

Geographical Analysis on the Distribution of Human Resources in Hinthada District

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Abstract

Human Resources are among the world's most productive agents. Meanwhile, they are also the most threatened parts of ecosystems in the world. This study area presents key demographic and socioeconomic data that reflect patterns of human and economic development of Myanmar. Hinthada District is one of the most populous districts in Myanmar. This research work is a geographic analysis of Human Geography of Hinthada District, Ayeyawady Region. The aim of this research paper is to identify the physical geographic environment and demographic factors. It also emphasized on the relationship between physical factors and human resources factors. The study area is composed of six townships: Hinthada, Zalun, Kyangin, Myanaung, Laymyethna, and Ingapu, which include 48 wards and 371 village tracts together with 2991 villages. According to the data collected in 2006, the total number of population in the study area is about 1651657. With the growth of population, population density increased, due to agricultural activities practised on the level and fertile soil.

Key words: Human resources, ecosystem

Introduction

This research explored the factors affecting the distribution of Human Resources in Hinthada District from the geographic point of view. The physical features of the district, its population growth, education and health were found as important affecting factors for the distribution of Human Resources in Hinthada District.

Physical Features

The district of Hinthada lies between 17° 20' and 18° 31' North Latitudes and 94° 48' and 95° 47' East Longitudes. It is situated on the west bank of the Ayeyawady River and lies between the river and the mountain ranges of Rakhine Yoma. Hinthada District is the most northerly district of the Ayeyawady Region situated at the head of the Ayeyawady Delta. Being located at the northern apex of the Ayeyawady deltaic region, the district is fairly close to the commercial city of Myanmar "Yangon", and highly accessible to the most developed regions of the country. It has locational advantages for economic development (Figure 1).

The area of the district varies from time to time. Since, there are changes in administrative boundaries of adjacent districts, some parts are added and some removed. The area of the district in 1915 was 743326.59 ha (2870 square miles), and at present, the area is 698592.31 ha (2697.28 square miles). Hinthada District comprises six townships. The largest is Ingapu, which is the fifth largest township in Ayeyawady Region and Zalun is the smallest township in the district.

It is irregularly wedge-like in shape. The northern most apex at Akaukaung, a spur of the Rakhine Yoma touch the Ayeyawady River twenty four miles above Myanaung.

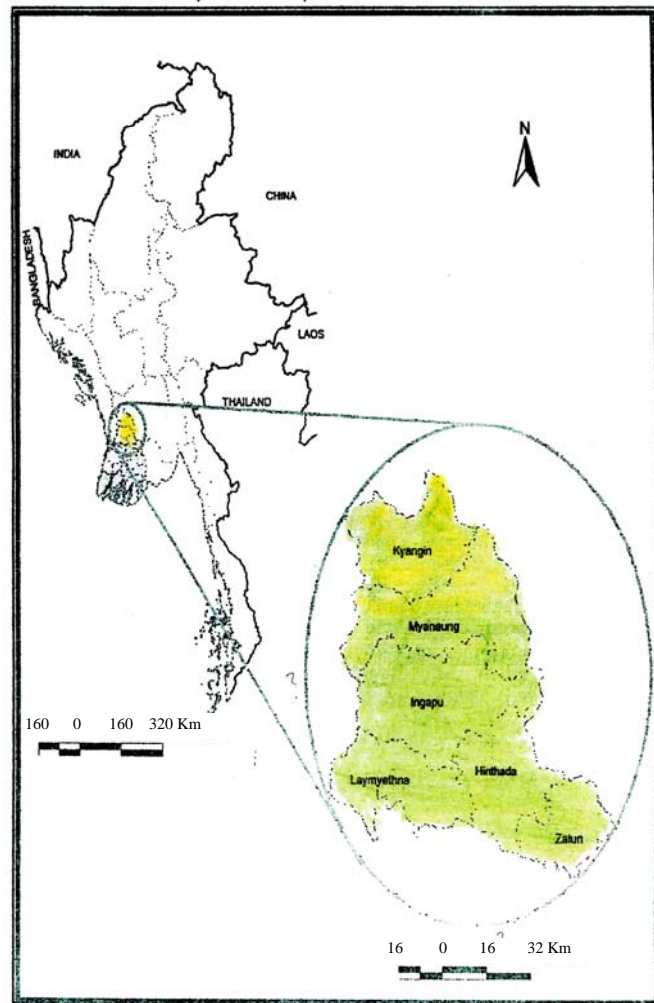


Figure 1. Location of Hinthada District.

