BACHELOR OF SCIENCE (TRAVEL AND TOURISM MANAGEMENT)

SEMESTER-II

GEOGRAPHY FOR TOURISM

BTT108

First Published in 2020

CHANDIGARH UNIVERSITY
Institute of Distance and Online Learning

Course Development Committee

Chairman
Prof. (Dr.) Parag Diwan
Vice Chancellor, **Chandigarh University, Gharuan, Punjab**

Advisors

Prof. (Dr.) Bharat Bhushan, Director – IGNOU
Prof. (Dr.) Majulika Srivastava, Director – CIQA, IGNOU

Programme Coordinators & Editing Team

Master of Business Administration (MBA) Coordinator – Dr. Rupali Arora **Master of Computer Applications (MCA) Coordinator –** Dr. Raju Kumar **Master of Commerce (M.Com.) Coordinator –** Dr. Aman Jindal **Master of Arts (Psychology) Coordinator –** Dr. Samerjeet Kaur **Master of Arts (English) Coordinator –** Dr. Ashita Chadha	**Bachelor of Business Administration (BBA) Coordinator –** Dr. Simran Jewandah **Bachelor of Computer Applications (BCA) Coordinator –** Dr. Manisha Malhotra **Bachelor of Commerce (B.Com.) Coordinator –** Dr. Minakshi Garg **Bachelor of Science (Travel & TourismManagement) Co-ordinator –** Dr. Shikha Sharma **Bachelor of Arts (General) Co-ordinator –** Ms. Neeraj Gohlan

Academic and Administrative Management

Prof. (Dr.) R. M. Bhagat Executive Director – Sciences	**Prof. (Dr.) S.S. Sehgal** Registrar
Prof. (Dr.) Abhishek Executive Director – Management	**Prof. (Dr.) Inderpreet Kaur** Director – IDOL
Prof. (Dr.) Manaswini Acharya Executive Director – Liberal Arts	

SLM SPECIALLY PREPARED FOR CU IDOL STUDENTS

Printed and Published by:

SCHOOLGURU EDUSERVE PVT LTD

B-903, Western Edge II, Western Express Highway, Borivali (E), Mumbai - 400066

Call Us:
+91 22 4896 8005

Mail Us:
corporate@schoolguru.in

For: CHANDIGARH UNIVERSITY

Institute of Distance and Online Learning

CONTENT

UNIT -1 BASIC INTRODUCTION

Structure

1.0 LEARNING OBJECTIVES

After studying this unit, you will be able to:

- State about and concept of geography
- Explain numerous terminologies of geography
- Discuss the brief history
- Describe the emergence of geography into modern period

1.1 INTRODUCTION

Geography, the study of the diverse environments, places, and spaces of Earth's surface and their interactions. It seeks to answer the questions of why things are as they are, where they are. The modern academic discipline of geography is rooted in ancient practice, concerned with the characteristics of places, in particular their natural environments and peoples, as well

as the relations between the two. Its separate identity was first formulated and named some 2,000 years ago by the Greeks, whose geo and graphein were combined to mean “earth writing” or “earth description.” However, what is now understood as geography was elaborated before then, in the Arab world and elsewhere. Ptolemy, author of one of the discipline’s first books, Guide to Geography (2nd century CE), defined geography as “a representation in pictures of the whole known world together with the phenomena which are contained therein.” This expresses what many still consider geography’s essence—a description of the world using maps (and now also pictures, as in the kind of “popular geographies” exemplified by National Geographic Magazine)—but, as more was learned about the world, less could be mapped, and words were added to the pictures.

Figure 1.1 Geography

To most people, geography means knowing where places are and what they are like. Discussion of an area’s geography usually refers to its topography—its relief and drainage patterns and predominant vegetation, along with climate and weather patterns—together with human responses to that environment, as in agricultural, industrial, and other land uses and in settlement and urbanization patterns.

Although there was a much earlier teaching of what is now called geography, the academic discipline is largely a 20th-century creation, forming a bridge between the natural and social sciences. The history of geography is the history of thinking about the concepts of environments, places, and spaces. Its content covers an understanding of the physical reality we occupy and our transformations of environments into places that we find more comfortable to inhabit (although many such modifications often have negative long-term impacts). Geography provides insights into major contemporary issues, such as globalization and environmental change, as well as a detailed appreciation of local differences; changes in disciplinary interests and practices reflect those issues.

1.2 GROWTH, DEPTH, AND FRAGMENTATION IN THE LATE 20TH CENTURY

Once the switch from inductive reasoning based on field evidence to deductive modeling and field-testing had been generally accepted within physical geography, change in that section of the discipline became more gradual and progressive rather than punctuated by significant advances. The last decades of the 20th century were marked by greater sophistication in modeling, data collection, and analysis—by a deepening of the discipline and a greater integration of its parts. Increasingly, physical geographers identified themselves as earth systems scientists, and their peer group became practitioners in a wide range of sciences, rather than other (especially, but not only, human) geographers. Physical geographers have retained distinctiveness in this wider enterprise through their abilities at handling spatial data and the problems of collecting and analyzing field data—skills increasingly deployed in large multidisciplinary projects.

Such continuity was not so readily apparent in human geography, whose practitioners have generated almost constant debate over its nature and methods without any one approach becoming dominant. As a result, human geography has become more fragmented than physical geography. This has been facilitated by continued growth in the number of practicing geographers, especially in the United Kingdom, where the discipline's popularity and strength in the universities has ensured the needed resources.

1.2.1 Influence of the social sciences

New practices in human geography have been closely linked to parallel changes in the social sciences, in some of which the quantitative-positivist approach has come under attack. The arguments were extended to the spatial-analysis approach with its geometric emphasis. By reducing all decision making to economic criteria, subject to immutable laws regarding least costs, profit maximization, and distance minimizing, geographers, it was claimed, were ignoring (even denigrating) the role of culture and individuality in human behavior. By proposing to use those laws as bases for spatial planning, they were simply reproducing the status quo of capitalist domination; and by assuming universal patterns of behavior, it was argued, they were patronizing those who chose to operate differently.

Stimulating and growing out of these arguments were three main strands of work. In the first, geographers led by David Harvey (who was Cambridge-trained but worked largely in the United States) explored Marxist thinking. This involved not only the workings of the economy—to which they added an important spatial dimension—but also the class conflict underpinning Marxian analyses and the consequent unequal distribution of power. The positivist aspects of locational analysis were attacked as largely irrelevant; they assumed constant conditions for economic decision making and, thus, universal laws of behavior, whereas for Marxist scholar's continuous change was the norm.

A popular alternative approach for some of a generally Marxist persuasion was critical realism. This accepts that there are general tendencies within capitalism but contends that they are only realized when implemented by individuals making decisions in local contexts: the profit motive is general, but individual entrepreneurs decide how to pursue it. The outcomes then change the local contexts—for example, by changing the maps of economic activity within which decisions are made, so that the contingent circumstances for future decisions also change—and there can be no general laws of outcomes, only of basic processes. This argument was forcefully made by the British geographer Doreen Massey. Furthermore, decision makers learn from the consequences of previous decisions. There is a continuous interplay between context and decision maker (or between structure and agency). Realists can explain why events have occurred—why a factory is located at a particular site—but not as examples of general laws of location. For them, explanation means accounting for specific events in context, relating how decision makers react to circumstances in order to meet imperatives within the constraints of their particular situations (what they know, what they believe their competitors will do, and how they manipulate that knowledge).

Marxist-inspired approaches to understanding spatial arrangements covered a wide range of issues, many relating to inequalities in society. Access to various goods and services—e.g., housing and health care—is a function of class position, not only locally and regionally but also nationally and internationally. The geography of development, embracing not only wealth and income but also the quality of life and life chances, reflects a global economic system that varies at several levels.

Marxism is more than a mode of analysis based on axioms regarding capitalist economic systems: it has an associated politics. Many geographers inspired by this approach in the context of the world situation in the 1960s and ’70s were attracted to the politics and adopted the term “radical geography.” Others accepted the power of Marxist-inspired analysis without also agreeing with the associated socialist agenda. From these twin positions, a more broadly based critical geography emerged that identified spatial problems of contemporary societies and their causes and promoted solutions, while at the same time meeting principles of social justice and ethical practice.

This critical geography also drew on a second strand of work, which developed out of writings on gender and the growth of feminist scholarship. Feminist geographers contended that geography was a male-dominated discipline whose concerns reflected masculinist epistemologies. Women were subordinated and largely ignored in geography, and feminists pointed out the gender divisions and campaigned to remove bias against women. In spatial science, for example, they showed how patterns of accessibility discriminated against women in labor markets, demonstrating how space had been manipulated to promote male interests and, in the process, had become part of society’s definition of gender roles.

Feminists also contended that gender is one of the multiple positions that individuals occupy within a society, rejecting the predominant class position at the core of Marxian analyses.

From this foundation emerged wider concerns with identity and positionality, embracing not only gender divisions but also ethnic and national distinctions, as well as sexual orientation and other criteria on which individuals' identities are based—such as the position of those in postcolonial societies. Thus, gender had to be subdivided to recognize the different positions (and politics) of white and black women, of women in societies with developed and developing economies, and in various religions. Appreciating those divisions—plus the many hybrid positions that emerge through, for example, the mixing of peoples in multiethnic cities—requires appreciating discrimination and difference. To many, this cannot be achieved by the abstract theorizing of either spatial science or Marxian analysis. It requires interpretative methodologies aimed at understanding through empathy, gained through a variety of qualitative research methods, such as participant observation, focus groups, in-depth interviewing, and the examination of archived resources. These enable access to not only how people interpret their place in the world and act accordingly but also to how they create worlds within which to act, at all spatial levels from the smallest (their individual bodies) outward.

An example of such analyses is critical geopolitics. Political geography was a marginal subdiscipline for several decades after World War II, with geopolitical thinking disparaged because of its association with the work of geographers in 1930s Nazi Germany. Its revival involved regaining an appreciation of how influential political thinkers and politicians develop and propagate mental maps of the world as structures for action. These mental maps are created by key thinkers, adopted by politicians, and disseminated by various media. They form contexts for developing political strategies and determining tactics, to which the wider population's attitudes are molded. The world of politics is a world of mental maps and of dominant views that underpin behavior: we act in perceived worlds that intersect with, but are often more powerful than, real worlds, which are composed of physical phenomena.

Such work came to be associated with another major development in the social sciences: postmodernism. This concept maintains that there are no absolute truths, so no grand theories can provide universal explanations and guides to action. Truths are the beliefs on which people act, and there are multiple truths of which none can claim primacy, although the value of competing truths in any context can be assessed ethically, according to local conceptions of right and wrong. People learn their truths from others—through either direct or indirect sources. Therefore, much learning takes place in contexts, and, since most people live relatively spatially constrained lives, those contexts are territorially defined. They are the places and areas within which people interact and learn—their homes and neighborhoods, their schools and universities, their workplaces, and the formal organizations in which they participate—and that they create and maintain through local interactions.

This appreciation of the role of context put the concept of place on Centre stage in much human geographical research, displacing space from the primary position it occupied for several decades. It differs from the former regional tradition in which environmental features

dominated. Places are defined more fluidly: they are made, remade, and dissolved by people; they may overlap, or they may be bounded and defended. Places occupy core positions in human existence and everyday lives. People learn attitudes and behavior patterns in places where they interact with others and to which they ascribe meanings—a theme developed by humanistic geographers over several decades, as in books on topics such as Topophilia: A Study of Environmental Perceptions, Attitudes, and Values (1974), by Yi-fu Tuan. Their identities and their politics are associated with the nature of their places. As people learn and change themselves, so too do they change their environments. Furthermore, as critical geopolitics illustrates, such place making involves not only creating an identity for one's home area but also separate identities for those of other areas. Geographers have been stimulated by Edward Said's Orientalism (1979), which portrays how Western societies created images of the East in opposition to themselves. These images, portrayed in literature and other media, are the basis for attitudes toward many non-Western cultures, presenting "the other" as not only different but also inferior and thus not deserving equal treatment and respect—as was exemplified in Derek Gregory's seminal The Colonial Present: Afghanistan, Palestine, Iraq (2004).

This revived interest in places is a feature of the third contemporary strand, with geographers engaged in the field of cultural studies, which encompasses scholars from the humanities and social sciences studying human action in context. Such work ranges over many aspects of behavior, including the microscale of the individual body, and seeks to understand the meanings that underpin actions—many of which are never recorded during the processes of everyday life—and how communities and groups identify with places and spaces. The relationships between people and nature are also being reconsidered, breaking down artificial boundaries between these long-considered opposites. New approaches for interrogating actions are being explored: geography quite literally studies where events take place, and the impact of those events is reflected in places' characters. Indeed, such is the contribution of geography to cultural studies that some identify a "spatial turn" within the humanities.

1.2.2 Linking the human and physical worlds

There has also been an increasing stream of work on the interactions between human societies and physical environments—long a central concern for some geographers, as illustrated by Clarence Glackens's magisterial treatment of Western interpretations of nature in Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century (1967). Human abuse and despoliation of the environment are important themes introduced in their modern context by a pioneering American conservationist, George Perkins Marsh, in Man and Nature (1864), but they were minor concerns among most geographers until the late 20th century.

One significant example of work on the interaction of human society and nature was stimulated by Gilbert White, a geography graduate of the University of Chicago. White

returned to Chicago in the 1950s to lead a major research program on floodplains and their management, assessing people's views of the risks of floodplain use and evaluating the influence of flood insurance on their actions. From that foundation, White and his coworkers pioneered research into a wide range of environmental hazards and risk taking and the development of sustainable environmental management strategies, and they were also involved in government and international agency programs.

When environmental concerns moved to Centre stage politically and publicly in the 1970s, relatively few geographers were working on society-nature interrelationships; topics that they considered within their discipline's purview were being commandeered by biologists, earth scientists, and sociologists, for example, and new subject areas such as environmental history. Over time, four main themes—environmental influences on human activities, the impact of humans on environmental processes, environmental conservation, and environmental management—formed a growing corpus of geographical work on environmental issues. One area of interest has been environmental attitudes and ideologies and environmental meanings and understandings within different societies. Others have studied environmental politics, environmentalism as a basis for political action, environmental policy making, policy assessment (as with environmental risk analyses), and the role and interpretation of environmental risks and hazards in human decision making.

Some see the environmental focus as a means not only of establishing the relevance of geography to pressing public concerns but also of reintegrating physical and human geography. There has been some coming together but little close engagement between the two subdisciplines, largely because they define knowledge quite differently. The scientific foundations of modern physical geography sit uneasily with the qualitative and critical research methods of many human geographers. Nevertheless, interest in the society-nature nexus has increased and has given the discipline a clear identity within the sciences.

