

## INFLUENCE OF THE GEOGRAPHICAL ENVIRONMENT ON HEALTH AND PREVALENCE OF DISEASES THROUGH AYURVEDA - A REVIEW

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### ABSTRACT

**Introduction:** Consideration of *Desha*, *Dika* or *Disha* which is included within the banner of *Karan Dravya*, brought for the influence of the geographical environment on the prevalence of diseases and precise habituation and health. Geographical evaluation of the distribution of illnesses and exact wealthiest inside the enlightened view of *Ayurveda* concerning natural and social elements related to health and incidence of the disorder. **Aims & Objective:** Contribution to more open exposure approaches regarding the aboriginal of ailments in certain areas as well as their spreading regarding the population dynamics through the fundamental theme of *Bhumi Desha* and *Atura Desha* described within the ancient system of medicine. **Method:** The present review study carried out by collecting the literature and research finding from various classical and modern textbook, online reports and online research articles in Google Search and PubMed Database. **Results:** It is revealed that the geographical influence is essential for the distribution of diseases and regular health of those particular regions. The terminology as *Bhumi Desha*, *Atura Desha*, *Dika*, *Jangal Desha*, *Anupa Desha* and the representation of ten types of *Dikas* with inclusion of respective disease and healthy habits with the proper consideration to the modern scientific

analysis. **Conclusion:** Geographical environment on health and occurrence of diseases has been elicited through the expertization of ancient *Ayurveda* with the correlation to modern scientific rationalization. That is critical for knowledgeable evaluation and care of sufferers, who increasingly have had exposures in a couple of geographical areas.

**Keywords:** *Desha, Disha, Dika*, Geographical environment, *Atura Desha, Bhumi Desha*.

## INTRODUCTION

*Disha* is derived from ‘*Disha Niradesh*’ which has been taken into consideration in nine ‘*Karana Dravyas*’ within the Indian philosophy and *Ayurveda*. *Disha* (direction) denotes *Desha* additionally which is directed and divided from one component to different. In *Ayurveda* the terminology is used in the dual context of *Desha* and *Dika* or direction. Each of them is important for the renovation of health prevention and cure of disorder too. Usually site, location, land etc. are denoted by Geographical areas. Geography as science is more and more concerned with studying the causal hyperlinks of the advent of the disorder in precise geographic regions. It has been distinguished though the separate clinical area, called clinical geography. [1] The *Disha* with due consideration as a substance is to be inferred from the notion of remoteness and proximity contrary to the ones as a result of *Kala*. It is one, everlasting and all pervading. It has the characteristics like variety, dimensions, separateness, conjunction and disjunction. It is inferred from the notions of the instructions, east, west and so forth. [2] Impact of geographical habitats as geographical range, the geological composition of the soil, topography, climate, water, biogeographic traits, and so on and geo-social environment which includes demographic affect, migration of population, economic and non-economic activities of the population and its social impact. Areas of the arena stand out as regions of the earth's floor filled with gadgets of inorganic beginning (topography, soil, weather water), with natural (flora and fauna as well as human) and anthropogenic beginning (human society and its visible and invisible items and phenomenon in space). Most of the diseases are associated with unique geographic areas or precise areas characterized with the aid of the prevalence of a specific ailment. [3] In *Ayurveda*,

geographical area has been introduced by *Desha* or *Disha* or *Dika*, which belongs to Space, belongs to the mark of the inference of Space. Space is that substance from which in respect of two simultaneously existing bodies which are also fixed in reference to direction and place, such cognition and utilization rise that the floor or substratum of the conjunctions of a comparatively large wide variety of conjoint matters is before other than or awesome from this. So, the substratum of the conjunctions of a comparatively small wide variety of conjoint things, and also that the substratum of the comparative smallness in a wide variety of the conjunctions of the conjoint, is posterior to this, the substratum of the comparative largeness in the quantity of the conjunctions of the conjoint. [4] Distance and nearness are to be understood right here in a spatial experience. The excellent purpose of the perception of them is geographical place alone. The concept is that one undivided space is hooked up, for the sake of simplicity, because the substratum of the conjunction of the area and something that limits, it is the non-inherent motive of spatial distance and nearness. [5] Because of geographical capabilities that distinguish sure areas of the Earth-like warm weather, cold climate, high humidity, dry lands, polluted water, shortages of meals, and so on. Appear certain diseases through popular geographical distribution. [1]

**Materials & Method:** The present review study carried out by collecting the *Ayurvedic* and Modern literature and research finding from various classical and modern textbook in headings of *Desha, Dika*, Geographical distributions of disease, *Anupa Desha, Jangal Desha, Sadharana Desha* and geographical influence of infectious disease and disease prevalence through the geographical areas through online reports

and online research articles in Google Search and PubMed Database.