Source: Myanmar Survey Department.

Hinthada District is bounded on the north by Padaung Township (Pyay District) while on the east the Ayeyawady River serves as a boundary (except in Zalun Township) between Monyo and Shwedaung Townships (Pyay District). On the southeast the boundary is marked between Insein Township (Yangon Region) and on the south between Danuphyu Township (Maubin District), Kyonpyaw and Ngathaingyaung Townships (Pthein District). The western boundary follows the water divided of the Rakhine Yoma throughout its whole length. On the other side of the Yoma lies Gwa Township (Thandwe District).

The physical features of Hinthada District can be divided into three divisions. They are the eastern flanks of the Rakhine Yoma, the foot-hills of the Rakhine Yoma and the alluvial plains.

It lies in the western part of Hinthada District with an elevation of 76 m (250 feet) above sea level. The highest peaks are Sababontaung 1229 m (4032 feet), Taungnyotaung, Chabonetaung, Kintaung, Kyitaung and Moehtitaung. These ranges gradually slope towards the Ayeyawady River in the east and form a water divide between the Rakhine State and the Ayeyawady Region. Many streams take their sources from these ranges. The mountainous areas are covered by forests and are placed under reserved forest.

Hinthada is found in the northern part of Hinthada District, located between the Rakhine Yoma and Hinthada-Kyaingon railway line and motor road. The general elevation is

between 30.48 m (100 feet) and 76.2 m (250 feet) above sea level. In Myanaung and Ingapu Townships, valleys lie between the low hills. A significant feature in Myanaung and Ingapu Townships is the occurrence of low ridges having an elevation of 76 m above sea level and lying parallel to Rakhine Yoma, causing the Phatashin stream to flow northwards and the Mamy stream to flow south of the ridge.

Table 1. Area of townships in Hintahda District

Sr. No.	Townships	Area (hectares)
1.	Ingapu	162703.05
2.	Myanaung	155220.58
3.	Kyangin	115148.28
4.	Laymyethna	103350.89
5.	Hinthada	98082.85
6.	Zalun	64086.67
Total		698592.31

Source: District Peace and Development Council Report (2005)

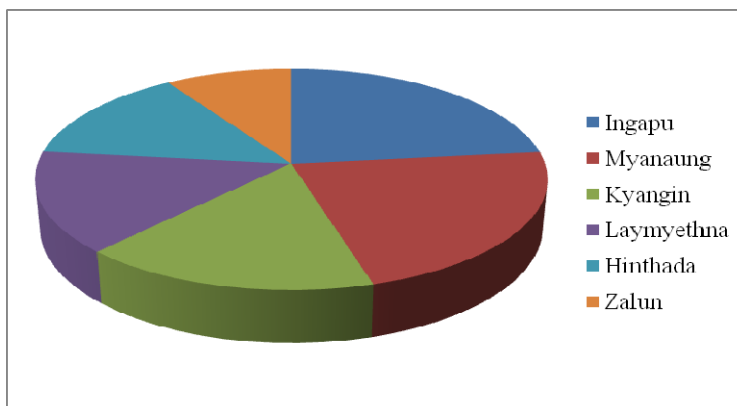


Figure 2. Area of townships shown in Circle with Sectors Method

Source: District Peace and Development Council Report (2005)

Table 2. Wards and Village Tracts of Hintahda District in 2005

Sr. No.	Townships	Wards	Village Tracts	Villages
1.	Ingapu	3	73	661
2.	Myanaung	11	58	517
3.	Kyangin	3	30	249
4.	Laymyethna	5	41	285
5.	Hinthada	21	103	820
6.	Zalun	5	66	459
Total		48	371	2991

Source: District Peace and Development Council Report (2005)

In Kyangin Township the foot hills occupy the area north of Kunchaung reaching the bank of the Ayeyawady River, the streams flowing from the Rakhine Yoma run across the region between the hills, forming valleys which are devoted to paddy fields.