1.3 THE CONTEMPORARY DISCIPLINE

The academic discipline of geography is extremely broad in subject matter and approaches; it contains specialists covering diverse subjects but sharing concerns over places, spaces, and environments. Indeed, the discipline is now fragmented into a substantial number of separate subcommunities among some of which there is relatively little contact. The Association of American Geographers has more than 50 separate specialty groups, for example, catering to its members' particular interests. Some physical geographers have stronger links outside their discipline than within it. The International Geographical Union—based in Rome at the "Home of Geography," provided by the Italian Geographical Society—has some two dozen commissions and about a dozen study groups.

Given this diversity of interests, encapsulating the contemporary discipline in only a small number of categories is difficult. The main division continues to be between physical and

human geography, each of which contains subdivisions and even sub-subdivisions.

1.3.1 Physical geography

Since the reorientation after 1970 of physical geography to the study of systems of natural environmental processes, there have been major changes in both research and teaching. Much research now involves large, tightly focused collaborative programs of careful measurement, modeling, and analysis. It is much more demanding and expensive in resources than previously: equipping field expeditions and laboratories and learning related techniques necessarily generates specialization. This is facilitated and integrated by major international interdisciplinary programs, such as those associated with the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the European Union (EU), as well as national research councils and major government research bodies such as National Aeronautics and Space Administration (NASA). Typical of this shift has been the relative demise of the study of landforms. There are now two main research communities within geomorphology: those who study contemporary processes and those who investigate environmental change and landscape evolution since the beginning of the Quaternary Period (about 1.8 million years ago).

The importance of water in erosion plus the transport and deposition of sedimentary materials is reflected by work in geographical hydrology. This relative emphasis on water in contemporary physical geography undoubtedly indicates the concentration of English-speaking geographers working in temperate latitudes. There is also substantial work in glaciology, reflecting ice's role in creating many current temperate environments, as well as—especially in the case of polar ice—in contemporary climatic change. Similarly, much work is being done on dryland areas, a consequence of political as well as intellectual interest in desertification and land degradation.

Other areas of the natural environment attract less attention. There are few large research teams in biogeography. Remotely sensed data are used to map land cover, however, to estimate biomass and model ecosystems for work on biodiversity and the carbon cycle, and to chart disturbances generated both naturally and by human-induced events (e.g., bushfires). The geography of soils is only a minor field of study, with some work on erosion and reclamation. Advances in climatology involve extremely large-scale computer modeling from global to local focus, based on understanding atmospheric physics and meteorology; relatively little of this involves geographers, whose main contributions concern physical, synoptic, and applied climatology and climatic impacts (i.e., on agriculture). These three subdisciplines remain part of many geography degree programs, however; indeed, geography departments offer more introductory work on various aspects of the environment, at all scales, than do most other sciences.

Physical geography now concentrates on the Earth's surface processes, therefore, involving field and laboratory investigations of contemporary processes and the reconstruction of past

environments, especially the relatively recent past (which includes collaboration with archaeologists). These are integrated in research programs into past, contemporary, and future environmental changes. Concern about global warming and climate change, sea-level changes, extreme environmental events, and the loss of biodiversity stimulated modeling of environmental systems involving the interactions among the Earth's hydrological, ecological, and atmospheric components. Building large models of these systems and their complex interrelationships involves teams seeking not only to understand their operations but also to predict environmental futures as bases for public policy making at global, international, national, and local scales. Research reconstructing past environments puts current processes and changes into longer-term perspective.

The methods employed by physical geographers are those of environmental scientists more generally; knowledge of relevant work in physics, chemistry, biology, and mathematics is necessary, and applications increasingly involve working with engineers. Geographers have developed particular areas of expertise within environmental science, as with the analysis of remotely sensed data. Processing the massive databases produced daily involves major geo-computation expertise to address these questions: What is where? How much is there? What condition is it in?

1.3.2 Human Geography

Since 1945 human geography has contained five main divisions. The first four—economic, social, cultural, and political—reflect both the main areas of contemporary life and the social science disciplines with which geographers interact (i.e., economics, sociology, anthropology, and political science and international relations, respectively); the fifth is historical geography. All five have remained central, being joined in the mid- to late 20th century by concentrations on particular types of areas, notably urban. Research interests in specific regions have declined, and relatively few geographers now identify themselves as experts on a particular part of the world.

Economic geography has a long pedigree. Its traditional focus has been the distribution of various productive activities—with subdivisions into, for example, the geography of agriculture, industrial geography, and the geography of services—and patterns of trade such as transport geography. Such concentrations were strengthened by the move into spatial analysis. Relatively little work in that mold is now undertaken, however, and the models of idealized economic landscapes that dominated in the 1960s and '70s are now rarely deployed or taught. Part of the change reflects economic shifts, notably the extension of globalization. Transport costs have decreasing significance for many location decisions, relative to labor and other costs. Instead, the decision making of transnational corporations dominates the changing global pattern of activity, reflecting a wide range of political as well as economic concerns regarding the profitability of investing in different countries and regions. Much contemporary work studies company locational decision-making processes, the regulatory

regimes of individual states (including policies designed to attract and retain investment), and their impact on the pattern of economic activity.

Economic and cultural worlds are closely intertwined. Many individual economic decisions in advanced industrial countries—e.g., what to buy, where to eat, and where to take vacations—reflect not needs but rather culturally induced preferences, which change rapidly, in part responding to advertising and media discussions of tastes and fashions. To some commentators, this generates a significant shift in the major features of capitalist production and consumption. It is moving away from mass products manufactured on large assembly lines toward myriad small niche markets with factories having relatively short production lines and rapid changes in the details of their products. Economic geographers investigate how markets for goods and services are culturally created and changed and the implications for both where production occurs and where jobs are created and destroyed.

Political geography also has a considerable pedigree, although it attracted little attention during the mid-20th century. Its main concerns are with the state and its territory—with states' external relations and the relationships between governments and citizens. The geography of conflict incorporates both local conflicts, over such matters as land use and environmental issues, and international conflicts, including the growth of nationalism and the creation of new states. Electoral geography is a small subfield, concerned with voting patterns and the translation of votes into legislative seats through the deployment of territorially defined electoral districts.

Social geography concentrates on divisions within society, initially class, ethnicity, and, to a lesser extent, religion; however, more recently others have been added, such as gender, sexual orientation, and age. Mapping where different groups are concentrated is a common activity, especially within urban areas, as is investigating the related inequalities and conflicts. Such mappings are complemented by more-detailed studies of the role of place and space in social behavior—as with studies of the geography of crime and of educational provision—and in how mental representations of those geographies are created and transmitted.

Other subdisciplines associated with social geography are sometimes seen as separate. Population geography is largely concerned with the three main demographic characteristics of fertility, mortality, and migration; investigations using census and other data are complemented by detailed case studies of decision making, such as whether and where to migrate and how relevant information is received and processed. Medical geography focuses on patterns of disease and death—of how diseases spread, for example, and how variations in morbidity and mortality rates reflect local environments—and on geographies of health care provision.

In its original manifestations, cultural geography had close links with anthropology, especially in the work of Sauer's Berkeley school. This has been superseded by a wider appreciation of the interrelationships among people and societies as well as between people and their environments. Cultures are sets of beliefs transmitted in various ways. Many

involve texts, not only written but also visual and constructed (e.g., works of art and architecture) and aural (e.g., soundscapes); some may never be recorded but are transitory moments in people's movements and expressions. Interpreting them involves deconstructing what people say and do, activities that bring geographers into contact with the humanities as well as the social sciences in developing appreciations of meanings in texts and actions, including the landscapes and townscapes—large and small, personal and intimate, as well as grand and public—created in the process.

Places are central to this diverse range of contemporary work, especially in the study of cultural change, which involves mixing people from different backgrounds and areas as they move through space. Cultures are fluid and continually renegotiated, as are the spaces they create and occupy. Many negotiations involve conflict and the exercise of power—for example, the imperial strategies in the construction of 19th- and 20th-century worlds and postcolonial responses to others' worldviews imposed on them.

One of the most popular fields of study from the 1960s to the '80s was urban geography, under the banner of which much pioneering work in the locational analysis approach was conducted. Cities and towns were field laboratories for testing models of least-cost decision making. When those models were dismissed as oversimplifying complex realities and the search for spatial laws about cities declined, interest turned to contemporary concerns regarding urban areas and life. Cities are major globalization nodes, economic power being centralized in a small number of world cities (London, New York City, and Tokyo are usually placed at the top of city hierarchies).

Given that the majority of people in the industrialized world live in cities, it is not surprising that urban geography has received much more attention than rural geography. Relatively little work was done on aspects of rural areas other than agriculture before the 1970s, just when, according to some, much of the particularity of rural areas was disappearing as many features of urban society were reaching into the countryside. To others, however, issues unique to rural, low-density areas call for a separate rural geography; although typical urban problems such as poverty, homelessness, social exclusion, and access to public facilities are also characteristic of rural low-density areas, particular issues there include the society-nature relationships, common images of the "rural," and the role of tourism in reinvigorating rural economies.

Historical geography has retained its identity and distinction, although historical geographers have not distanced themselves from changes elsewhere in the discipline, with which their focus on interpreting the past from available evidence resonates. The developments in locational analysis stimulated some new ways to study available data. For others, the later developments, especially in cultural geography, coincided with their deployment of a wide range of nonquantitative sources to reconstruct the real and imagined, as well as the abstract (spatial analysis), worlds of the past; issues of postcolonialism have attracted the attention of historical geographers as well as those interested in current cultural issues. Detailed analyses

of particular places and times are complemented by major syntheses—such as Donald Meinig's four-volume The Shaping of America: A Geographical Perspective on 500 Years of History (1986–2002).

A great range of sources is now used in such endeavors, not only maps but also, for example, travelers' writings about worlds they have encountered. Within this enterprise is a rejuvenated interest in the history of geography itself, not merely as a means of better appreciating where the discipline has come from but also of illustrating the importance of place and context in its evolution; geography, like so much else, is a range of practices that emerged and evolved in response to local stimuli. Geographers have produced particular forms of knowledge that have been significantly influenced by how people have encountered the world.

1.3.3 People and the environment: the physical and the human

Historical geographers have long investigated landscape change. Their work now informs investigations of global environmental changes as well as illustrating past human-induced environmental modifications. Other research evaluates contemporary environmental changes and their implications not only for environmental futures but also for individual life chances.

Such studies occupy the intersection of physical and human geography, although relatively little work involves collaboration among human and physical geographers. For the latter, it involves incorporating human-induced changes to models of environmental processes and systems. Human geographers' concerns range widely, from pragmatically applied work on environmental policy and management through political ecology to explorations of culture-nature interrelations.

1.3.4 Methods of geography

Changes in what a discipline studies are closely interwoven with changes in how its research is undertaken. Some substantive changes have been technologically driven: without new facilities, advances would not have been possible, perhaps not conceivable. In others, technical developments were responses to the research questions.

Physical geography has experienced two parallel sets of methodological changes since 1970. The first involved closer alliances with other scientific disciplines, engaging with the physical, chemical, and biological bases for understanding physical matter and processes together with the mathematical methods necessary for their analysis. The second involved technical developments in field and laboratory measurement and data analysis. These two have come to pervade all work in physical geography, which has become technically sophisticated and whose progress has depended almost entirely on such skills.

Virtually all work in physical geography shares a belief in what is known as the "real" world—that which can be observed, measured, and generalized upon, even if the appreciation

of particular events and landforms requires setting general principles within particular contexts. The laws of physics can be used to generalize about atmospheric processes, for example, but only an appreciation of how they interact in specific, local circumstances can account for the weather at a place on a given day. Immanent laws operate in local, contingent circumstances, involving highly complex interactions whose analysis requires sophisticated mathematical skills in analyzing nonlinear, often chaotic, relationships.

A much wider range of approaches is deployed within human geography; different theories of knowledge and reality inspire different types of work. The tenets of positivism still underpin some work in many areas: there is order in the world that can be observed, measured, analyzed, and generalized, even if there are no general laws of human behavior awaiting discovery. Other work is based on theories of knowledge that claim an inseparability of observer and observed (or subject and object) and dispute the existence of real worlds independent of their inhabitants' imagined worlds. We cannot apprehend an external world but only perceived worlds. Geographical research based on these premises deploys means of identifying those worlds, the processes involved in their creation, and the behavior within them. It then has to transmit that derived understanding to others—what is sometimes termed a "double hermeneutic."

These various approaches pervade most of contemporary human geography. With the exception of cultural geography, quantitative methods are used to analyze and identify regularities in data sets large and small, taking advantage of technical advances, such as with methods of artificial intelligence for classifying individuals and areas.

Nonquantitative approaches can be found throughout the various subdisciplines. These involve obtaining information in rigorous ways from individuals regarding their mental maps of the world and how these underpin behavior. Means of interviewing individuals and groups to elicit information dominate the qualitative procedures that involve interpersonal interaction. Research material is also sought in a variety of other ways, though, for example, participant observation in case studies of communities and events. But information gathering extends well beyond interacting, directly or indirectly, with living people. Learning about the roles of places, spaces, and environments in the lives of individuals, groups, communities, and even entire societies near as well as far and past as well as present involves interrogating many information sources. Most common are written texts, analyzed for the meanings they can reveal. Other documents, such as maps, also reveal much, as do works of art. Ways of deconstructing meanings are commonly used in cultural and historical geography and in other subdisciplines too, as with the meanings attached to exotic foods in economic geography.

Research involves not only observing, recording, and analyzing the world but also transmitting acquired understandings and explanations to others. In quantitative analyses, this involves using mathematical notation and procedures—a language that many claim is unambiguous but whose use nearly always involves interpretation in vernacular languages, with meanings often contested. In qualitative work, nearly all of the reporting is done through

the medium of written language. Having studied texts to reach understandings, researchers then deploy the same media to present them to others and thereby place their readers in the same situation of having to derive meanings from the textual material. The research process thus involves continued interpretation and reinterpretation of textual and other materials, including research reports. Unlike the apparently incontestable clear statements of quantitatively expressed research findings, research in much contemporary human geography involves continued debate over meanings and interpretations.

One tool long considered central to geographical work is the map. Automation of map production has been accompanied by a decline of research in this area; one of the few continuing fields concerns map legibility—the degree to which different symbols and shading succeed in transmitting messages. Its replacement as a central tool is GIS, a visualization medium with massive capacity for facilitating a wide range of research investigations. It offers not only sophisticated procedures for manipulating spatial data but also new ways of presenting visual data, including three-dimensional images of the world, at all scales. Geographic information science incorporates the traditional disciplines of cartography, geodesy, and photogrammetry with modern developments in remote sensing, the Global Positioning System (GPS), geo-statistics, and geo-computation in activities that bring forward geographers' eternal interest in maps as sophisticated means of representing, analyzing, and viewing the Earth's great diversity.

1.3.5 Applied geography

One area that some have set apart from the various sub-disciplinary divisions concerns the application of geographical scholarship. Geography was always applied, long before it became an identified academic discipline; much geographical knowledge was created for specific purposes. Since the discipline was established, individuals have used their knowledge in a wide range of contexts and for various types of clients. Outside of universities, some of those trained as geographers have applied their skills in a range of sectors; the U.S. State Department had an Office of the Geographer for much of the 20th century, for example, providing the president with daily briefings.