**Classification of geographical areas or Desha:**

*Desha* has been classified into two kinds as *Bhumi Desha* and *Deha* or *Atura Desha*. *Bhumi Desha* is again classified into three kinds as *Jangal Desha* which is Predominant of *Vata Dosha*, *Anupa Desha* is predominant of *Kapha Dosha* and *Sadharana Desha*, where all the *Malas* and *Dosha* are in their normal proportion.<sup>[6]</sup>

**Bhumi Desha:** Habitats or *Desha* are of three types, viz., *Jangala* or dry forest land, *Anupa* or marshy land and *Sadharana* or normal land.

**Jangala Desha or Dry Forest Land:**

**General features:** It abounds in open sky. It abounds in skinny, dry and hard sands in addition to gravels which offer rise to mirages the flora and trees of those places. The gentle branched of those trees dance, being swayed through the force of non-stop dry wind.

**Trees and Birds:** It has deep forests of trees like *Kadara*, *Khadira*, *Asana*, *Asva-Karna*, *Dhava*, *Tinisa*, *Sallaki*, *Sala*, *Soma-Valka*, *Badari*, *Tinduka*, *Asvattha*, *Vata*, *Amlaki*. It is mostly surrounded by trees of *Sami*, *Kakubha* and *Simsapa* in large number. This area is inhabited by *Lava*, *Tittiti* and *Cakora*.<sup>[7]</sup>

**Doshika Predominance:** *Vata Dosha*<sup>[6]</sup>

**Prevalence of disease:** The people inhabiting this type of land are predominated by *Vayu* and *Pitta* and most of them are sturdy and hardy.<sup>[7]</sup> *Coccidioidomycosis*, additionally called Valley Fever is resulting from the fungus *Coccidioides* spp. The fungus can develop below intense environmental situations together with excessive temperatures, high salinity, and alkaline situations that maximum different microorganisms cannot tolerate.<sup>[8]</sup> Dry land or *Jangal Desha* possesses many and far-reaching health implications. Drought-related health factors and prevalent occurrence of disease are furnished below for easy to anticipate the health implications.

**Table – I**<sup>[8]</sup>

Sl.No.	Primary Factors	Prevalent Disease
1.	Water	Reduced move and river flows can increase the awareness of pollution in water and purpose stagnation. Multiplied water temperatures in lakes and reservoirs result in reduced oxygen degrees. West Nile Virus carried by mosquitoes breeding in stagnant water.
2.	Food and Nutrition	Restrict the growing season and create conditions that inspire insect and disorder infestation in positive crops. In such condition malnourished, diseased, and death is most common.
3.	Air Quality	The dusty, dry situations and wildfires that frequently accompany drought can harm health. Fireplace and dry soil and flora growth the form of particulates which can be suspended in the air, which embody pollen, smoke, and fluorocarbons.
4.	Sanitation and Hygiene	Having water to be had for cleansing, sanitation, and hygiene reduces or controls many ailments. Water borne illness due to microorganisms, protozoa, and distinctive contaminants.
5.	Recreational Risks	In untreated floor waters, a few pathogens, which consist of a type of amoeba ( <i>Naegleria fowleri</i> ).
6.	Infectious Disease	Ground water and surface water may be polluted by Viruses, protozoa, and microorganism at the same time as rainfall decreases. Acute respiration and gastrointestinal ailments are more without trouble unfold from character to person even as hand washing is compromised with the resource of a perceived or actual lack of available water. E. coli and Salmonella.
7.	Chronic Disease	Drought-related changes in air pride, at the side of improved concentrations of air particulates and airborne pollution can irritate the eyes, lungs, and breathing structures of humans with chronic respiration conditions.
8.	Diseases Transmitted by Insects and Animals	In the course of times of limited rainfall, both people and animal’s behavior change tactics that growth the possibility of various vector-borne sicknesses. This offers more breeding grounds for positive styles of mosquitoes (for example, <i>Culex pippins</i> ).

**Anupa-Desha or Marshy Land**

**General features:** It is located generally at the banks of rivers and sea. Mostly cold winds blow here, mountains, different kinds of thick forests, rivers, lakes, ponds and wells full of lotus, lily and other flowers, pleasant landscape, hard and unctuous soil.

**Trees and Birds:** It contains deep forests of trees like *Hintala, Tamala, Narikela* and *Kadali*. This form of land is positioned in the neighborhood of rivers whose banks are beautified by means of flora like *Vanjula* and *Varnira*. It had mountains covered with stunning creepers; the trees in this think wooded area wave with the mild breeze. The vicinity is surrounded via thick forests with stunning and blossoming bushes; its miles included with the soft branched of timber. The branched of bushes located here are echoed

with the sound produced by means of birds like *Hamsa, Cakravaka, Balaka, Nandi-Mukha, Pundarika, Kadamba, Madgu, Bhrngaraja, Satapatra* and *Drunk Kokila* [7]

**Doshika Predominance:** *Kapha Dosh* [6]

**Prevalence of disease:** People inhabiting this type of land are of tender body, and generally they are dominated by *Vayu* and *Kapha*. [7] Disease like filariasis, diseases of the throat, scrofula/enlarged lymph glands and fever, etc. is known as *Anupa Desha* (forest region) and it's the producer of sweet substances. [9] Marshy land or *Anupa Desha* possesses many and far-reaching health implications. Wetland-related health factors and prevalent occurrence of disease are furnished below for easy to anticipate the health implications.