The alluvial plain formed by Ayeyawady River covers over half of the district's area and occupies the eastern region. This flat low lying region is below 30.48 m (100 feet). It is broad at the south of the Ngawun River and tapers towards the north. The Ayeyawady River, and its distributary Ngawun meander across its flood plain, changing its course from time to time and thus the region is dotted with numerous ox-bow lakes ("inn"). The alluvial plain is the most fertile and is the best paddy land of Myanmar (Figure 3).

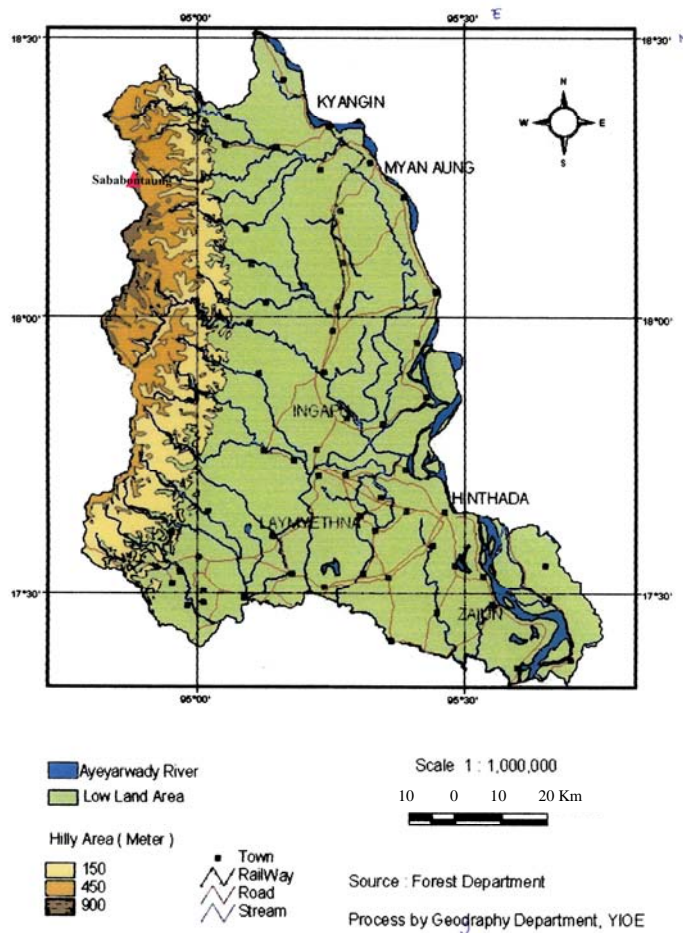


Figure 3. Physical condition of Hinthada District.

All the streams in the district have their sources on the Rakhine Yoma and flow towards the east. The Ayeyawady River is the major river in the district. Phatashin, the prominent tributary flows into the Ayeyawady River, in the northern part of the district. The Ngawun River in the south is the well known distributary of the Ayeyawady. Other streams are Mamyia, Kanyin and Nankathu Streams, that join the Ngawun in the south.

The Ayeyawady River serves as the natural boundary between the Ayeyawady and Bago Regions. It flows from north to south passing through almost all the townships except Laymyathna. The Ayeyawady River had left behind ox-bow lakes and meander scars on the former flood plain, forming many "inn" in the eastern part.

The main tributary of the Ayeyawady is Phatashin Stream which serves as the boundary between Kyangin and Myanaung Townships. The tributaries of Phatashin are Ahlon, Kun, Pataw and Pashin (main stream, Phatashin is sometimes called Pashin). Phatashin enters the Ayeyarwaddy from the west below Kyaungin near Chaungwa village.

The Daga is originally like the Ngawun, an effluent of the Ayeyawady River but its source has been cut off by the Seiktha-Myogwin embankment near the village of Daga. It flows for about thirty miles through the district. It is of little use in the hot season but act as a means of transportation, in the rainy season. Paddy is taken to Yangon by boat along Daga stream.

As the eastern deltaic plain is so flat, many ponds and ox-bow lakes are found. On the western side of the natural levees, man-made embankments lie along the river courses. Thus most of the streams flow towards the south.

This region is bounded on the west by the flooded flysch deposits of Rakhine Yoma. The eastern boundary is defined approximately by the Ayeyawady River.