For the first half of the 20th century, the development of geography as an academic discipline was closely associated with its educational role, especially in the preparation of teachers and of teaching materials. Increasingly, however, geographers responded to societal changes—especially the extending role of the state—by promoting their discipline as a potential contributor in a range of activities. Some, like L. Dudley Stamp, argued that geographers' factual knowledge regarding environments and places plus their understanding of spatial organization principles should be applied in town, city, country, and regional planning. This could just involve information provision, but increasingly it was argued that geographical analyses could inform the understanding of current patterns and trends and the preparation of plans for the future.

Such geographical involvement expanded in the late 20th century as pressures grew on universities to orient their work more to societal needs and to undertake applied research for public- and private-sector sponsors. Within human geography, for example, the locational analysis paradigm was adapted to commercial applications. Models of least-cost (and hence economically most efficient) location were used to predict the best sites for facilities, such as supermarkets and hospitals. Classifications of residential areas within cities were adapted to identify districts dominated by people with particular lifestyles toward which niche-market advertising could be directed; this substantial activity is widely termed geodemographics. Qualitative research findings and methods have been deployed in resolving conflicts over proposed land uses at particular sites.

Physical geographers' understanding of environmental processes has been directed to applied ends to meet concerns over environmental issues; much public policy takes these issues into account when pursuing goals such as sustainable development. Four types of applied work have been identified: description and auditing of contemporary environmental conditions; identification and analysis of environmental impacts, mainly of human action, actual and proposed; evaluation of the value of particular environments for specified future uses; and prediction and design of environmental works.

Some of these studies are relatively small-scale, such as tracing the diffusion of pollutants through water channels, identifying mineral deposits within local ecosystems, and monitoring local environmental changes and processes. Others involve larger-scale activities, such as models of climate change used to predict future ice-sheet melting, sea levels, and limits of cultivation of various plants. The scientific research may feed wider debates over policy formulation or may incorporate action plans—for conserving specific landscapes (such as wetlands or coasts) or managing a river catchment—as shown through the work of physical geographer William L. Graf, who chaired such interdisciplinary National Research Council studies as Strategies for America's Watersheds (1999) and Dam Removal: Science and Decision-Making (2002).

1.3.6 The geography of contemporary geography

The study of geography has changed considerably since its 19th-century institutionalization as an academic discipline, but several basic metaphors have been constant foundations of its endeavors. The first is of the world as a mosaic of patterns and forms, a complex map of myriad small areas with particular characteristics reflecting the interaction of environmental conditions and human activities. Much geographical scholarship has involved mapping that mosaic in all its variety and detail and conveying the observed areal differentiation of the Earth's surface to a wide audience. A second metaphor is of the world as a machine, comprising a large number of complexly interacting systems in which everything is both cause and effect; identifying and representing those systems is the basis for understanding cause and effect in environmental and human systems.

A third metaphor presents the world as an organism, in which the whole is greater than the sum of the parts but which, in turn, comprises a large number of subsidiary organisms and local regions with similar characteristics. Researchers have identified these organic elements, places in which the concurrent presence of various phenomena creates something more than just the sum of their parts—hence the French notion of characteristic genres de vie for each pays. Associated with this is the world as a text metaphor, in which the landscape is among the texts interpreted to appreciate its creators' intentions and cultures. Finally, and linked to the previous two, there is the metaphor of the world as an arena, with places as the contexts within which events occur: places are the contexts for learning and behavior.

These metaphors are not mutually exclusive, and combinations of one or more are common. They are the contexts—or worldviews—within which scholarship is undertaken. Their relative importance varies over time and space; geography is a wide range of related academic practices reflecting local conditions in which geographers (individually and collectively) respond to their contexts. There may be common features—concerns reflecting the key concepts of environment, space and place, for example, and concentration on particular metaphors—but also local emphases and absences. In pre-Soviet Russia, for example, physical geographers stressed climatic variations and their influences on soils rather than on landforms as was typical elsewhere, and during the Soviet era human geography was largely absent, with just a few economic concerns of relevance to national planning having been studied.

Much international variation in geographical practices is set within the map of separate language realms. Each major national school has influenced the practice of geography in a number of others, some through their imperial projects. German and French influences have been strong in different parts of the Iberian world: in Latin America, German geographers influenced early development in Argentina, with a Catalan geographer having considerable influence in Venezuela and a Spaniard inaugurating developments in Panama. Japanese geography initially reflected German influences, in part refracted through American interpretations, especially at Berkeley; after 1945, physical and human geography were almost completely separated in Japan, with American influence dominating the latter. There has been growing concern internationally regarding the dominant role of English—and hence geographers in Anglophone countries—in the discipline's discourse.

Even within individual language realms, however, significant differences between the United Kingdom and the United States reflect important local contexts, despite many commonalities reflecting the substantial interchange across the Atlantic during the last half century. A major basis of those differences is geography's role in their educational systems.

The paucity of geographic education in schools in the United States was highlighted in the second half of the 20th century by the geographical ignorance of many Americans. Changing this situation was a cause taken up by several bodies. In the 1960s and '70s the National Science Foundation funded programs to upgrade science teaching, which included the

American Association of Geographers' High School Geography Project. In the last decade of the 20th century, the National Geographic Society (internationally known for its National Geographic Magazine) committed substantial resources to promote geography in the country's schools, as well as launching a television channel to carry educational materials about human-environment interactions.

These major differences between the two countries are reflected in the pattern of specialisms within geography departments. In the United States, for example, there has been an increasing awareness that students can be attracted to undergraduate geography courses that provide training in marketable skills. Many departments have identified GIS as an important skills package, and increasing numbers of faculty appointments are of GIS specialists. In the United Kingdom such pressures are less, and cultural geography is more important; indeed, it dominates human geography in some departments, with spatial analysis having only a minor place in the curriculum. Furthermore, because geography degree programs in Britain are built on much deeper foundations of geographical exposure, there is less pressure to cover a full range of sub disciplinary specialisms. In addition, given the importance of prescribed research excellence in the funding of universities there, the current tendency is to build up specialist research teams in certain areas only.

There is thus a geography of geography as an academic discipline, as these national particularities are reproduced many times over. There are also differences within countries. Few departments (even the largest in the United Kingdom) cover the full range of the current subdisciplines in their teaching programs, for example, let alone in their research concentrations. Most specialize, reflecting the interests of senior staff at particular times in their development and institutional decisions on resource allocation. Thus, the practice of geography as an academic discipline itself reflects its own fundamental precepts. There are general features that apply to most geography programs but also particularities that reflect local characteristics and individual decision making. In geography, as in so much else, place matters.

In many ways, geography as practiced today is unrecognizable from the academic discipline that was being created at the end of the 19th century. And yet the underlying basic concepts—of environments, spaces, and places—remain at the disciplinary core. Geography continues to illuminate major aspects of the human condition through people's interactions with their natural and social milieux. The discipline was created to address issues of what is where and why. It still does just that.

1.4 EMERGENCE OF MODERN GEOGRAPHY

Some people have trouble understanding the complete scope of the discipline of geography because, unlike most other disciplines, geography is not defined by one particular topic. Instead, geography is concerned with many different topics—people, culture, politics,

settlements, plants, landforms, and much more.

What distinguishes geography is that it approaches the study of diverse topics in a particular way (that is, from a particular perspective). Geography asks spatial questions—how and why things are distributed or arranged in particular ways on Earth's surface. It looks at these different distributions and arrangements at many different scales. It also asks questions about how the interaction of different human and natural activities on Earth's surface shape the characteristics of the world in which we live.

Geography seeks to understand where things are found and why they are present in those places; how things that are located in the same or distant places influence one another over time; and why places and the people who live in them develop and change in particular ways. Raising these questions is at the heart of the "geographic perspective."

Exploration has long been an important part of geography. But exploration no longer simply means going to places that have not been visited before. It means documenting and trying to explain the variations that exist across the surface of Earth, as well as figuring out what those variations mean for the future.

The age-old practice of mapping still plays an important role in this type of exploration, but exploration can also be done by using images from satellites or gathering information from interviews. Discoveries can come by using computers to map and analyze the relationship among things in geographic space, or from piecing together the multiple forces, near and far, that shape the way individual places develop.

Applying a geographic perspective demonstrates geography's concern not just with where things are, but with "the why of where"—a short, but useful definition of geography's central focus.

The insights that have come from geographic research show the importance of asking "the why of where" questions. Geographic studies comparing physical characteristics of continents on either side of the Atlantic Ocean, for instance, gave rise to the idea that Earth's surface is comprised of large, slowly moving plates—plate tectonics.

Studies of the geographic distribution of human settlements have shown how economic forces and modes of transport influence the location of towns and cities. For example, geographic analysis has pointed to the role of the U.S. Interstate Highway System and the rapid growth of car ownership in creating a boom in U.S. suburban growth after World War II. The geographic perspective helped show where Americans were moving, why they were moving there, and how their new living places affected their lives, their relationships with others, and their interactions with the environment.

Geographic analyses of the spread of diseases have pointed to the conditions that allow particular diseases to develop and spread. Dr. John Snow's cholera map stands out as a classic example. When cholera broke out in London, England, in 1854, Snow represented the deaths per household on a street map. Using the map, he was able to trace the source of the outbreak to a water pump on the corner of Broad Street and Cambridge Street. The

geographic perspective helped identify the source of the problem (the water from a specific pump) and allowed people to avoid the disease (avoiding water from that pump).

Investigations of the geographic impact of human activities have advanced understanding of the role of humans in transforming the surface of Earth, exposing the spatial extent of threats such as water pollution by manmade waste. For example, geographic study has shown that a large mass of tiny pieces of plastic currently floating in the Pacific Ocean is approximately the size of Texas. Satellite images and other geographic technology identified the so-called "Great Pacific Garbage Patch."

These examples of different uses of the geographic perspective help explain why geographic study and research is important as we confront many 21st century challenges, including environmental pollution, poverty, hunger, and ethnic or political conflict.

Because the study of geography is so broad, the discipline is typically divided into specialties. At the broadest level, geography is divided into physical geography, human geography, geographic techniques, and regional geography.

1.5 CONCEPT OF GEOGRAPHY

Geography may be studied by way of several interrelated approaches, i.e., systematically, regionally, descriptively, and analytically. The important terms of Geography are classifiers tools for making sense of the world. These terms help us to plan geographically rigorous, engaging and challenging sequences of learning that will encourage careful and challenging thinking about a geographical topic. They are also the concepts central to a discipline that increasingly engages with the humanities as well as with the physical and social sciences.

1. **The Systematic approach** organizes geographical knowledge into individual categories that are studied on a worldwide basis.
2. **The Regional approach** integrates the results of the systematic method and studies the interrelationships of the different categories while focusing on a particular area of the earth.
3. **The Descriptive approach** depicts where geographical features and populations are located.
4. **The Analytical approach** seeks to find out why those features are located where they are.

1.6 VARIOUS GEOGRAPHICAL TERMINOLOGIES

An Island

It is any piece of sub-continental land that is surrounded by water. Very small islands such as emergent land features on atolls can be called islets, skerries, cays or keys. An island in a river or a lake island may be called an eyot or ait, or a holm. A grouping of geographically or geologically related islands is called an archipelago, e.g. the Philippines. A group of island is

called ARCHIPELAGO. Indonesia is the largest Archipelago in the world.

Peninsula

A body of land surrounded by water on three sides is called a peninsula. The word comes from the Latin paene insula, meaning "almost an island. The world's largest peninsula is Arabia, covering about 1 million square miles (2.6 million square kilometers). It is bounded on the west by the Red Sea, on the south by the Gulf of Aden and the Arabian Sea, and on the east by the Persian Gulf and the Gulf of Oman."

Figure 1.2 Peninsula

Strait

It is a naturally formed, narrow, typically navigable waterway that connects two larger bodies of water. It most commonly refers to a channel of water that lies between two landmasses, but it may also refer to a navigable channel through a body of water that is otherwise not navigable, for example, because it is too shallow, or because it contains an un-navigable reef or archipelago.

Isthmus

It is a narrow strip of land connecting two large land areas otherwise separated by the sea. Unquestionably the two most famous are the Isthmus of Panama, connecting North and South America, and the Isthmus of Suez, connecting Africa and Asia.

Gulf

It is a portion of the ocean that penetrates land. Gulfs vary greatly in size, shape, and depth. They are generally larger and more deeply indented than bays. Like bays, they often make excellent harbors. Many important trading Centre's are located on gulfs.

Cape

It is a high point of land that extends into a river, lake, or ocean. Some capes, such as the

Cape of Good Hope in South Africa, are parts of large landmasses. Others, such as Cape Hatteras in the U.S. state of North Carolina, are parts of islands. Peninsulas are similar to capes. Most geographers consider capes to be smaller than peninsulas. Capes are narrow features that jut into a body of water. Peninsulas can be large, and many are barely connected to the mainland at all.

Topography

It is a field of geosciences and planetary science comprising the study of surface shape and features of the Earth and other observable astronomical objects including planets, moons, and asteroids. It is also the description of such surface shapes and features (especially their depiction in maps).

Relief

In geography, "relief" refers to the highest and lowest elevation points in an area. Mountains and ridges are typically the highest elevation points, while valleys and other low-lying areas are the lowest.

Absolute location

A point on the earth's surface expressed by a coordinate system such as latitude and longitude

Aquifer

An underground reservoir of water which can be extracted for surface use.

Archipelago

A chain or set of islands grouped together

Atoll

A circular coral reef that encloses a shallow lagoon

Biosphere

The plant and animal life on the earth.

Caldera

A bowl-shaped circular depression caused by the destruction of the peak of a volcano. Crater Lake, Oregon is a caldera and not a crater.

Cartogram

A "map" that is a diagram used to present statistical information. A common cartogram shows the countries of the world with the size of the country representing its population.

Cartography

The art and science of making maps.

Census

An investigation or count of a population.

Climate

The long term trends in weather conditions for an area.

Continental drift

The current theory that the continents of the earth move across the earth on giant tectonic plates

Continental shelf

The extension of the continents into the ocean; continental shelf land would be exposed if sea level dropped.

Demography

The study of population statistics and trends, such as births, deaths, and disease

Density

The number of items per unit area, such as persons per square kilometer.

Desert

An area with little precipitation or where evaporation exceeds precipitation, and thus includes sparse vegetation.

Ecology

The study of the interrelationships between life forms and their environment.

El Niño Southern Oscillation (ENSO)

Periodic warming of the ocean waters in the eastern Pacific Ocean which affects global weather patterns.

Epicenter

The point on the earth's surface directly above the hypocenter, where the energy of an earthquake is first released.

Equator

Zero degrees latitude divides the earth into the Northern and Southern hemispheres.

Equinox

The beginning of autumn and spring, the two days each year when the sun is directly overhead at the equator.

Erosion

Forces that shape the earth's surface. Includes water, wind, and ice.