**Table-II** [10]

Sl.No.	Primary Factors	Prevalent Disease
1.	Water	Almost 250 million instances of cholera, dysentery, and other water-related diseases are pronounced every year; water-borne sicknesses kill among 5-10 million people a year.
2.	Food and Nutrition	An epidemic of cholera in Maryland, USA turned into traced to imported, infected commercial frozen coconut milk. Tour and change are key functions inside the epidemiology of the contamination <i>Cyclospora</i> , a motive of gastroenteritis. Some vegetation water hyacinths ( <i>Eichhornia crussipes</i> ), both of which aren't uncommon in wetlands.
3.	Air Quality [11]	In Africa, for example, COPD occurrence in sufferers hospitalized in specialized services ranged from 2.7% in Guinea to 14% in Morocco. In sub-Saharan Africa, deaths from 57,000 in 1985 to 145 000 in 2015, sincerely from demographic changes. Airborne pollution originating from freshwater blooms of cyanobacteria.
4.	Sanitation and Hygiene	A couple of billion humans the fungus <i>Coccidioides</i> inmates, which reasons <i>Coccidioidomycosis</i> , thrives in surface soil in arid and semiarid areas with alkaline soil, hot summers, and quick, wet winters; its miles endemic in elements of south-western USA, Mexico and crucial and South America lack potable drinking water.
5.	Recreational Risks	<i>Schistosomiasis</i> (also referred to as Bilharzia) is a severe sickness in southern Africa. Human behavior that leads to touching among human beings (particularly children) and water is a risk issue for <i>Schistosomiasis</i> .
6.	Infectious Disease	Wetlands or wetlands polluted using pathogens, heavy metals, or insecticides which pose a health threat. Human Enteropathogenesis ( <i>Cryptosporidium spp.</i> ) are related to constructed wetlands in Ireland.
7.	Chronic Disease	Adjustments in water great, which includes extended concentrations of contaminants, can threaten humans whose immune systems are compromised.
8.	Diseases Transmitted by Insects and Animals	The mosquito-borne ailment is the most customarily shows the evidence of humans or animals as with snails as important intermediate host. Water <i>Schistosomiasis</i> is a common phenomenon. [1]

### Sadharana-Desha or Normal Land

**General features:** Ordinary character of heat, cold and rainfall and from the fact of the bodily humors maintaining their normal state of equilibrium within its confines.

**Trees and Birds:** It has creepers, *Vanaspati* (trees having fruits without apparent flowers), *Vanaspatya* (trees having both fruits and flowers), birds and beasts described above in respect of *Jangala-Desha* or dry forest land and *Anupa-Desha* or marshy land.

**Doshika Predominance:** *Samagni* <sup>[12]</sup>

**Prevalence of disease:** Persons inhabiting this land are sturdy, tender endowed with strength, complexion and compactness, as well as other attributes of people inhabiting in the land of general nature.<sup>[7]</sup>

**Anupa-Sadharana Desha:** The region which will have more features of *Anupa Desha* and less of *Jangal Desha* is called *Anupa- Sadharana Desha*. It is the source of salt and sour substances.

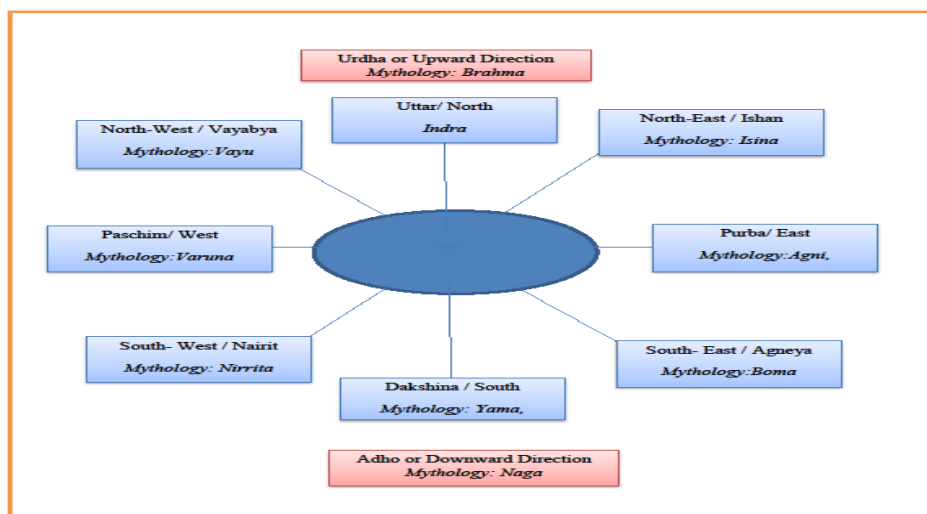
**Jangala-Sadharana Desha:** The region that with the more features of *Jangal Desha* and less of *Anupa Desha* is called as *Jangal-Sadharana Desha*. It is the source of bitter and astringent substances.<sup>[13]</sup>