Geology of Hinthada District can be arranged as Cretaceous Rocks, Miocene Rocks, Eocene Rocks, Irrwaddy Formaiton, Older Aluvium and Recent deposits. These rocks form the basement of the Rakhine Yoma comprising sandstone, limestone, sand-shale alternation, and shale. In succession, sandstone forms the bottommost and thick layers limestone alternately with sandstone the top.

Soils play a significant role in the agriculture of the district. Soils in Hinthada District vary with the topography, drainage, vegetation and underlying bedrock. Generally, young alluvial soils are formed in the lowlands, whereas forest soils occur on the high lands. Most of the fertile soils of the district lie on either side of the Ayeyawady River, in Myanaung, Ingapu, Hinthada and Zalun Townships. These large tracts of fertile lands are suitable for cultivation of paddy.

Hinthada District, located in the north Ayeyawady Region, generally falls within the tropics and experiences the Tropical Monsoon Climate (Am), according to the Koppen's of climate classification. But in some years it is likely to be Tropical Savanna (Aw).

It is about 60 miles away from the eastern shore of the Bay of Bengal and 120 miles from the Gulf of Mottama. Hence, the effect of the marine is less pronounced in the north than in the south. As it is situated in the tropical monsoon belt, it enjoys the three seasons.

Temperatures are high throughout the year. The normal mean temperature for Hinthada District is 27 °C to 31.1 °C. The hottest month is March, with a mean temperature of 34.2 °C (Myint Thidar, 2005).

In Hinthada District rainfall varies from place to place, depending on relief and location and from year to year, due to the effected of Elnino and Southern Oscillation. The normal rainfall of Hinthada town is 2390 mm (Myint Thidar, 2005).

Since the area receives an average annual rainfall of 2174 mm and average temperature of 27.17°C; evergreen and mixed deciduous forest has been grown. But at present true natural vegetation can scarcely be seen widely in this region. Most of the vegetative covers have been cleared and these areas are utilized for agricultural land, settlements or other types of land use. So far, the natural vegetation can be identified only on Rakhine Yoma. There is however very few vegetations on the flat plains. The total forest covers 57172.46 ha.

The forest of the district can be classified as reserved forest and unreserved forests.

Hmyinwutung, Myanaungtaund, Shwethamintaung, Yenantaung and Sinthe Reserved forests are confined to reserved forests of the Hinthada District.

The plains of the Hinthada District are widely cultivated. Naturally, because of the remoteness, wild animals can be found mostly on Rakhine Yoma. Along the foothills throughout the mountains and reserved forests, there are abundant fauna. It is important for the ecosystem and beneficial for the economic development of the region.

Human Resources

Man is both the most dynamic agent of production and beneficiary of the entire process of resource development or utilization. As an agent of production man contributes labour, both mentally and physically. To be able to perform at a higher level, man must be physically fit and healthy and properly educated and trained. Human resources are the most dynamic, potent and precious gifts because they combine the task of production agent with the end object of the entire process.

Hinthada District is the most populous district in Ayeyawady Region. At the time of Myanmar Kings, it was said that the southern part of the area was chiefly waste lands, flooded almost every year, prevented any crops growing. The northern part seems to have been more extensively cultivated especially near the towns of Kyangin and Myanaung (Morrison, 1915). After the annexation by the British, the building of embankments by government and the opening of Suez 1869, a further impetus, to produce rice for export. These accounts for the development in agriculture supported the natural population growth of the district (Morrison, 1915).

The population characteristics of Hinthada District are reflected by the social and economic pattern of the people at various stages of development. During the Colonial Period the Ayeyawady Delta was cleared of the original forest cover by the local and imported labour for cultivation of rice and it became one of the producers and known as the 'rice bowl' of Myanmar. This accounts for the rapid increase of population. The Ayeyawady River splits up into numerous distributaries south of Hinthada and the town becomes an important commercial centre.

The population growth is influenced by birth rate, death rate, natural increase, immigration and emigration.

According to Gazetteer in 1855, a rough approximation of the population of the present district was 118,700 persons, which increased to 329,600 in 1872. Thus the population of the district doubled within two decades. The subsequent censuses (1881, 1901 and 1911) show a steady increase of population with (367,654, 484,558 and 532,357 respectively), with average increase rate of about 50,000 persons per decade (Morrison, 1915).