Estuary

The wide end of a river when it meets the sea; salty tidal water mixes with the freshwater of the river here

Fault

A fracture in the rock where there has been movement and displacement.

Geologic time

The calendar of the earth's history since its birth 4.6 billion years ago; geologic time is divided into eras, epochs, and periods.

Geology

Science of the earth's crust, strata, the origin of rocks, etc.

Glacier

A large mass of ice that moves over the land, carving and eroding surfaces as it moves

Global Positioning System (GPS)

A system of satellites and ground units which enable a user to determine their absolute

location.

Global warming

The theory that the temperature of the atmosphere an increase due to the increase in gasses such as carbon dioxide.

Globe

A spherical model of the earth's surface that includes a map of the earth; also known as a terrestrial globe

Greenhouse effect

The analogy used to describe the ability of gasses in the atmosphere to absorb heat from the earth's surface

Hemisphere

Half of the earth's surface. There are four hemispheres, Northern and Southern (divided by the equator) and the Eastern and Western (divided by the Prime Meridian and 180°).

Humidity

The amount of water vapor in the air.

Hurricane

A tropical storm that contains winds of at least 74 miles per hour (119km/h). Also known as a cyclone in the northern Indian Ocean and a typhoon in the western Pacific Ocean.

Hydrologic cycle

The circulation of water between the atmosphere, streams and land, the ocean, and back to the atmosphere.

Hydrosphere

The water of the earth.

International Date Line

An imaginary line near 180° longitude that exists to separate the two simultaneous days that exist on the planet that the same time.

Jet stream

The high-altitude high-speed air current in the tropopause.

La Niña

A periodic cooling of the ocean waters in the Pacific Ocean which affects global weather patterns.

Lagoon

A small, shallow body of water between a barrier island or a coral reef and the mainland, also a small body of water surrounded by an atoll.

Latitude

Angular degrees based on the equator; the equator is 0° latitude and the North Pole is 90° North while the South Pole is 90° south.

Lava

Magma that reaches the earth's surface through a volcanic vent or fissure.

Lingua franca
The language used by a population as their common language.
Lithosphere
The soil and rock layer of the earth.
Longitude
Angular degrees based on the Prime Meridian (0°) at Greenwich, London; degrees are east or west of Greenwich and meet in the Pacific Ocean at 180°.
Magma
Molten rock that lies beneath the surface of the earth; once exposed, magma becomes lava.
Map
A graphic representation of the earth's surface.
Map projection
A mathematical formula which assists in representing the curved surface of the earth onto the flat surface of a map.
Map scale
The relationship between distance on a map and the distance on the earth's surface.
Megalopolis
Several adjacent metropolitan areas form a huge urban area. Conurbation.
Meridian
A line of longitude.
Mesa
A large flat-topped but steep-sided landform; they shrink to become buttes.
Meteorology
The scientific study of the atmosphere.
Monsoon
A wind system in Southeast Asia which changes direction seasonally, creating wet and dry seasons.
Morphology
The shape of a state or nation.
Pangaea
A huge landmass consisting of almost all the continental land on the earth which then divided and slowly became the continents we know today.
Permafrost
Permanently frozen water in the soil.
Physical geography
The branch of geography dealing with the natural features of the earth.
Plate tectonics
The surface of the earth is composed of many large plates which slowly move around the planet, meeting and diverging, creating a variety of earthquakes, volcanoes, and mountains at

their margins.

Precipitation

Any form of water that falls from the atmosphere to the surface of the earth (e.g. rain, snow, sleet, and hail).

Primate city

A city which is greater than two times the next largest city in a nation (or contains over one-third of a nation's population). Usually very expressive of the national culture and often the capital city.

Prime meridian

Zero degrees longitude. Also known as the Greenwich meridian because it was established at the Greenwich observatory near London.

Region

An area which is marked common characteristics

Relative location

A location of a place in relation to another place (i.e. south or downhill).

Scale

The relationship between distance on a map and on the earth's surface.

Sustainable development

Development that does not exploit resources more rapidly than the renewal of those resources.

Topographic map

A detailed, large scale contour map showing human and physical features.

Weather

The short-term atmospheric conditions.

1.7 SUMMARY

- Geography is the study of places and the relationships between people and their environments. Geographers explore both the physical properties of Earth’s surface and the human societies spread across it. They also examine how human culture interacts with the natural environment, and the way that locations and places can have an impact on people. Geography seeks to understand where things are found, why they are there, and how they develop and change over time.
- Geography and maps are a fundamental language for understanding the world. They provide a framework for organizing and communicating our knowledge. Increasingly geography is used in virtually every field of human endeavor, providing a universal language for understanding, communicating ideas, and providing insights. Geography asks the big questions—Where? How? Why? What if?—and gives you the perspective to answer them with advanced technology and a solid knowledge of the

world in which we all live.

- Geography is about more than just the location, coordinates, and position of things on Earth. Geography also studies the physical and human characteristics of places. From the dimensions of a single room to the extent of a cultural region or the entirety of the globe itself, geographers explore the meaning, function, and history of places, how places change, and how they are perceived.
- Even though the term "geo-graphy" literally means to graph the earth, geography is also about the study of people. It is about the spatial aspects of human existence, how humans occupy and alter the landscape, and the relationships between nature and society.
- History's great explorers led challenging expeditions to the farthest reaches of the globe—to new continents, the poles, the tops of mountains, and the bottoms of the oceans. Today, modern technologies such as satellite imaging, remote sensing, and lidar have extended our ability to explore how earth and human systems work.
- Since ancient times, maps have provided the means to capture geographic knowledge and share information with others in a simple and easily comprehensible way. Recent advances in technology have forever changed the way we create and use maps, and how we use them to tell geographic stories and solve geographic problems.
- Geography offers a unique lens through which to observe and richly describe current events, recount history, inspire, educate, and amuse. Geographic storytelling engages audiences, using maps to connect stories to actual locations on earth. Modern geographic tools let you move beyond the traditional idea of a map, combining narrative text, images, videos, and other content to effectively tell your story.

1.8 KEYWORDS

- **Explore**: Adopt a questioning approach, looking at all aspects of the situation, including points for and against. Similar to 'discuss'.
- **Identify:** Establish the nature of a situation by distinguishing its features and naming them.
- **Illustrate:** Make something clear and explicit, by providing examples or evidence. May require the use of visual representations (e.g. maps, diagrams, tables, graphs and statistics).
- **Interpret**: Examine visual data such as a map, graph or diagram, to make sense of what is being depicted and to draw conclusions.
- **Justify:** Use examples or find sufficient evidence to show why, in your opinion, a viewpoint or conclusion is correct.

1.9 LEARNING ACTIVITY

1. What is the difference between an absolute and a relative location? Give an example of each. .How Indian geography is defined in these terms

_____

_____

2. determine the evolution of Geography of India from Historic Times to Modern era

_____

_____

1.10 UNIT END QUESTIONS

A. Descriptive Type Questions

1. Discuss the term Geography?
2. Explain "emergence of modern geography".
3. Explain the different concepts of geography.
4. Analyze and discuss the growth, depth and fragmentation in geography?
5. Explain, physical geography, human geography and applied geography.

B. Multiple Choice Questions

1. The importance of …… in erosion plus the transport and deposition of sedimentary materials is reflected by work in geographical hydrology.
   a. Water
   b. Air
   c. Soil
   d. Stone

2. A body of land surrounded by water on three sides is called a……. .
   a. Peninsula
   b. Island
   c. Delta
   d. None of these

3. It is a portion of the ocean that penetrates land. ……. vary greatly in size, shape, and depth
      a. Islands
      b. Delta

c. Peninsula
d. Gulfs

4. ……. seeks to understand where things are found and why they are present in those places; how things that are located in the same or distant places influence one another over time; and why places and the people who live in them develop and change in particular ways.
   a. Geography
   b. History
   c. Civics
   d. Physics

5. A "map" that is a diagram used to present statistical information.
   a. Climate
   b. Cartography
   c. Caldera
   d. Cartogram

Answer

1. a 2. a 3. d 4. a 5. d

1.11 REFERENCES

- An Introduction to the Geography of Tourism: By Velvet Nelson · 2013
- Boniface B. and Cooper C. (1987) The Geography of Travel and Tourism. London and England: Heinemann Professional Publisher.
- Cotterill, Peter D. (1997). "What is geography?". AAG Career Guide: Jobs in Geography and related Geographical Sciences. American Association of Geographers. Archived from the original on 6 October 2006. Retrieved 9 October 2006.
- Delano Smith, Catherine (1996). "Imago Mundi's Logo the Babylonian Map of the World". Imago Mundi. 48: 209–211. doi:10.1080/03085699608592846. JSTOR 1151277.
- Dorn, Harold (1991). The Geography of Science. Johns Hopkins University Press. ISBN 978-0-8018-4151-4. The geography of science.
- Edson, Evelyn; Savage-Smith, Emilie (2007). "Medieval Views of the Cosmos". International Journal of the Classical Tradition. 13:3 (3): 61–63. JSTOR 30222166
- Geography of Travel & Tourismbooks.google.com › books: Lloyd E. Hudman, ‍ Richard H. Jackson · 2003
- Gopal Singh. (2010). A Geography of India. Delhi: Atma Ram & Sons
- Hall, CM and Page, SJ. (2014). The Geography of Tourism and Recreation.UK and

New York: Routledge publishers.

- International Atlas, Penguin Publication and DK Publication
- Rohinson H.A.A. (1976). Geography of Tourism. London: Macdonaled and Evans.
- Sinha, P.C. (2005). Tourism Geography, New Delhi: Anmol Publication.

UNIT 2: SCOPE & SIGNIFICANCE

Structure

2.0 LEARNING OBJECTIVES

After studying this unit, you will be able to:

- Discuss about tourism geography,
- Explain about the role of geography in tourism, and connection between them
- State about scope and context of geography
- Explain concept of geography

2.1 INTRODUCTION

There are many theories and definitions to what can be understood through the term of tourism geography and researchers are still debating on what is and isn't included in this rather large field of study. The content of tourism geography is complex, making a connection between the two concepts of geography and tourism, being rather new compared especially with the term of geography. The beginning of the science can be traced at the beginning of the 20th century, although tourism was being used inside the study of geography long before. By the 1950s, tourism geography began to be accepted as its own domain, especially in scientific works from USA and Germany. The first definitions were pretty vague and incomplete, G. Chabot (1964) stating that geography and tourism are two terms predestined to be joined because every geographer has to necessarily be doubled by the qualities of a tourist and also reciprocally, we can say that in every tourist there is a hidden geographer, because the intelligent tourist is actually a geographer that has not discovered himself. As more and more researchers began to study this new field, the accuracy and depth

of the definitions began to improve.

2.2 ROLE OF TOURISM GEOGRAPHY

As the importance and popularity of tourism increased, especially in the last two or three decades, becoming one of the biggest industries in the world, so did the role of tourism in geography and its study. While before there were few mentions of tourism related facts in any book or research of geography, today we cannot imagine any geographical descriptions without a separate chapter on tourism. Still rather raw and simple, L. Merlo (1969) considers this science as being a branch of geography that studies the position and appearance of tourist centers, their individual natural and cultural-historical characteristics, the attractions and traditions in the context of the area where they are found, the transportation network assuring the accessibility and the links with other tourist centers. Tourism is essentially a geographical phenomenon, regarding the transfer of people and services through space and time, so a special domain dedicated to the research of the interconnections between tourism and geography was inevitable. Although the scientific field is new, the connections of geography and travel can be traced to ancient times, when geographers had no other way of describing the world than traveling and seeing it for themselves.

Tourism geography is the study of travel and tourism, as an industry and as a social and cultural activity. Tourism geography covers a wide range of interests including the environmental impact of tourism, the geographies of tourism and leisure economies, answering tourism industry and management concerns and the sociology of tourism and locations of tourism.

Tourism geography is that branch of human geography that deals with the study of travel and its impact on places.

Geography is fundamental to the study of tourism, because tourism is geographical in nature. Tourism occurs in places, it involves movement and activities between places and it is an activity in which both place characteristics and personal self-identities are formed, through the relationships that are created among places, landscapes and people. Physical geography provides the essential background, against which tourism places are created and environmental impacts and concerns are major issues, that must be considered in managing the development of tourism places.

The approaches to study will differ according to the varying concerns. Much tourism management literature remains quantitative in methodology and considers tourism as consisting of the places of tourist origin (or tourist generating areas), tourist destinations (or places of tourism supply) and the relationship (connections) between origin and destination places, which includes transportation routes, business relationships and traveler motivations. Recent developments in human geography have resulted in approaches such as those from cultural geography, which take more theoretically diverse approaches to tourism, including a

sociology of tourism, which extends beyond tourism as an isolated, exceptional activity and considering how travel fits into the everyday lives and how tourism is not only a consumptive of places, but also produces the sense of place at a destination. The Tourist by Dean McConnell and The Tourist Gaze by John Urry are classics in this field.

2.3 CONNECT BETWEEN TOURISM AND GEOGRAPHY

The connections between tourism and geography are linked to specific terms such as place, location, space, accessibility, scale and others. This science also has an integrative character, containing key elements from all fields of geography, physical, human and economic. Besides this, tourism geography also has many common points with other sciences, including history, geology, biology, art, economy and so on. In more modern times, the tourism geography has become to achieve a broader definition, regarding the study of the spatial and temporal genesis, repartition and unfolding of the tourism phenomenon, being considered as a complex and specific interaction at the level of the geographic environment. As such, tourism geography studies things like the tourist resources (natural or man-made), the tourism infrastructure (transportation, accommodation, etc.), the types and forms of tourism, the tourist circulation (statistical research), tourist markets, as well as other domains. The areas of geographical interest in tourism are stated by S. Williams (1998), including the effect of scale, spatial distributions of tourist phenomena, tourism impacts, planning for tourism and spatial modeling of tourism development.

There is also another link between the two domains, as the primary factor which attracts tourists to a certain area is geography, with all its specific elements. The interconnections go a lot deeper, as tourists usually choose a certain destination primarily through the perceived experience of that place, as they envision its geographical characteristics, they use means of transportation to travel over the land or water surface, creating what we call tourism fluxes or the tourist circulation. While visiting a certain place, tourists actively discover and appreciate the geography of that place, from the landscapes with their typical forms, to the traditions of the local population, all while benefiting the local economy and using its resources. In conclusion, tourism geography studies the relations between places, landscapes and people, describing travel and tourism as an economic, social and cultural activity. More concisely, it is all about the spatial and temporal dynamics, as well as the interactions between the tourism resources.

2.4 SCOPE OF GEOGRAPHY

Figure 2.1 Classification of research in tourism geography

Each of the physical, biological and social science has its own philosophy, methodology and scope. Geology is the study of physical structure, their composition and structure of the earth. The major thrust of HG is the study of human society in relation to their natural habitat. Deal with wide distribution of human society therefore its scope is enormous. Influence of physical environment on economy, culture, food, customs, language etc.