### Atura Desha:

The patient constitutes the *Karyadesha* or the site for the management of therapies to be able to bring approximately the equilibrium of *Dhatu*s and *Dosha*s. In *Atura Desha* there is ten points of investigation for the best result in the control of disorder in *Ayurveda* as *Prakriti*, *Vikriti*, *Sara*, *Samhanan*, *Pramana*, *Satmya*, *Satwa*, *Aharshakti*, *Vyamashakti* and *Vayas*. The examination of *Atura Desha* is accomplished to recognize three primary factors of living beings. To realize status of *Dosha* in affected person, to know the existence span of patient and to recognize status of *Bala* (immunity). The anatomical position of tissue and structures is determined via *Desha* and *Disha* in context *Atura Desha*. Similarly, the location of *Dosha*, *Dhatu*s and *Malas* is nicely defined in normal kingdom and alternate/disturb whilst pathology is created. The pathology is created where the vitiated *Doshas* found beneficial situations and get lodged because of vitiation of *Srota* or channels.<sup>[14]</sup>

Apart from the above classification the geographical directions or *Dika* elaborates the significance of health and prevalence of diseases. *Dika*, which is the cause of the employment of East, West etc. is one, all-pervading and eternal.<sup>[15]</sup>

**Figure-I:** Ten *Dika* according to *Ayurvedic* scholars: <sup>[15]</sup>





### **East or Prachi:**

The east or *Prachi* is so referred to as, due to the fact the solar first (peak) actions (*Ancheta*) there. Accordingly, that direction is referred to as the east, wherein the primary conjunction of the solar came about or will take region or is taking place in the direction of its circulated spherical Mount *Meru*.<sup>[16]</sup>

**Nature of wind:** The east wind, which is cool and sweet in its potency, is heavy and charged with salt.

**Benefits:** It is highly efficacious to fatigued persons, as well as to those of *Vatala* (nervous) temperament, or who are afflicted with any sort of *Kaphaja* disease; thought it increases the slimy secretion in their ulcers in there be any.<sup>[17]</sup>

**Nature of water flow:** *Purva Abhi Mukha* (flowing towards the eastern) Opposite qualities to *Paschim Abhimukha* not good for health.

### **Disease prevalence:**

The east winds aggravate *Rakta* and *Pitta* and gives rise to an acid digestive reaction. It specially aggravates the diseases in a patient suffering from a wound or an ulcer, or from the effect of any poison, and affects persons of *Shleshmala* temperament.<sup>[17]</sup>

The eastern peoples are habituated eaters of fish and rice. They may be in all likelihood to be troubled with *Kaphaja* and *Pittaja* proceedings. Occurrences of elephantiasis and goiter or *Galaganda* are primarily visible among them.<sup>[18]</sup> Dry eye disease is most common in eastern part of India.<sup>[19]</sup> In West Bengal high prevalence of diabetes in particular 3 districts as Howrah (13.2%), Kolkata (12%), and Burdwan (8.7%). occurrence is relatively low in Purulia (2.7%), Bankura (3.0%), Dinajpur East (3.6%) and West (3.5%).<sup>[20]</sup>

### **West or Prattice:**

The *Dika* in which the sun sets is called as *Pratici*. Vicinity of the sun is in west is called *Pratici*. The direction in the vicinity of the setting mountain is *Pratici*. The direction which is nearer to the sunset or *Astacala* is called *Pratici*.

### **Nature of wind:**

The west wind is pure, non-slimy, dry, rough to the perception, and keen. It absorbs the albumen or oily principle of the body. It absorbs or dries up fat and

*Kapha*, produces a parched condition in the body when exposed to it, and speedily diminished the strength of a person.<sup>[17]</sup>

**Nature of water flow:** *Pashchim Abhimukha* (flowing towards the west) Swift and have clean water, such water is good for health.

### **Disease prevalence:**

Peoples of the west enormously desire meat, wines and girls; in addition, they love journey. They may be seen to be excessively travelled through *Rajayakshma*.<sup>[18]</sup>

In western countries, diabetes and high blood pressure account for over 2/3rd of the causes of CKD. In India too, diabetes and high blood pressure today account for 40–60% of cases of CKD. As in line with recent Indian Council of clinical research statistics, the occurrence of diabetes in the Indian person populace has risen to 7.1%, (varying from 5.8% in Jharkhand to 13.5% in Chandigarh) and in the urban population (over the age of 40 years) the superiority is as excessive as 28%. Likewise, the said occurrence of high blood pressure in the person population these days is 17%, 14.8% from rural and 21.4% from urban belt. In India, the occurrence of CKD is predicted to upward push.<sup>[21]</sup> In 2012, about 80% of mentioned instances of tuberculosis are within the countries of Afghanistan, Bangladesh, Burma, Cambodia, China, India, Indonesia, Pakistan, the Russian Federation, the Philippines, Thailand, Democratic Republic of Congo, Ethiopia, Kenya, Mozambique, Nigeria, South Africa, Tanzania, Uganda, Zimbabwe, Brazil. Maximum of the instances global in 2012 have been in South-East Asia 29%, Africa 27% and Western Pacific 19%. India and China accounted for 26%.<sup>[22]</sup>