The opening of the Suez Canal also encouraged the natural population growth as well as migration growth of the area. This is the main reason for the sharp growth of population. The agricultural activities and agricultural production were developed in Hinthada District. The population of the district was also increasing year by year. In 1973, the total population was 956141 in Hinthada District and increased to 1,086,006 in 1983 and further increased to 1,651,657 in 2006 and 1,809,876 in 2010.

Hinthada Township, the most populous township in the district increased from 163875 in 1931, to 184713 in 1941 to 431521 in 2001 and 473505 in 2006. As Hinthada is

the capital of the district with 29% of the district's total population. This shows the growth of population in the latter part of the period.

Together with the growth of population, population density increased. The population of the district is 1,651,657 in the year 2006 with a density of 612 persons per square mile. No other district in Myanmar is nearly as densely populated as Hinthada District. Hinthada Township has a high population density. In the year 2006, with a population of 473,505, it represents 480 persons per sq-km and became the first in the district, because it has a small area of 980.83 sq-km with large hinterland, high capability for the livelihood of its whole population. Kyangin and Laymyethna townships have sparse population because of the large forested areas.

Uneven distribution of population is quite prevalent. Dense population is found along the roads and terminals of railway in Hinthada Township with a population of 612, followed by Zalun Township. The revering area of Ayeyawady and Ngawun Rivers, on the flat plain are naturally favourable for cluster of population. Thus the eastern part of the district is more populated than the western part, especially at the east of Pathein-Monywa Highway.

The population of Hinthada District is made up mainly of Bamar with few or a few Kayin, Chin, Mon and Rakhine.

Buddhism is commonly professed by majority of the population. Along with the annexation of British, Christianity became an additional religion in the district. Some of the rest believe in Islam and Hindus. There are some Chin, Kayin and Mon, who believe in "Nat" or "animists".

In 2002-03, there are 23 Basic Education High Schools in the district, added up with 18 Branched Basic Education High Schools/ BEHSs and 13 Associate BEHS Schools. At Middle Level, there are 63 Basic Education Middle Schools, together with 14 Branched BEMS Schools and 39 associate BEMS Schools. For primary level, there are 1206 Basic Education Primary Schools. In 2004-05 there are 49 Post Primary Schools and 2 Associate BEPS School in the district.

There are three institutions at Higher Education Level: Hinthada University, Government Technological University and Government Computer University which are all situated in Hinthada Township.

Table 3. Types of Basic Education School in Hinthada District (2003-2009)

Year	BEHS	Branched BEHS	Associate BEHS	BEMS	Branch BEMS	Associate BEMS	Post Primary School	BEPS	Associate BEPS	Total
2003-04	24	24	10	59	18	35	43	1205	6	1395
2004-05	24	26	10	58	18	35	45	1205	7	1398
2005-06	24	27	10	58	22	33	48	1204	6	1401
2006-07	24	30	8	58	27	28	58	1204	6	1443
2007-08	24	30	8	58	32	24	67	1204	7	1454
2008-09	25	29	8	57	34	24	68	1204	7	1456

Source: District Education Department (Hinthada).

Hinthada University has nine courses from first year to master courses with eight different intakes from 2006 to 2010. Altogether 2,659 students attended this University in 2006-2007 Academic Year (Table 4). As a form of mass higher education system and also, to

keep abreast with the world education system, the University of Distance Education came into existence in 1992 catering to tertiary level education for those who for various reasons, cannot enroll for the regular university courses and for those who wish to continue to pursue higher education without leaving their jobs and homes. Altogether 32,137 students attended this university between 2000 and 2005 year. The number of University of Distance Education students in successive years is shown in Table 5.

Table 4. Number of students in Hinthada University.

	First Year	Second Year	Third Year	First Year Honours	Second Year Honours	Qualify	First Year M.A	Second Year M.A	Total
2006	852	806	653	56	59	24	115	94	2659
2007	1481	762	592	47	54	7	44	96	3083
2008	1111	1177	563	99	45	22	40	45	3102
2009	1421	1005	941	107	78	17	40	37	3646
2010	1008	1277	813	115	99	17	39	36	3404

Source: Department of Student Affairs, Hinthada University.