Human geography consists of a number of sub-disciplinary fields that focus on different elements of human activity and organization, for example, cultural geography, economic geography, health geography, historical geography, political geography, population geography, rural geography, social geography, transport geography, and urban geography. What distinguishes human geography from other related disciplines, such as development, economics, politics, and sociology, are the application of a set of core geographical concepts to the phenomena under investigation, including space, place, scale, landscape, mobility, and nature.

These concepts foreground the notion that the world operates spatially and temporally, and that social relations do not operate independently of place and environment, but are thoroughly grounded in and through them.

With respect to methods, human geography uses the full sweep of quantitative and qualitative methods from across the social sciences and humanities, mindful of using them to provide a thorough geographic analysis. It also places emphasis on fieldwork and mapping and has made a number of contributions to developing new methods and techniques, notably in the areas of spatial analysis, spatial statistics, and GIS science.

The long-term development of human geography has progressed in tandem with that of the discipline more generally. Since the Quantitative Revolution in the 1950s and 1960s, the philosophy underpinning human geography research has diversified enormously. The 1970s saw the introduction of behavioral geography, radical geography, and humanistic geography.

These were followed in the 1980s by a turn to political economy, the development of feminist geography, and the introduction of critical social theory underpinning the cultural turn. Together these approaches formed the basis for the growth of critical geography, and the introduction of postmodern and post-structural thinking into the discipline in the 1990s. These various developments did not fully replace the theoretical approaches developed in earlier periods, but rather led to further diversification of geographic thought. For example, quantitative geography continues to be a vibrant area of geographical scholarship, especially through the growth of GIS science. The result is that geographical thinking is presently highly pluralist in nature, with no one approach dominating.

2.5 GEOGRAPHIC CONCEPT

Basic geographic concepts are:

- Location
- Region
- Place (physical and cultural attributes)
- Density, Dispersion, Pattern
- Spatial Interaction
- Size and Scale

Location

Location can be described in two ways: absolute and relative and answers the question of "Where is it?" Absolute describes the position of a feature or event in space, using some form of geographic coordinates. Relative uses descriptive text to describe the position of the feature or event in relationship to another object or event. What is the distance and direction of a place from another? For example, the hurricane will hit landfall 30 miles north of Town A. Understand the location of features or events is the building blocks to geographic study, including using GIS for mapping and analysis.

Region

Regions are groupings of geographic information. A region is a geographic area defined by one or more distinctive characteristics. Regions can be based on physical features (such as a watershed), political boundaries (a county, country, or continent), culture or religion, or other categorized geographies. Regions can be formal, functional, or perceptual. Formal regions are also known as homogenous or uniform region. Entities within a formal region share one or more common traits such as the residents of a country. a functional region is a region anchored by a focal point. Examples are a customer service area for a restaurant delivery service or the school district for an elementary school. A vernacular region (also known as a popular or perceptive region) is a geographic area that exists as part of a cultural or ethnic identity and therefore don't adhere to political or formal regional boundaries.

Place

Place looks at the physical and/or cultural attributes of a place is important. Physical characteristics include: weather and temperature, land and soil, and plant and animal life. Cultural attributes include: languages, religions and ethnicities, where and how people settle, transportation, economics, and politics.

Density, Dispersion, Pattern

Understanding spatial pattern is an important aspect of geographic inquiry. Spatial pattern looks at commonality in geography across regions. How are things arranged? Is the arrangement regular? Is there a pattern to the distribution?

Spatial Interaction

Spatial interaction is the cause and effect of an event in one region or area that affects another area and takes a look at the connectivity and relationships of features. For example, a change in land use from rural to high density can affect traffic congestion in adjoining areas. The 1980 eruption of Mount Saint Helen affected an area far beyond the volcanic site with ash fallout reach across several states.

Size and scale

Geographic features are visualized using a map which is a representation of reality. The size and scale affects the degree of generalization of the features being mapped. The smaller the scale, the less detail is shown. In other words, a small scale shows a larger geographic area (e.g. a map of the world or of a continent) but shows more generalized features and less detail (e.g. only major highways and major rivers). A large scale map shows a smaller geographic area (e.g. a map of a city or a neighborhood) but shows a greater amount of detail (e.g. the entire street network and all branches of a river).

2.6 SUMMARY

- Tourism geography is the study of travel and tourism, as an industry and as a social and cultural activity. Tourism geography covers a wide range of interests including the environmental impact of tourism, the geographies of tourism and leisure economies, answering tourism industry and management concerns and the sociology of tourism and locations of tourism.
- Tourism geography is that branch of human geography that deals with the study of travel and its impact on places.
- Geography is fundamental to the study of tourism, because tourism is geographical in nature. Tourism occurs in places, it involves movement and activities between places and it is an activity in which both place characteristics and personal self-identities are formed, through the relationships that are created among places, landscapes and people. Physical geography provides the essential background, against which tourism places are created and environmental impacts and concerns are major issues, that must be considered in managing the development of tourism places.

- The approaches to study will differ according to the varying concerns. Much tourism management literature remains quantitative in methodology and considers tourism as consisting of the places of tourist origin (or tourist generating areas), tourist destinations (or places of tourism supply) and the relationship (connections) between origin and destination places, which includes transportation routes, business relationships and traveler motivations.
- Recent developments in human geography have resulted in approaches such as those from cultural geography, which take more theoretically diverse approaches to tourism, including a sociology of tourism, which extends beyond tourism as an isolated, exceptional activity and considering how travel fits into the everyday lives and how tourism is not only a consumptive of places, but also produces the sense of place at a destination.

2.7 KEYWORDS

- **Human geography:** or anthropogeography is the branch of geography that deals with humans and their communities, cultures, economies, and interactions with the environment by studying their relations with and across locations.
- **Impact:** The impacts of tourism include the effects of tourism on the environment and on destination communities, and its economic contributions.
- **Travel:** Travel is the movement of people between distant geographical locations. Travel can be done by foot, bicycle, automobile, train, boat, bus, airplane, ship or other means, with or without luggage, and can be one way or round trip
- **Tourism**: Tourism is travel for pleasure or business; also the theory and practice of touring, the business of attracting, accommodating, and entertaining tourists, and the business of operating tours.
- **Cultural geography**: Cultural geography is a subfield within human geography. Though the first traces of the study of different nations and cultures on Earth can be dated back to ancient geographers such as Ptolemy or Strabo

2.8 LEARNING ACTIVITY

1. How the geography of a country effects its tourism

_____

_____

2. Examine geography of India and establish a connect of tourism with its geography.

2.9 UNIT END QUESTIONS

A. Descriptive Type Questions

1. Define tourism.
2. Define geography of tourism.
3. Elaborate connection between tourism and geography?
4. Discuss the role of geography in tourism?
5. Explain the role of location, region, place, density and dispersion in geography?

B. Multiple Choice Questions

1. …… can be described in two ways: absolute and relative and answers the question of "Where is it?".

   a. Location
   b. Region
   c. Place
   d. Density

2. …… is an important aspect of geographic inquiry Place

   a. Location
   b. Region
   c. Spatial pattern
   d. Spatial integration

3. Tourism geography is the study of travel and tourism, as an industry and as a social and ……. Activity.

   a. Cultural
   b. Motivational
   c. Locational
   d. None of these

4. Much tourism management literature remains ……. in methodology and considers tourism as consisting of the places of tourist origin.

   a. Qualitative
   b. Comparative
   c. Quantitative

d. None of these

5. A ……. is a geographic area defined by one or more distinctive characteristics.

a. Region
b. Place
c. Location
d. Density

Answer

1. a 2. c 3. a 4. c 5. a

2.10 REFERENCES

- Hall, CM and Page, SJ. (2014). The Geography of Tourism and Recreation.UK and New York: Routledge publishers.
- Sinha, P.C. (2005). Tourism Geography, New Delhi: Anmol Publication.
- International Atlas, Penguin Publication and DK Publication
- Boniface B. and Cooper C. (1987) The Geography of Travel and Tourism. London and England: Heinemann Professional Publisher.
- Rohinson H.|A.A. (1976). Geography of Tourism. London: Macdonaled and Evans.
- Gopal Singh. (2010). A Geography of India. Delhi: Atma Ram & Sons
- Hayes-Bohannan, James (29 September 2009). "What is Environmental Geography, Anyway?". webhost.bridgew.edu. Bridgewater State University. Archived from the original on 26 October 2006. Retrieved 10 November 2016.
- Hough, Carole; Izdebska, Daria (2016). "Names and Geography". In Camelot, Peder (ed.). The Oxford Handbook of Names and Naming (First ed.). Oxford, United Kingdom: Oxford University Press. ISBN 978-0-19-965643-1.
- Pioneering China-based Geo-tourism (China Daily March 31, 2006)
- Tourism Geographies: An International Journal of Tourism Space, Place and Environment (Routledge)

UNIT 3: GEOGRAPHICAL ATTRIBUTES

Structure

3.0 LEARNING OBJECTIVES

After studying this unit, you will be able to:

- Explain about the introduction to various types of Geographical aspects
- State of various Geographies scenarios like Mountains, Rivers, national park.
- Discuss about wildlife sanctuaries, flora and fauna

3.1 INTRODUCTION

The geographically informed person must understand the genesis, evolu-tion, and meaning of places. Places are locations having distinctive features that give them meaning and character that differs from other locations. Therefore, places are human creations, and people's lives are grounded in particular places. We come from a place, we live in a place, and we preserve and exhibit fierce pride over places. Places usually have names and boundaries and include continents, islands, countries, regions, state, cities, neighborhoods, villages, and uninhabited areas.

There are attributes of geographical:

A mountain is a large landform that rises above the surrounding land in a limited area, usually in the form of a peak. A mountain is generally considered to be steeper than a hill. Mountains are formed through tectonic forces or volcanism. These forces can locally raise the surface of the earth.

A river is a natural flowing watercourse, usually freshwater, flowing towards an ocean, sea, lake or another river. In some cases a river flows into the ground and becomes dry at the end of its course without reaching another body of water.

A desert is a barren area of landscape where little precipitation occurs and, consequently, living conditions are hostile for plant and animal life. The lack of vegetation exposes the unprotected surface of the ground to the processes of denudation.

3.2 MOUNTAINS

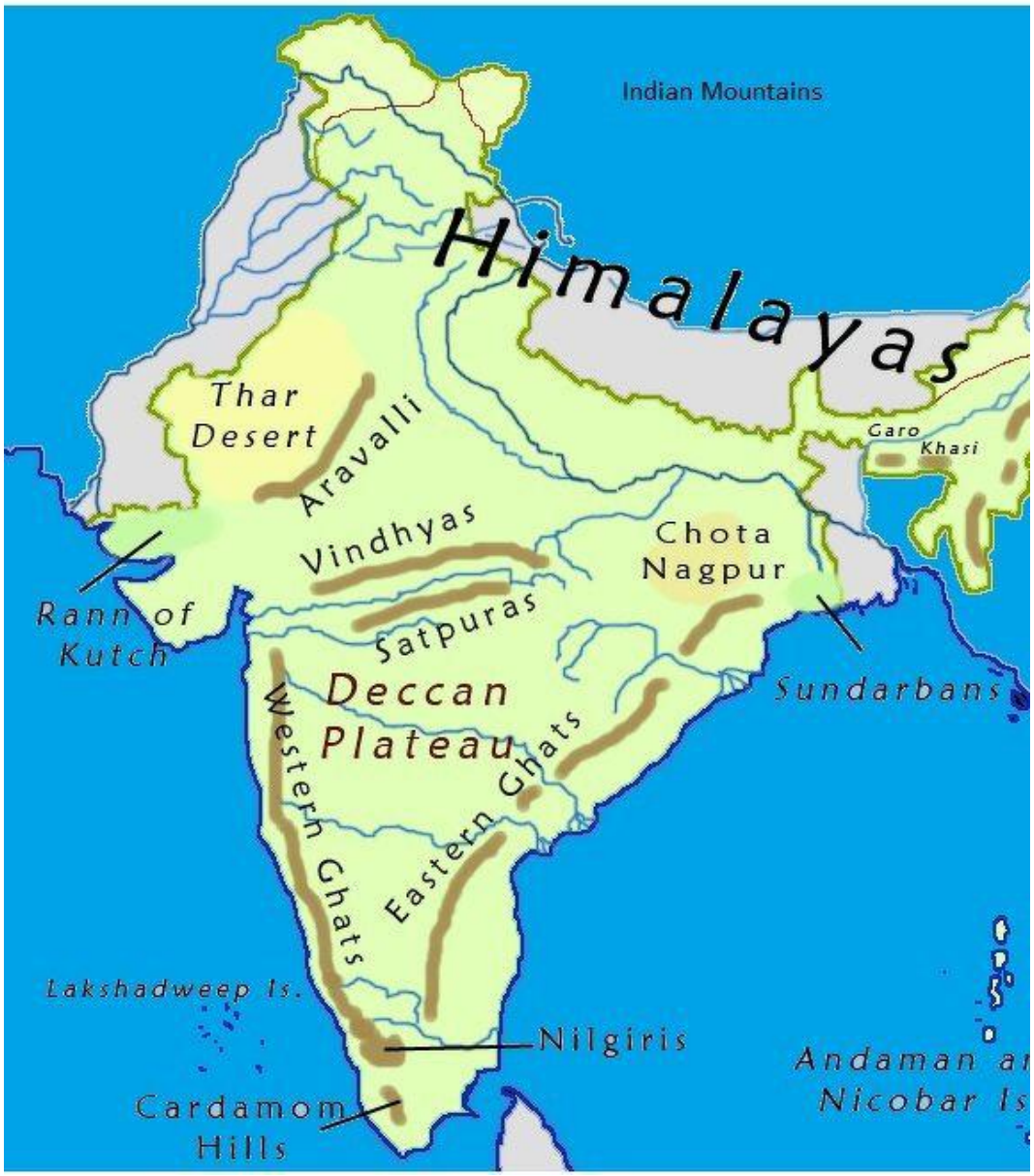


Figure 3.1 Mountains

Mountain, landform that rises prominently above its surroundings, generally exhibiting steep slopes, a relatively confined summit area, and considerable local relief. Mountains generally are understood to be larger than hills, but the term has no standardized geological meaning. Very rarely do mountains occur individually. In most cases, they are found in elongated ranges or chains. When an array of such ranges is linked together, it constitutes a mountain belt

A mountain belt is many tens to hundreds of kilometers wide and hundreds to thousands of kilometers long. It stands above the surrounding surface, which may be a coastal plain, as along the western Andes in northern Chile, or a high plateau, as within and along the Plateau of Tibet in southwest China. Mountain ranges or chains extend tens to hundreds of kilometers

in length. Individual mountains are connected by ridges and separated by valleys. Within many mountain belts are plateaus, which stand high but contain little relief. Thus, for example, the Andes constitute a mountain belt that borders the entire west coast of South America; within it are both individual ranges, such as the Cordillera Blanca in which lies Peru's highest peak, Huascaran, and the high plateau, the Altiplano, in southern Peru and western Bolivia.