### **North or Udici or Uttara:**

The *Dika* wherein the sun actions upward course or whilst facing closer to the east, the left aspect or left route is known as *Uttara*. In other words, the *Dika* wherein is nearer to *Meru Parvati* is referred to as north. The course in the location of the mountain *Meru* and lying to the left hand of a man dealing with the east is *Udici* or *Uttara*.

**Nature of wind:** The north wind is cold, crisp, and mild, of a sweet taste terminating in an astringent

one. It does not in any way enrage or agitate the deranged bodily humours.

**Benefits:**

In healthy subjects it increases the strength and the running secretions from the different orifices of the body (such as the nostrils etc.). It proves extremely salutary of patients suffering from consumption, cachexia and the effects of poison.<sup>[18]</sup>

**Disease prevalence:**

Peoples of *Bhallika* mostly consumed food, that is very hot and also meat that is trickling with juices or *Avishyandi Bhojan*, as well as *Panaka* and watery drinks (*Oudakani*) in plenty regions of *Bhallika* country (North) are generally afflicted with the disease of *Balasaka* (loss of strength).<sup>[18]</sup> Its miles important to be aware though that diarrhoea illnesses, lower respiration infections, iron-deficiency anaemia, neonatal issues, and tuberculosis nevertheless remain important public fitness troubles in many poorer northern states.<sup>[23]</sup> Celiac disease is more prevalent in Northern part of India.<sup>[24]</sup>

In Northern Ethiopia, the superiority of goiter changed into very high within the look at the place. Consequently, the fitness quarter of the district must invest efforts in enhancing the community's focus through disseminating key messages about iodized salt and iodine-wealthy foods.<sup>[25]</sup>

**South or Avaci or Dakshina:**

The *Dika* wherein the solar movements downward path is *Avaci* or *Dakshina*. The path contrary to the mountain. *Meru* and mendacity to the proper hand of a man going through the east is *Avaci*. It's miles very closer to *Vindhyacala*.

**Nature of wind:**

The south wind is light, sweet (produces the same soothing effect on the organism like thing of sweet taste) and is following by astringent after-taste (*Anurasa*) being antacid in its reaction.

**Benefits:**

It is best winds, gives vigor to the eyes, increases the strength, and soothes the *Rakta* and the *Pitta* without aggravating the body *Vayu*.<sup>[17]</sup>

**Disease prevalence:**

People inside the south habitually devour fish of the river water and the sea. They usually traveled with *Kustha*.<sup>[18]</sup> In the state of Tamil Nadu, Andhra Pradesh, and Bengal, Glaucoma is anticipated as the most prevalent disease. It influences 60.5 million folks international by the year 2010. The predicted prevalence of glaucoma in India is 11.9 million.<sup>[26]</sup> Leprosy is endemic in tropical countries, in particular in underdeveloped or growing countries. Its prevalence has reduced markedly since the creation of MDT at the beginning of the 1980s. However, 105 endemic countries specifically placed in Southeast Asia, in the Americas, Africa, eastern Pacific, and Western Mediterranean, nevertheless pay attention to a large number of instances.<sup>[27]</sup>

**South-East or Agneya:**

The direction between the east and the south is *Agneya* or *Daksina Purva*.

**Nature of wind:** It possesses the *Tikta*, *Madhura* quality.<sup>[28]</sup>

**Disease prevalence:**

The south-east wind produces the *Kapha* and *Vataja Roga*.<sup>[28]</sup>

Occurrence of *Streptococcus pneumonia* serotypes inflicting invasive and non-invasive ailment in Southeast Asia. Peoples of the outskirts of *Kambojas* had many colonial states in central India amongst them one is *Aswaka* of Maharashtra kingdom any other is the south-east United States Cambodia. (South-Easterly India). ([indiathedestiny.com/kingdoms/Kamboja-kingdom/](http://indiathedestiny.com/kingdoms/Kamboja-kingdom/)) continuously ate up *Masura*, *Yava*, *Godhuma*, *Tila*, and *Kodalaka*; court cases of piles are very common there.<sup>[17]</sup> Due to excessive temperature water conditions different than other areas of the same district. Piles are inflammation of the blood vessel that is commonly nearby in the anal canal. The piles are produced while the anal cushions are disrupted by using the strength of defecation. The stool uniformity and defecator habitual for infinite wounded are nearly positively to clam. The difficulty is increases because of difficult stools that are the energy of shearing. There are sorts of piles, internal piles and external piles.<sup>[29]</sup>