Table 5. Number of University of Distance Education students in Hinthada University.

	First Year	Second Year	Third Year	Forth Year	Total
2006	7453	2945	2573	247	13218
2007	6095	3076	1876	193	11240
2008	2958	3590	2450	245	9243
2009	4154	2354	3053	239	9800

Source: Department of Student Affairs, Hinthada University.

Government Technological University offers Civil Engineering, Electrical Power, Electrical Communication, Electrical Engineering and other courses. The number of teachers and students increased year by year. In the year 1978-79, it started with 20 teachers and 52 students. Now the University has 79 teachers and 783 students in 2008-09 academic year.

Table 6. Number of students in Government Technological University (2008-09)

Course	No. of Students
AGTI	468
B.Tech	232
BE	83
Total	783

Source: District Peace and Development Council Report, 2009

The students at the Government Computer University increased year by year. In 2008-09, there are 228 students (Table 7).

Table 7. Number of students in Government Computer University

Course	No. of Students
BSc (First Year)	34
BSc (Second Year)	40
BSc (Third Year)	69
BSc (Hons)	33
BC.Tech (Hons)	6
DCSc	3
BTech	3
MISC	12
BCTech (Second Year)	7
BCTech (Third Year)	21
Total	228

Source: District Peace and Development Council Report, 2009

Hinthada was not a very healthy district in the past. The density of the natural vegetation covers along the spurs of Rakhine Yoma, the clayey nature of the soil. The extreme humidity of the atmosphere throughout the rainy season, the entire absence of the poor natural drainage owing to the riverine embankments, all combine to make the climate depressing and unhealthy. The density of the population is also great aid to the spread of infection. The diseases suffered in the district were fevers, bowel complaints, small pox and plague. Malarial fever is endemic along the foot hills and spurs of Rakhine Yoma. The extreme unhealthiness of the foothills is due to dense nature of the forest growth.

In the broad open-air paddy fields, malaria is not a common disease, although mosquitoes are widespread. Hemorrhagic fever and jaundice fever are common in the district. Cholera is a recurring epidemic in the towns along the banks of the river but epidemics are not an annual occurrence. The people are susceptible to cholera owing to the lack of obtaining a good water-supply. A large proportion of the inhabitants of the towns and riparian villages drink river water unfiltered and un-boiled. The interior of the district is dependent on well water.

The water-supply provided in the municipalities is from wells. Owing to the nature of the district, nearly all the wells become dry in the summer, and pollution by drainage occurs in the rainy season. Small pox used to be a dreaded scourge of the district. But with the spread of knowledge and the increasing use of vaccination, it has become of less importance.

Hinthada District has a fairly healthy people in its area. The district has a Township Civil Hospital of 200 beds in Hinthada. There are 16 beds hospital in every township of the district. In Hinthada and Myanaung Townships, each has a Regional Health Care Center. Except Zalun and Laymyethna, the rest four townships have tuberculosis and leprosy

eradicate departments. Every township, except Hinthada, has Malaria eradicate departments. Traditionally, people depend on indigenous medicine. Majority of people in the rural area of the district depend on the rural health care center occasionally. In 2009, the District had a total population of 1,651,657. In the same year specialists, doctors, nurses, health assistances, physicians and midwives were appointed in the District. Now, the private hospital (Myint Myat) was opened in Hinthada Township.

Conclusion

Human resources are the most important for the wellbeing of our country, and also in Hinthada District, as they provide both products and development. Human resources also play an important role in the socio-economy in the district. In an effort to promote human resources in all the sectors, the government is creating learning opportunities to reach rural regions.

Generally, Hinthada District is well endowed with good physical features, especially climate, relief and soil, which encourage agricultural production, and accounts for the most populous district in Myanmar.

In this study area, all the departments concerned are nurturing highly qualified human resources. In addition, they are building more roads linking villages, townships and with for convenience of the rural people in accordance with the five rural development tasks. With the better transportation in this study area, education, health and economic sectors of local people will be improved day by day.

In this knowledge age, all activities are upgraded in this district, including the 24 special development regions in our country. Therefore, the local people should participate with the zest and zeal in the human resources task for greater progress of the entire district. Development of human resources is for the uplift of the living standard or the quality of life for a country, and consequently for the benefit of all mankind.

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