3.2.1 Geomorphic Characteristics

Mountainous terrains have certain unifying characteristics. Such terrains have higher elevations than do surrounding areas. Moreover, high relief exists within mountain belts and ranges. Individual mountains, mountain ranges, and mountain belts that have been created by different tectonic processes, however, are often characterized by different features.
Chains of active volcanoes, such as those occurring at island arcs, are commonly marked by individual high mountains separated by large expanses of low and gentle topography. In some chains, namely those associated with "hot spots" (see below), only the volcanoes at one end of the chain are active. Thus, those volcanoes stand high, but with increasing distance away from them erosion has reduced the sizes of volcanic structures to an increasing degree.

The folding of layers of sedimentary rocks with thicknesses of hundreds of meters to a few kilometers often leaves long parallel ridges and valleys termed fold belts, as, for example, in the Valley and Ridge province of Pennsylvania in the eastern United States. The more resistant rocks form ridges, and the valleys are underlain by weaker ones. These fold belts commonly include segments where layers of older rocks have been thrust or pushed up and over younger rocks. Such segments are known as fold and thrust belts. Typically their topography is not as regular as where folding is the most important process, but it is usually dominated by parallel ridges of resistant rock divided by valleys of weaker rock, as in the eastern flank of the Canadian Rocky Mountains or in the Jura Mountains of France and Switzerland.

Most fold and thrust belts are bounded on one side, or lie parallel to, a belt or terrain of crystalline rocks. These are metamorphic and igneous rocks that in most cases solidified at depths of several kilometers or more and that are more resistant to erosion than the sedimentary rocks deposited on top of them. These crystalline terrains typically contain the highest peaks in any mountain belt and include the highest belt in the world, the Himalayas, which was formed by the thrusting of crystalline rocks up onto the surface of the Earth. The great heights exist because of the resistance of the rocks to erosion and because the rates of continuing uplift are the highest in these areas. The topography rarely is as regularly oriented as in fold and thrust belts.
In certain areas, blocks or isolated masses of rock have been elevated relative to adjacent

areas to form block-fault mountains or ranges. In some places, block-fault ranges with an overall common orientation coalesce to define a mountain belt or chain, but in others the ranges may be isolated.

Block faulting can occur when blocks are thrust, or pushed, over neighboring valleys, as has occurred in the Rocky Mountains of Colorado, Wyoming, and Utah in the western United States or as is now occurring in the Tien Shan, an east–west range in western China and Central Asia. Within individual ranges, which are usually a few hundred kilometers long and several tens of kilometers wide, crystalline rocks commonly crop out. On a large scale, there is a clear orientation of such ranges, but within them the landforms are controlled more by the variations in erosion than by tectonic processes.

Block faulting also occurs where blocks are pulled apart, causing a subsidence of the intervening valley between diverging blocks. In this case, alternating basins and ranges form. The basins eventually fill with sediment, and the ranges—typically tens of kilometers long and from a few to 20–30 kilometers wide—often tilt, with steep relief on one side and a gentle slope on the other. The uniformity of the gently tilted slope owes its existence to long periods of erosion and deposition before tilting, sometimes with a capping of resistant lava flows on this surface prior to tilting and faulting. Both the Tetons of Wyoming and the Sierra Nevada of California were formed by blocks being tilted up toward the east; major faults allowed the blocks on their east sides to drop steeply down several thousand meters and thereby created steep eastern slopes.

In some areas, a single block or a narrow zone of blocks has subsided between neighboring blocks or plateaus that moved apart to form a rift valley between them. Mountains with steep inward slopes and gentle outward slopes often form on the margins of rift valleys. Less commonly, large areas that are pulled apart and subside leave between them an elevated block with steep slopes on both sides. An example of this kind of structure, called a horst, is the Ruwenzori in East Africa.

Finally, in certain areas, including those that once were plateaus or broad uplifted regions, erosion has left what are known as residual mountains. Many such mountains are isolated and not part of any discernible chain, as, for instance, Mount Katahdin in Maine in the northeastern United States. Some entire chains (e.g., the Appalachians in North America or the Urals in Russia), which were formed hundreds of millions of years ago, remain in spite of a long history of erosion. Most residual chains and individual mountains are characterized by low elevations; however, both gentle and precipitous relief can exist, depending on the degree of recent erosion.

3.3 MAJOR TYPES OF MOUNTAIN BELTS

Mountain belts differ from one another in various respects, but they also have a number of similarities that enable Earth scientists to group them into certain distinct categories. Each of

these categories is characterized by the principal process that created a representative belt. Moreover, within individual belts different tectonic processes can prevail and can be associated with quite different landforms and topography. Thus, for any category there are exceptions and special cases, as well as subdivisions.

3.3.1 Mountain belts associated with volcanism

Volcanoes typically form in any of three tectonic settings. At the axes of the mid-ocean ridge system where lithospheric plates diverge, volcanism is common; yet, high-standing volcanoes (above sea level) rarely develop. At subduction zones where one plate of oceanic lithosphere plunges beneath another plate, long linear or arcuate chains of volcanoes and mountain belts associated with them are the norm. Volcanoes and associated landforms, as well as linear volcanic chains and ridges (e.g., the Hawaiian chain) also can exist far from plate boundaries.

3.3.2 Mountain belts associated with crustal shortening

Most mountain belts of the world and nearly all of those in Europe, Asia, and North America have been built by horizontal crustal shortening and associated crustal thickening. The landforms associated with such belts depend on the rates, amounts, and types of crustal deformation that occur and on the types of rocks that are exposed to erosion. To some extent the deformation can be related to different tectonic settings. Large thrusted crystalline terrains and parallel fold and thrust belts are commonly associated with continental collisions in which two separate continents have approached each other and one has been thrust onto the other. Continental collisions are responsible for Alpine-, or Himalayan-, type mountain belts. Fold and thrust belts can also be associated with active continental margins or Andean-type margins, where oceanic lithosphere is subducted into the asthenosphere but where crustal shortening occurs landward of the volcanic arc on the overriding continental plate. Block-faulted ranges commonly form as intracontinental mountain ranges or belts, far from collision zones and subduction zones.

3.3.3 Major Mountain Belts of The World

Most mountains and mountain ranges are parts of mountain belts that have formed where two lithospheric plates have converged and where, in most cases, they continue to converge. In effect, many mountain belts mark the boundaries of lithospheric plates, and these boundaries in turn intersect other such boundaries. Consequently, there exist very long mountain systems where a series of convergent plate boundaries continue from one to the next. A nearly continuous chain of volcanoes and mountain ranges surrounds most of the Pacific basin—the so-called Circum-Pacific System. A second nearly continuous chain of mountains can be traced from Morocco in North Africa through Europe, then across Turkey and Iran through

the Himalayas to Southeast Asia; this chain, the Alpine-Himalayan (or Tethyan) System, has formed where the African, Arabian, and Indian plates have collided with the Eurasian Plate. Nearly all mountain ranges on the Earth can be included in one of these two major systems and most that cannot are residual mountains, which originated from ancient continental collisions that occurred hundreds of millions of years ago.

3.3.4 The Circum-Pacific System

A nearly continuous chain of volcanoes surrounds the Pacific Ocean. The chain passes along the west coast of North and South America, from the Aleutian Islands to the south of Japan, from Indonesia to the Tonga Islands, and to New Zealand. The Pacific basin is underlain by separate lithospheric plates that diverge from one another and that are being subducted beneath the margins of the basin at different rates. This Circum-Pacific chain of volcanoes (often called the Ring of Fire) and the mountain ranges associated with it owe their formation to the repeated subduction of oceanic lithosphere beneath the continents and the islands that surround the Pacific Ocean. Differences among the various segments of the Circum-Pacific chain arise from differences in the histories of subduction of the different plates.

3.4 RIVERS

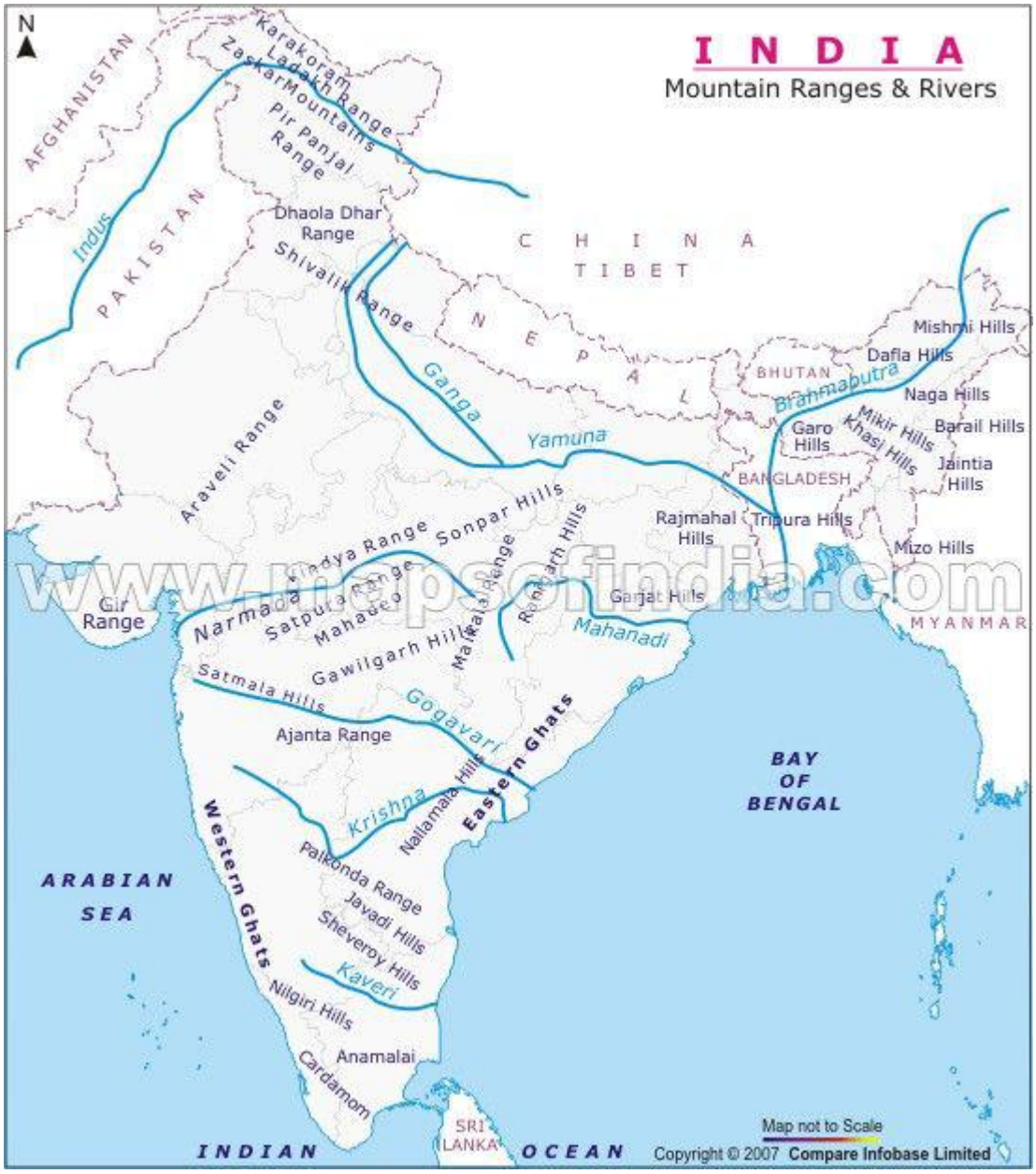


Figure 3.2 Rivers

River, (ultimately from Latin ripa, "bank"), any natural stream of water that flows in a channel with defined banks. Modern usage includes rivers that are multichannel, intermittent, or ephemeral in flow and channels that are practically bank less. The concept of channeled surface flow, however, remains central to the definition. The word stream (derived ultimately from the Indo-European root srou-) emphasizes the fact of flow; as a noun, it is synonymous with river and is often preferred in technical writing. Small natural watercourses are sometimes called rivulets, but a variety of names—including branch, brook, burn, and creek—are more common, occurring regionally to nationally in place-names. Arroyo and (dry) wash connote ephemeral streams or their resultant channels. Tiny streams or channels are referred to as rills or runnels.

Rivers are nourished by precipitation, by direct overland runoff, through springs and seepages,

or from meltwater at the edges of snowfields and glaciers. The contribution of direct precipitation on the water surface is usually minute, except where much of a catchment area is occupied by lakes. River water losses result from seepage and percolation into shallow or deep aquifers (permeable rock layers that readily transmit water) and particularly from evaporation. The difference between the water input and loss sustains surface discharge or streamflow. The amount of water in river systems at any time is but a tiny fraction of the Earth's total water; 97 percent of all water is contained in the oceans and about three-quarters of fresh water is stored as land ice; nearly all the remainder occurs as groundwater. Lakes hold less than 0.5 percent of all fresh water, soil moisture accounts for about 0.05 percent, and water in river channels for roughly half as much, 0.025 percent, which represents only about one four-thousandth of the Earth's total fresh water.

Water is constantly cycled through the systems of land ice, soil, lakes, groundwater (in part), and river channels, however. The discharge of rivers to the oceans delivers to these systems the equivalent of the water vapor that is blown overland and then consequently precipitated as rain or snow—i.e., some 7 percent of mean annual precipitation on the globe and 30 percent of precipitation on land areas.

Rivers are 100 times more effective than coastal erosion in delivering rock debris to the sea. Their rate of sediment delivery is equivalent to an average lowering of the lands by 30 centimeters (12 inches) in 9,000 years, a rate that is sufficient to remove all the existing continental relief in 25,000,000 years.

Rock debris enters fluvial systems either as fragments eroded from rocky channels or in dissolved form. During transit downstream, the solid particles undergo systematic changes in size and shape, traveling as bed load or suspension load. Generally speaking, except in high latitudes and on steep coasts, little or no coarse bed load ever reaches the sea. Movement of the solid load down a river valley is irregular, both because the streamflow is irregular and because the transported material is liable to enter temporary storage, forming distinctive river-built features that range through riffles, midstream bars, point bars, floodplains, levees, alluvial fans, and river terraces. In one sense, such geomorphic features belong to the same series as deltas, estuary fills, and the terrestrial sediments of many inland basins.