**South -West or Nairit:** The direction between the south and the west is *Daksina Pascima* or *Nairit*.

**Nature of wind:** It possesses the *Rukshma*, *Ushna*, *Katu*, *Amla* quality.

**Disease Prevalence:**

The South-West wind produces the *Pittaja*, *Raktaja Roga* and *Vata-Kaphalvan Vyadhi*. *Coccidioidomycosis*, also referred to as Valley Fever is a result of the fungus *Coccidioides* spp. which lives in the soil of the southwestern united states and areas further south into Mexico and significant and South the United States. The fungus commonly enters humans through the breathing course through inhalation of microscopic fungal spores. [8]

**Arthritis:** One in five adults (22%) pronounced arthritis, an extensively higher rate than the country.

**Mental health trouble:** One in seven (14%) adults mentioned a presently recognized mental health problem.

**Asthma:** 8% of adults had asthma.

**Diabetes:** The majority have both types of diabetes. Hazard elements encompass being obese/overweight, main a sedentary lifestyle, and bad nutritional consumption.

**Cardiovascular disease:** The main types are ischemic heart disorder and stroke.

According to *Harita Samhita*, the direction of *Vayu*, their attributes and prevalence of diseases caused by the flow of wind has been furnished in table-II [28]

**Table -II**

Direction of Vayu	Attributes	Prevalence of disease
<i>Purba Disha Vayu</i>	<i>Sita, Ati Madhurjya</i>	<i>Vata Prokopa</i> , Unwholesome
<i>Agneya Disha Vayu</i>	<i>Tikta, Madhura</i>	<i>Kapha and Vataja Roga</i>
<i>Dakshina Disha Vayu</i>	<i>Tikta, Kasaya, Madhura, Atimanda, Sugandha, Sitala</i>	Neither too hot nor too cold. May cause <i>Kaphaja Roga</i>
<i>Nairita Disha Vayu</i>	<i>Rukshma, Ushna, Katu, Amla</i>	<i>Pitta and Raktaja Roga. Vata-kaphalwon.</i>
<i>Paschim Disha Vayu</i>	<i>Ati Suskshma</i>	<i>Raktapitta</i>
<i>Vayabya Disha Vayu</i>	<i>Prasastha, Kasaya, Samsuskshma</i>	Most wholesome <i>Vayu</i>
<i>Uttar Disha Vayu</i>	<i>Swadu, Kasaya</i>	<i>Medhajanaka</i> , wholesome <i>Vayu</i>
<i>Ishan Disha Vayu</i>	<i>Sitala and Chanchal</i>	<i>Kapha and Vayu</i> provoking, not suitable for <i>Kshya</i> and <i>Swasa Roga</i>

**Respiratory disease:** the two important sorts being bronchial asthma and chronic obstructive pulmonary ailment.

**Kidney disorder:** frequently develops as a hassle of different clinical conditions including diabetes, excessive blood pressure, urinary tract infections, and drug use. [30]

**North -West or Vayavya:** the direction between the west and north is *Uttara Paschima* or *Vayavya*.

**Nature of Wind:** It possesses the *Prasastha*, *Kasaya*, *Samsuskshma* quality. It is mentioned as the most wholesome *Vayu*.

**Disease Prevalence:** Prevalence of ulcerative colitis (UC), Crohn’s disease (CD) and inflammatory bowel disease unclassified (IBDU). [31]

**North-East or Ishan:** The direction between the north and east is *Uttara Purva* or *Ishan*.

**Nature of Wind:** It possesses the *Sitala* and *Chanchal* quality.

**Disease Prevalence:** The North-East wind produces the *Kapha* and *Vayu* provocation, not suitable for *Kshya* and *Swasa Roga*. [28] Prevalence of asymptomatic gallstone disease changed into determined in 6% apparently wholesome subjects of North-East a part of Bangladesh. It turned into greater conventional amongst housewives and center magnificence institution of population. It is also commonplace many of the human beings of age organization underneath 40 years. [32]

According to *Bhavprakash*, the direction of *Vayu*, their attributes and prevalence of diseases caused by the flow of wind has been furnished in table-III [3]



**Table -III**

Direction of Vayu	Attributes	Prevalence of disease
South	Swadu, Laghu, Sita Virya	Rakta, Pitta Prashamaka, Good for eye, Vata Samak
West	Tikshna, Rukshma	Mitigates Meda, Pitta and Kapha Aggravates Vayu
North	Sita, Snigdha, Madhura, Mridu	Aggravates Doshas Bestows strength to healthy persons
South- East Agneya		Burning sensation and dryness
South- West Nairit		Does not cause burning sensation
North-West Vayabya	Bitter	
North-East Ishan	Pungent	