Rates of erosion and transportation, and comparative amounts of solid and dissolved load, vary widely from river to river. Least is known about dissolved load, which at coastal outlets is added to oceanic salt. Its concentration in tropical rivers is not necessarily high, although very high discharges can move large amounts; the dissolved load of the lowermost Amazon averages about 40 parts per million, whereas the Elbe and the Rio Grande, by contrast, average more than 800 parts per million. Suspended load for the world in general perhaps equals two and one-half times dissolved load. Well over half of suspended load is deposited at river mouths as deltaic and estuarine sediment. About one-quarter of all suspended load is estimated to come down the Ganges-Brahmaputra and the Huang He (Yellow River), which together deliver some 4,500,000,000 tons a year; the Yangtze (Chang Jiang), Indus, Amazon,

and Mississippi deliver quantities ranging from about 500,000,000 to approximately 350,000,000 tons a year. Suspended sediment transport on the Huang He equals a denudation rate of about 3,090 tons per square kilometer (8,000 tons per square mile) per year; the corresponding rate for the Ganges-Brahmaputra is almost half as great. Extraordinarily high rates have been recorded for some lesser rivers: for instance, 1,060 tons per square kilometer per year on the Jing and 1,080 tons per square kilometer per year on the Luo, both of which are Loess Plateau tributaries of the Huang He.

This article concentrates on the distribution, drainage patterns, and geometry of river systems; its coverage of the latter includes a discussion of channel patterns and such related features as waterfalls. Considerable attention is also given to fluvial landforms and to the processes involved in their formation. Additional information about the action of flowing water on Earth's surface is provided in the article valley. Certain aspects of the changes in rivers through time are described in climate: Effects of precipitation, and the general interrelationship of river systems to other components of the Earth's hydrosphere is treated in hydrosphere: River and ocean waters. For information concerning the plant and animal forms that inhabit the riverine environment, see inland water ecosystem.

3.5 IMPORTANCE OF RIVERS

3.5.1 Significance in early human settlements

The inner valleys of some great alluvial rivers contain the sites of ancestral permanent settlements, including pioneer cities. Sedentary settlement in Hither Asia began about 10,000 years ago at the site of Arīḥ ā (ancient Jericho). Similar settlement in the Tigris-Euphrates and Nile valleys dates back to at least 6000 BP (years before present). The first settlers are thought to have practiced a hunting economy, supplemented by harvesting of wild grain. Conversion to the management of domesticated animals and the cultivation of food crops provided the surpluses that made possible the rise of towns, with parts of their populations freed from direct dependence on food getting. Civilization in the Indus River valley, prominently represented at Mohenjo-Daro, dates from about 4500 BP, while civilization in the Ganges valley can be traced to approximately 3000 BP. Permanent settlement in the valley of the Huang, He has a history some 4,000 years long, and the first large irrigation system in the Yangtze catchment dates to roughly the same time. Greek invaders of the Syr Darya, Amu Darya, and other valleys draining to the Aral Sea, east of the Caspian, encountered irrigating communities that had developed from about 2300 BP onward.

The influence of climatic shifts on these prehistoric communities has yet to be worked out satisfactorily. In wide areas, these shifts included episodic desiccation from 12,000 or 10,000 BP onward. In what are now desert environments, increased dependence on the rivers may have proved as much a matter of necessity as of choice. All of the rivers in question have broad floodplains subject to annual inundation by rivers carrying heavy sediment loads.

Prehistoric works of flood defense and irrigation demanded firm community structures and required the development of engineering practice. Highly elaborate irrigation works are known from Mohenjo-Daro; the ziggurats (temple mounds) of the Euphrates valley may well have originated in ancient Egypt in response to the complete annual inundation of the Nile floodplain, where holdings had to be redefined after each flood subsided. It is not surprising that the communities named have been styled hydraulic civilizations. Yet, it would be simplistic to claim that riparian sites held the monopoly of the developments described. Elaborate urban systems arising in Mexico, Peru, and the eastern Mediterranean from about 4000 BP onward were not immediately dependent on the resources of rivers.

Where riverine cities did develop, they commanded ready means of communication; the two lands of Upper and Lower Egypt, for instance, were unified by the Nile. At the same time, it can be argued that early riverine and river-dependent civilizations bore the seeds of their own destruction, independent of major climatic variations and natural evolutionary changes in the river systems. High-consuming cities downstream inevitably exploited the upstream catchments, especially for timber. Deforestation there may possibly have led to ruinous silting in downstream reaches, although the contribution of this process to the eventual decline of civilization on the Euphrates and the Indus remains largely a matter of guesswork. An alternative or conjoint possibility is that continued irrigation promoted progressive salinization of the soils of irrigated lands, eventually preventing effective cropping. Salinization is known to have damaged the irrigated lands of Ur, progressively from about 4400 to 4000 BP, and may have ruined the Sumerian empire of the time. The relative importance of environmental and social deterioration in prehistoric hydraulic civilizations, however, remains a matter of debate. Furthermore, defective design and maintenance of irrigation works promote the spread of malarial mosquitoes, which certainly afflicted the prehistoric hydraulic communities of the lower Tigris-Euphrates valley. These same communities also may have been affected by bilharziasis, or schistosomiasis (blood fluke disease), which requires a species of freshwater snail for propagation and which even today follows many extensions of irrigation into arid lands.

3.5.2 Significance to trade, agriculture, and industry

The historical record includes marked shifts in the appreciation of rivers, numerous conflicts in use demand, and an intensification of use that rapidly accelerated during the 20th century. External freight trade became concentrated in estuarine ports rather than in inland ports when oceangoing vessels increased in size. Even the port of London, though constrained by high capital investment, has displaced itself toward its estuary. The Amazon remains naturally navigable by ocean ships for 3,700 kilometers (2,300 miles), the Yangtze for 1,000 kilometers, and the partly artificial St. Lawrence Seaway for 2,100 kilometers. Internal freight traffic on the Rhine system and its associated canals amounts to one-quarter or more of the total traffic in the basin and to more than half in some parts. After a period of decline

from the later 1800s to about the mid-1900s, water transport of freight has steadily increased. This trend can in large part be attributed to advances in river engineering. Large-scale channel improvement and stabilization projects have been undertaken on many of the major rivers of the world, notably in the northern plain lands of Russia and in the interior of the United States (e.g., various large tributaries of the Mississippi River).

Demand on open-channel water increases as population and per capita water use increase and as underground water supplies fall short. Irrigation use constitutes a comparatively large percentage of the total supply. With a history of at least 5,000 years, controlled irrigation now affects roughly 2,000,000 square kilometers (770,000 square miles) of land, three-quarters of it in East and South Asia and two-fifths in mainland China alone. Most of this activity involves the use of natural floodwater, although reliance on artificially impounded storage has increased rapidly. Irrigation in the 1,300-kilometre length of the Indus valley, for instance, depends almost exclusively on barrages (i.e., distributor canals) running down alluvial fans and along floodplains.

3.5.3 Environmental problems attendant on river use

The ever-increasing exploitation of rivers has given rise to a variety of problems. Extensive commercial navigation of rivers has resulted in much artificial improvement of natural channels, including increasing the depth of the channels to permit passage of larger vessels. In some cases, this lowering of the river bottom has caused the water table of the surrounding area to drop, which has adversely affected agriculture. Also, canalization, with its extensive system of locks and navigation dams, often seriously disrupts riverine ecosystems.

An even more far-reaching problem is that of water pollution. Pesticides and herbicides are now employed in large quantities throughout much of the world. The widespread use of such biocides and the universal nature of water makes it inevitable that the toxic chemicals would appear as stream pollutants. Biocides can contaminate water, especially of slow-flowing rivers, and are responsible for a number of fish kills each year.

In agricultural areas the extensive use of phosphates and nitrates as fertilizers may result in other problems. Entering rivers via rainwater runoff and groundwater seepage, these chemicals can cause eutrophication. This process involves a sharp increase in the concentration of phosphorus, nitrogen, and other plant nutrients that promotes the rapid growth of algae (so-called algal blooms) in sluggish rivers and a consequent depletion of oxygen in the water. Under normal conditions, algae contribute to the oxygen balance in rivers and also serve as food for fish, but in excessive amounts they crowd out populations of other organisms, overgrow, and finally die owing to the exhaustion of available nutrients and autointoxication. Various species of bacteria then begin to decay and putrefy the dead algal bodies, the oxidation of which sharply reduces the amount of oxygen in the river water. The water may develop a bad taste and is unfit for human consumption unless filtered and specially treated.

3.6 DISTRIBUTION OF RIVERS IN NATURE

World's largest rivers

Obvious bases by which to compare the world's great rivers include the size of the drainage area, the length of the main stem, and the mean discharge. However, reliable comparative data, even for the world's greatest rivers, is often difficult to obtain. It is possible that well over 100 of the greatest rivers may exceed a 1,600-kilometre length on their main stems. Measuring from the headwaters of the most distant source, the five longest rivers in the world are the Nile, the Amazon–Ucayali–Apurímac, the Yangtze, the Mississippi–Missouri–Red Rock, and the Yenisey–Baikal–Selenga.

Principles governing distribution and flow

Moisture supply sufficient to sustain channeled surface flow is governed primarily by climate, which regulates precipitation, temperature, and evapotranspiration water loss caused by vegetation. In rainy tropical and exposed midlatitude areas, runoff commonly equals 38 centimeters or more of rain a year, rising to more than 102 centimeters. Negligible external runoff occurs in subtropical and rain-shadow deserts; perennial, intermittent, and ephemeral lakes, expanding in response to local runoff, prevent the drainage of desert basins from finding escape routes.

Rivers as Agents of Landscape Evolution

Every landform at the Earth's surface reflects a particular accommodation between properties of the underlying geologic materials, the type of processes affecting those materials, and the amount of time the processes have been operating. Because landforms are the building blocks of regional landscapes, the character of the local surroundings is ultimately controlled by those factors of geology, process, and time—a conclusion reached in the late 19th century by the noted American geologist and geographer William Morris Davis. In some regions, severe climatic controls cause a particular process agent to become preeminent. Deserts, for example, are often subjected to severe wind action, and the resulting landscape consists of landforms that reflect the dominance of erosional or depositional processes accomplished by the wind. Other landscapes may be related to processes operating beneath the surface. Regions such as Japan or the Cascade Range in the northwestern part of the United States clearly have major topographic components that were produced by repeated volcanic activity. Nevertheless, rivers are by far the most important agents in molding landscapes because their ubiquity ensures that no region of the Earth can be totally devoid of landforms developed by fluvial processes.

Rivers are much more than sluiceways that simply transport water and sediment. They also change a nondescript geologic setting into distinct topographic forms. This happens primarily because movement of sediment-laden water is capable of pronounced erosion, and when transporting energy decreases, landforms are created by the deposition of fluvial sediment. Some fluvial features are entirely erosional, and the form is clearly unrelated to the

transportation and deposition of sediment. Other features may be entirely depositional. In these cases, topography is constructed of sediment that buries some underlying surface that existed prior to the introduction of the covering sediment. Realistically, many fluvial features result from some combination of both erosion and deposition, and the pure situations probably represent end members of a continuum of fluvial forms.

Floodplains

Floodplains are perhaps the most common of fluvial features in that they are usually found along every major river and in most large tributary valleys. Floodplains can be defined topographically as relatively flat surfaces that stand adjacent to river channels and occupy much of the area constituting valley bottoms. The surface of a floodplain is underlain by alluvium deposited by the associated river and is partially or totally inundated during periods of flooding. Thus, a floodplain not only is constructed by but also serves as an integral part of the modern fluvial system, indicating that the surface and alluvium must be related to the activity of the present river.

The above definition suggests that, in addition to being a distinct geomorphic feature, a floodplain has a significant hydrologic role. A floodplain directly influences the magnitude of peak discharge in the downstream reaches of a river during episodes of flooding. In extreme precipitation events, runoff from the watershed enters the trunk river faster than it can be removed from the system. Eventually water overtops the channel banks and is stored on the floodplain surface until the flood crest passes a given locality farther downstream. As a consequence, the flood crest on a major river would be significantly greater if its floodplain did not store water long enough to prevent it from becoming part of the downstream peak discharge. The capacity of a floodplain system to store water can be enormous. The volume of water stored during the 1937 flood of the Ohio River in the east-central United States, for example, was roughly 2.3 times the volume of Lake Mead, the largest artificial reservoir in North America. The natural storage in the Ohio River watershed during this particular event represented approximately 57 percent of the direct runoff.

Because a floodplain is so intimately related to floods, it also can be defined in terms of the water level attained during some particular flow condition of a river. In that sense a floodplain is commonly recognized as the surface corresponding to the bank-full stage of a river—i.e., the water level at which the channel is completely filled. Numerous studies have shown that the average recurrence interval of the bank-full stage is 1.5 years, though this value might vary from river to river. Nonetheless, this suggests that most floodplain surfaces will be covered by water twice every three years. It should be noted, however, that the water level having a recurrence interval of 1.5 years will cover only a portion of the relatively flat valley bottom surface that was defined as the topographic floodplain. Clearly parts of the topographic floodplain will be inundated only during river stages that are considerably higher than bank full and occur less frequently. Thus, it seems that the definition of a hydrologic floodplain is different from that of the topographic floodplain, and how one ultimately studies

a floodplain surface depends on which point of view concerning the feature is considered of greatest significance.

River terraces

Terraces are flat surfaces preserved in valleys that represent floodplains developed when the river flowed at a higher elevation than its present channel. A terrace consists of two distinct topographic components: (1) a tread, which is the flat surface of the former floodplain, and (2) a scarp, which is the steep slope that connects the tread to any surface standing lower in the valley. Terraces are commonly used to reconstruct the history of a river valley. Because the presence of a terrace scarp requires river downcutting, some significant change in controlling factors must have occurred between the time that the tread formed and the time that the scarp was produced. Usually the phase of trenching begins as a response to climatic change, tectonics (movement and deformation of the crust), or baselevel lowering. Like most floodplains, abandoned or active, the surface of the tread is normally underlain by alluvium deposited by the river. Strictly speaking, however, these deposits are not part of the terrace because the term refers only to the topographic form.

The extent to which a terrace is preserved in a valley usually depends on the age of the surface. Old terraces are those that were formed when the river flowed at very high levels above the present-day river channel, while terraces of even greater age are those usually cut into widely separated, isolated segments. In contrast, very young terraces may be essentially continuous along the entire length of the trunk valley, being dissected only where tributary streams emerge from the valley sides. These young terraces may be close in elevation to the modern floodplain, and the two surfaces may be difficult to distinguish. This difficulty emphasizes the importance of how a floodplain and terrace are defined. Presumably the surface of a terrace is no longer related to the modern hydrology in terms of frequency and magnitude of flow events. Thus, any flat surface standing above the level inundated by a flow having a recurrence interval of 1.5 years is by definition a terrace. The complication arises, however, because some low terraces may be covered by floodwater during events of higher magnitude and lower frequency. These terrace surfaces are inundated by the modern hydrologic system but less frequently than the definition of a hydrologic floodplain would allow. In some cases, a low terrace may be underlain by sediment that has been continuously deposited for thousands of years during infrequent large floods.

3.7 DESERT

Figure 3.3 Desert

Desert, any large, extremely dry area of land with sparse vegetation. It is one of Earth's major types of ecosystems, supporting a community of distinctive plants and animals specially adapted to the harsh environment. For a list of selected deserts of the world, see below.