**Upper Direction or Brahmi:** the upper direction or *Urdhwa Dika*. **Disease prevalence:** Peoples of mountainous places or *Pravata* and their neighboring locations are employing nature itself liable to seize Cataract or *Avishyandi*, the typical disorder in them. [17] Cataract, nighttime blindness, glaucoma, strabismus, and systemic sicknesses changed into 74.6%, 53.4%, 17.4%, 70.8%, and 46.5%, respectively. [34] **Downward Direction: Nagi**” the downward direction or *Adaha Dika*. **Disease Prevalence:** Fish tapeworm parasites due to *Diphyllobothrium latum*. The biggest parasite found in people. In the human intestine, a fish tapeworm can devour 80 to 100 percent of

the host's nutrition B12. A vitamin B12 deficiency or pernicious anemia is a maximum debilitating effect. The liver fluke, resulting from *Clonorchis sinensis* and transmitted via the ingestion of raw, dried, salted, pickled, or undercooked fish. Snails, carp, and over forty additional species of fish have been acknowledged to be intermediate hosts to this fluke. In the human, it inhabits the bile ducts of the liver, causing the liver to turn out to be enlarged and gentle. [35] The specific features of individual in respect of geographical area and the respective prevalence of disease have been furnished in table – IV [14], [36]

**Table –IV**

Specific features	Geographical area with disease prevalence
Place of Birth	A global pathogen occurs in seasonal epidemics in parts of Africa – the so-called meningitis belt. Pilgrims carried an epidemic strain of <i>meningitidis</i> from southern Asia to Mecca.
Growth and affliction to disease	Demographic elements (e.g., length and density of populace will no longer support sustained transmission of diseases which include measles)
Features of food consumed	Commercial movement of fruits and vegetables redistributes resistance factors along with the microbes.
Exercise	Explains the strength of specific individual of specific geographical region.
Customs	Social and behavioral factors (e.g., absence of activities including drug use and unprotected intercourse with more than one partners) unfold of HIV.
Strength	Disease–ailment interactions also can alter the epidemiology of infections. Visceral leishmaniasis has turn out to be an essential contamination in HIV.
Mental condition	Persons living in areas of high transmission may be unaware of the presence of high levels of transmission, although nonimmune, older people (such as travelers) who enter the environment may develop severe, and occasionally fatal, infection.
Homologation by habitat	Travel and trade are key features in the epidemiology of the infection <i>Cyclospora</i> , a cause of gastroenteritis.
<i>Doshika</i> condition	Genetics of human populace, making it genetically resistant or pretty resistant. Immunity of human populace, making it no longer prone because of beyond infection with same or associated microbe or via vaccination capsules or vaccines injected
Habituation	Increasing urbanization, specifically in tropical areas, which has furnished big, dense populations; the use of non-biodegradable and other boxes that make best breeding sites for the mosquito.

## DISCUSSION

Geographical environment is essential in assessing the interrelations inherent in many health-associated danger exposures consisting of the association of health offerings and the region and nature of environmental exposures. The improvement of effective public health coverage is primarily based on evidence via the enlightened pathway of *Ayurveda* through the knowledge of the ailment hazard elements which include genetics, lifestyle, environment, and career interact with the social, built, and natural environments. Natural environment changes their climate in different seasons. In different seasons natural breeze changes their directions as in *Sisir Ritu* natural breeze will flow from *Purba Disha* in *Hemanta Ritu* from *Agneya Disha*, in *Vasanta Ritu* from *Dakshin Disha*, in *Grishma Ritu* from *Nairita Disha*, in *Varsha Ritu* from *Paschim Disha* and in *Sarat Ritu* from *Vayavya Disha*.<sup>[28]</sup> The effect on the human being producing the *Chaya* or accumulation of *Dosa*, *Prokopa* or provocation of the *Dosa* and *Prasama* or pacifying the *Dosa*. In *Sisir Ritu Kapha Dosha* will be in *Chaya* Stage, in *Vasanta Ritu Kapha Dosa* in *Prokopa* stage, *Grishma Ritu Vata Dosa* in *Chaya* Stage, in *Varsha Ritu Pitta Dosa* in *Chaya* and *Vata Dosa* in *Prokopa* stage, and in *Sarat Ritu Pitta Dosa* in *Prokopa* and *Vata Dosa* in *Prasama* stage.<sup>[37]</sup> The ailment hazard elements will lead to produce the *Visama Jwara* and changing of the environment leads to generate their verities as *Satata* (double quotidian fever) is due to *Agneya* (South-East direction), *Dwitiyaka* (*Anyedyuska* i.e., quotidian) is due to *Vayu* (North-West direction), *Trtiyaka* (tertian) is due to *Vaiswadeva* (all the gods collectively) and *Chaturtha* (quatrain) is due to *Ishna* (North-East direction).<sup>[38]</sup> From astronomic point of view, planet earth is moving around the earth's axis (rotation) and around the sun (revolution). They cause certain effects on earth. Consequences of rotation to the change of day and night, and the consequences of the revolution to earth are unequal length of day and night (in one place), the change of seasons and schedules of thermal zones as hot zone, two temperate zones and two cold zones.<sup>[39]</sup> Because

of geographical competencies that distinguish certain regions of the earth with heat weather, cold climate, excessive humidity, dry lands, polluted water, shortages of meals, and plenty of others. Appearance of positive illnesses via traditional geographical distribution that is geographically placed in the tropical and subtropical areas. Examples regarding the distribution of prevalence of ailment for a few particular places are provided right here through the contemporary medical reference as the *Plasmodium falciparum* is the maximum commonplace cause of malaria. Malaria is dependent on the geographical distribution of mosquitoes as its providers. African *trypanosomiasis* (sleeping sickness) is a parasitic disease transmitted by way of tsetse fly which exists handiest in sub-Saharan Africa; Dengue fever is due to dengue virus and is transmitted via mosquitoes from the type *Aedes aegypti*. Those mosquitoes normally live at a range 35 ° north and south of the Equator and on an altitude of 1000m. It is spread in tropical and subtropical regions of critical and south the United States Southern Africa Southeast Asia and Oceania. Japanese encephalitis (JE) is induced by using an endemic that spreads with inflamed *Culex tritaeniorhynchus* mosquitoes. In temperate areas of Asia (China, Japan, the Korean peninsula, and eastern components of the Russian Federation) it happens seasonally, within the summer season and in the rainfall. More often than not more in Bangladesh, components of India and Pakistan, Cambodia, Laos, the Philippines, and other nations. Every year approximately 60000 people are infected and half of them are in China. River blindness is a parasitic sickness through the bug *Onchocerca volvulus* and transmitted by way of inflamed black flies (*Simulium* spp.). In rural areas along the short rivers and streams, especially in West Africa. extra than 99% of infected humans stay in 31 international locations in sub-Saharan Africa, Angola, Benin, Burkina Faso, Burundi, Cameroon, principal African Republic, Chad, Ethiopia, Gabon, Ghana, Guinea, Pellagra is a sickness that happens because of a continual loss of niacin (nutrition B3) within the food plan. Signs of pellagra are excessive sensitivity to

sunlight. Pellagra existed in China, Indonesia, Korea, and Africa. Beriberi is an ailment because of nutritional deficiency of nutrition B1, thiamine. Especially occurs in regions wealthy with rice (East, Southeast, and South Asia), where rice is a chief food product. Geographical influence is not restricted within the limits of prevalence of disease; rather it is also important in the section of drug collection and proper storage. Land of Himalayas is fine habitats of medicinal plant life. Medicinal plants, for producing amazing healing effects, should be collected from places of *Sadharana-Desha* or forests of normal land or *Jangala-Desha* or dry land forests. plants ought to have been exposed to seasonal bloodless, solar, wind, rain as it should be and need to have grown over plains and easy land surrounded through water reservoirs. Plants need to not have been grown in a crematorium, *Caitya* or sacred tomb, prayer ground, meeting ground, pits, parks, ant hills and saline soil and the land must have enormous increase of *Kusha* and *Rohisa*. The soil must be unctuous, black in colour and sweet in taste or golden in shade and sweet in taste; and the land have to not have been ploughed and there have to not be other massive timber within the location overshadowing the medical plant life. <sup>[9]</sup> The gathered plant merchandise ought to be stored in appropriate containers nicely covered with a lid and hung on a swing. The storeroom needs to have doors dealing with in the direction of the east or the north. The room has to be proof against the wind or storm and there need to be simplest one window for air flow. Flower-offerings and sacrificial rituals need to be carried out in the storeroom every day. It needs to be free from hazards of hearth, water, moisture, smoke, dirt, mice and quadrupeds. <sup>[40]</sup>

## CONCLUSION

The earth is separated into regions, feature for a specific ailment due to geographical or social events. *Jangala Desha* is usually appropriate for health and diseases factor of view than *Anupa Desha*. For remedy *Desha* or *Disha* additionally consists of each the geographical and physical location of the disorder involved. The history of man is marked using numer-

ous epidemics pandemics and lethal illnesses that plagued a few of the populace. By way of analyzing certain factors and the geographical surroundings elements and their impact on human health were allotted regions and regions with the most frequent occurrence of certain diseases. To reduce the ailment incidence, it is recommended for the humans for whom disorder frequently develops in marshy places, it has to be dealt with the medicine growing in wild locations. If it does not get pacified with this, he has to also go to vicinity. The identical is repeated for the country wherein is the disease-free-country, the identical are the kith and kins who regardless of going do no longer to move and are properly-wisher to him. Some illnesses in geographical distribution are still found in epidemic proportions. Scholars of *Ayurveda* have directed to use *Ahara* (weight loss plan) and *Vihara* (existence fashion) *Ausadha* (drug) opposing to *Desha*. The conclusion may additionally proceed through the concept of the influence of Geographical environment on health and prevalence of diseases through the manner of *Ayurveda* could be very essential and should be stored in thoughts on the equal time as making plans for treatment of an affected person or research task and framing the health policies too.

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