Desert environments are so dry that they support only extremely sparse vegetation; trees are usually absent and, under normal climatic conditions, shrubs or herbaceous plants provide

only very incomplete ground cover. Extreme aridity renders some deserts virtually devoid of plants; however, this barrenness is believed to be due in part to the effects of human disturbance, such as heavy grazing of cattle, on an already stressed environment.

According to some definitions, any environment that is almost completely free of plants is considered desert, including regions too cold to support vegetation—i.e., "frigid deserts." Other definitions use the term to apply only to hot and temperate deserts, a restriction followed in this account.

Origin

The desert environments of the present are, in geologic terms, relatively recent in origin. They represent the most extreme result of the progressive cooling and consequent aridification of global climates during the Cenozoic Era (65.5 million years ago to the present), which also led to the development of savannas and scrublands in the less arid regions near the tropical and temperate margins of the developing deserts. It has been suggested that many typical modern desert plant families, particularly those with an Asian Centre of diversity such as the chenopod and tamarisk families, first appeared in the Miocene (23 to 5.3 million years ago), evolving in the salty, drying environment of the disappearing Tethys Sea along what is now the Mediterranean–Central Asian axis.

Deserts also probably existed much earlier, during former periods of global arid climate in the lee of mountain ranges that sheltered them from rain or in the Centre of extensive continental regions. However, this would have been primarily before the evolution of angiosperms (flowering plants, the group to which most present-day plants, including those of deserts, belong). Only a few primitive plants, which may have been part of the ancient desert vegetation, occur in present-day deserts. One example is the bizarre conifer relative tumbao, or welwitschia, in the Namib Desert of southwestern Africa. Welwitschia has only two leaves, which are leathery, straplike organs that emanate from the middle of a massive, mainly subterranean woody stem. These leaves grow perpetually from their bases and erode progressively at their ends. This desert also harbors several other plants and animals peculiarly adapted to the arid environment, suggesting that it might have a longer continuous history of arid conditions than most other deserts.

Desert floras and faunas initially evolved from ancestors in moister habitats, an evolution that occurred independently on each continent. However, a significant degree of commonality exists among the plant families that dominate different desert vegetations. This is due in part to intrinsic physiologic characteristics in some widespread desert families that preadapt the plants to an arid environment; it also is a result of plant migration occurring through chance seed dispersal among desert regions.

Such migration was particularly easy between northern and southern desert regions in Africa and in the Americas during intervals of drier climate that have occurred in the past two million years. This migration is reflected in close floristic similarities currently observed in these places. For example, the creosote bush (Larrea tridentata), although now widespread

and common in North American hot deserts, was probably a natural immigrant from South America as recently as the end of the last Ice Age about 11,700 years ago.

Migration between discrete desert regions also has been relatively easier for those plants adapted to survival in saline soils because such conditions occur not only in deserts but also in coastal habitats. Coasts can therefore provide migration corridors for salt-tolerant plants, and in some cases the drifting of buoyant seeds in ocean currents can provide a transport mechanism between coasts. For example, it is thought that the saltbush or chenopod family of plants reached Australia in this way, initially colonizing coastal habitats and later spreading into the inland deserts.

Environment

Deserts are varied and variable environments, and it is impossible to arrive at a concise definition that satisfies every case. However, their most fundamental characteristic is a shortage of available moisture for plants, resulting from an imbalance between precipitation and evapotranspiration. This situation is exacerbated by considerable variability in the timing of rainfall, low atmospheric humidity, high daytime temperatures, and winds.

Average annual precipitation ranges from almost zero in some South American coastal deserts and Libyan deserts to about 600 millimeters (24 inches) in deserts in Madagascar, although most recognized deserts have an annual rainfall below 400 millimeters. Some authorities consider 250 millimeters the upper limit for mean annual precipitation for true deserts, describing places with a mean annual rainfall of between 250 and 400 millimeters as semideserts. Regions this dry are barely arable and contribute to human food production only by providing grazing lands for livestock.

The arid conditions of the major desert areas result from their position in subtropical regions to either side of the moist equatorial belt. The atmospheric circulation pattern known as the Hadley cell plays an important role in desert climate. In areas close to the Equator, where the amount of incoming solar energy per unit surface area is greatest, air near the ground is heated, then rises, expands, and cools. This process leads to the condensation of moisture and to precipitation. At high levels in the atmosphere, the risen air moves away from the equatorial region to descend eventually in the subtropics as it cools; it moves back toward the Equator at low altitudes, completing the Hadley cell circulation pattern. The air descending over the subtropics has already lost most of its moisture as rain formed during its previous ascent near the Equator. As it descends, it becomes compressed and warmer, its relative humidity falling further. (For further discussion of relative humidity, see biosphere: Humidity.) Hot deserts occur in those regions to the north and south of the equatorial belt that lie beneath these descending, dry air masses. This pattern may be interrupted where local precipitation is increased, especially on the east sides of continents where winds blow onshore, carrying moisture picked up over the ocean. Conversely, deserts may be found elsewhere, as in the lee of mountain ranges, where air is forced to rise, cool, and lose moisture as rain falling on the windward slopes.

Rainfall in deserts is usually meagre. In some cases several years may pass without rain; for example, at Cochones, Chile, no rain fell at all in 45 consecutive years between 1919 and 1964. Usually, however, rain falls in deserts for at least a few days each year—typically 15 to 20 days. When precipitation occurs, it may be very heavy for short periods. For instance, 14 millimeters fell at Mash' abe Sade, Israel, in only seven minutes on October 5, 1979, and in southwestern Madagascar the entire annual rainfall commonly occurs as heavy showers falling within a single month. Such rainfall usually occurs only over small areas and results from local convectional cells, with more widespread frontal rain being restricted to the southern and northern fringes of deserts. In some local desert showers, the rain falling from clouds evaporates before it reaches the ground. Regions near the equatorial margins of hot deserts receive most of their rain in summer—June to August in the Northern Hemisphere and December to February in the Southern Hemisphere—while those near the temperate margins receive most of their rainfall in winter. Rain is particularly erratic and equally unlikely to occur in all seasons in intermediate regions.

In some deserts that are located near coasts, such as the Namib Desert of southwestern Africa and those of the west coasts of the Americas in California and Peru, fog is an important source of moisture that is otherwise scarce. Moisture droplets settle from the fog onto plants and then may drip onto the soil or be absorbed directly by plant shoots. Dew also may be significant, although not in deserts in from the central parts of continents where atmospheric humidity is consistently very low.

Biological Productivity

In the highly stressful desert environment, productivity is generally very low; however, it is also highly variable from time to time and from place to place. (For a full discussion of productivity, see biosphere: Resources of the biosphere.)

Temporal variations are caused by the occasional input of moisture; this allows the vegetation to grow for only a short period before arid conditions resume. Spatial variations are due in part to the structural patchiness of the vegetation itself, as surface soil beneath shrubs is several times more fertile than it is between shrubs. Shrub roots contribute to this process by retrieving nutrients from the deep soil and depositing them in litter on the soil surface beneath the shrub canopy. Windblown litter that accumulates around shrubs and the microbial flora found in soil shaded by the shrub canopy also create patchy, fertile areas. Because human disturbance of desert vegetation commonly involves the partial or total removal of the shrub cover, the impact of human disturbance on these ecosystems is significant.

3.8 FLORA AND FAUNA

In a nutshell, the term flora relates to all plant life and the term fauna represents all animal life. Let us dive deeper into these terms, exploring their origins and etymologies.

The term flora in Latin means "Goddess of the Flower." Flora is a collective term for a group

of plant life found in a particular region. The whole plant kingdom is represented by this name.

Flora is classified and differentiated based on many factors. The best one among them is the area in which they grow or are found. Some grow in desert regions or in water, some are found in hilly areas while some are endemic to a specific geographic location.

According to the place at which they grow, they have adaptations also. For example, Cactus plants are naturally seen in deserts. They have adaptations like modified leaves or prickles to preserve water and protect themselves from predators.

The agricultural flora consists of plants cultivated by men for their use. Horticulture is the practice of growing ornamental and decorative flowers which are also known as garden flora.

Fauna represents the animal life indigenous to a region. There are many explanations regarding the origin of the word. As per Roman mythology, Fauna or "Faunus" is the name of the goddess of fertility. Another source is "Fauns" which means "Forest spirits. "

Animal kingdom comprises of a variety of animal life forms. Hence the classification of fauna is much more complex than the floral division. Therefore, for ease of classification;

Birds are categorized in the name Avifauna while

Fishes under Pisci Fauna.

Microorganisms including bacteria and virus are generally considered under animal kingdom, they are known as Microfauna.

All unknown and undiscovered animals are named as crypto fauna.

Since time immemorial, there have been accounts of animals that have been thought to exist but have eluded the scientific community, thereby classifying them as crypto fauna or cryptids.

Most of these reports are just tall tales but until recently, a few have documented through actual physical evidence and scientific scrutiny. One such example is the colossal squid. This cryptid has been allegedly been sighted since the 17th and 18th century, often being cited in the diaries and logbooks of sailors.

It wasn't until the 21st century and the conclusive proof was found in the form of a live specimen being entangled in a fishing net. It was taken in and studied by scientists who concluded that it was a new species of squid. Since then, there has been undisputed confirmation about the existence of giant squids.

The earth is beautiful because of all these life forms. Other life forms depend on them for various resources and exploit them.

Conservation of flora and fauna is thus necessary for future survival. Biosphere reserves, national parks, zoos, and sanctuaries are few instances of the measures taken by the government for conservation of flora and fauna. Another example is the Tiger project launched by the government of India with the goal of saving the tigers in the country from extinction.

3.9 IMPORTANCE OF FLORA AND FAUNA

The flora and fauna are important for the following reasons:

3.9.1 Maintains Ecological Balance

Flora and fauna are very important for human existence. The flora liberates oxygen that is consumed by the fauna for respiratory activities. Fauna, in turn, liberates carbon dioxide consumed by the flora for photosynthesis.

Flora and fauna hugely benefit mankind through its medicinal and food offerings. Animals maintain the equilibrium by predating on different plants and animals to balance their population on earth.

Animal droppings are a source of fertilizer. The dead animals decay and act as supplement minerals for other animals.

3.9.2 Aesthetic Value

The flora and fauna spread across the earth contribute to the aesthetic value of the earth. People visit several biosphere reserves, national parks and zoos, forests, botanical gardens etc. to enjoy the beauty of landmarks. This explains the significance of flora and fauna in our day to day lives.

3.9.3 Expansion of Local Economies

Flora and Fauna contribute to the local economies through tourism. The flora and fauna of Amazon forests attract tourists and scientists which contributes to about 50 million dollars to the Brazilian economy.

Caribbean, Indonesia, Panama are other tourist locations that attract millions of people due to its widespread flora and fauna.

3.9.4 Flora and Fauna of India

The flora and fauna in India are diverse with a variety of plants and animal varieties. The popular fauna of India includes 500 different varieties of mammals, 2000 species of birds, 30.000 types of insects and several varieties of fish, amphibians, and reptiles. Elephants, Royal Bengal Tiger, rhinos, bison, lions are some common fauna found in the country.

India also contains a variety of flora that includes the Alpines, temperate forests, deciduous forests, evergreen forests, oaks, rhododendrons, pine, spruce, deodar, laurels, maples, bamboos and tall grasses.

3.10 WILD LIFE SANCTUARY

A wildlife sanctuary is an area where animal habitats and their surroundings are protected from any sort of disturbance. The capturing, killing and poaching of animals is strictly prohibited in these regions.

They aim at providing a comfortable living to the animals. India has beautiful wildlife sanctuaries, with dense forests, large rivers, high and beautiful mountains.

Tourism is not permitted in a wildlife sanctuary. People are not allowed unescorted there. The main objective of establishing a wildlife sanctuary is to educate humans as to how to treat the animals. The animals are taken care of and allowed to live peacefully in their natural habitats.

3.11 IMPORTANCE OF WILDLIFE SANCTUARIES

There are a number of reasons for establishing wildlife sanctuaries. Some of the reasons are listed below:

The wildlife sanctuaries are established to protect the endangered species.

It is quite difficult to always relocate the animals from their natural habitat, therefore, protecting them in their natural environment is advantageous.

The endangered species are specially monitored in the wildlife sanctuaries. If they reproduce and grow in number while under protection, few specimens can be kept for breeding in the conservation parks for their survival.

Biologist activities and researches are permitted in the wildlife sanctuaries so that they can learn about the animals living there.

A few sanctuaries take in injured and abandoned animals and rehabilitate them to health before releasing them in the forest.

Wildlife sanctuaries preserve the endangered species and protect them from humans and predators.

Protection of Endangered Species

Many species of plants and animals are on the verge of extinction. Such creatures are conserved in the wildlife sanctuaries. Various sanctuaries have been established such as the Fleurieu peninsula sanctuary is maintained to protect sheoak habitat for glossy black cockatoos.

Conservation of Biodiversity

- The landowners of a wildlife sanctuary are involved in:
- Production and distribution of electricity.
- Horticulture, grazing and farming enterprises
- Wine production
- Organic horticulture

Ecotourism

Many sanctuaries are involved in ecotourism. They offer accommodation, tour guides, nature walks, etc.

Education and Public use

The sanctuaries that are created on public land are involved in public use along with the conservation of biodiversity. For e.g., golf courses, picnic areas, lakes for boating and swimming.

Thus, we know, that a wildlife sanctuary is one of the finest ways of preserving the endangered species.

3.12 NATIONAL PARKS

National park, an area set aside by a national government for the preservation of the natural environment. A national park may be set aside for purposes of public recreation and enjoyment or because of its historical or scientific interest. Most of the landscapes and their accompanying plants and animals in a national park are kept in their natural state. The national parks in the United States and Canada tend to focus on the protection of both land and wildlife, those in the United Kingdom focus mainly on the land, and those in Africa primarily exist to conserve animals. Several other countries have large areas reserved in national parks, notably Brazil, Japan, India, and Australia.

It is generally thought that the concept of a park or nature reserve under state ownership originated in the United States in 1870 and that the world's first such park was Yellowstone National Park in Wyoming, created through legislation signed by U.S. Pres. Ulysses S. Grant in 1872. However, some naturalists and others have argued that there is evidence that indicates that the creation of Yellowstone was predated by the creation of Bogd Khan Mountain National Park in Mongolia, which may date from as early as 1778.

Yosemite, Sequoia, and General Grant national parks were established in the United States in 1890, and during this time the idea of protecting outstanding scenic natural areas for their own sake grew into a concept of American (U.S.) national policy. The national park system was expanded during the following decades, and the U.S. National Park Service (NPS) was created in 1916 to administer the parks. By the early 21st century the NPS administered more than 400 separate areas constituting about 85 million acres (34 million hectares). In addition to national parks, the system included national preserves, monuments, recreation areas, seashores, lakeshores, historic parks and sites, parkways, scenic trails, and battlefields.

Partly inspired by the American example, movements in favor of national parks sprang up in many other countries, beginning with Canada, which established its first three national parks in the mid-1880s. Nature reserves had been maintained in Europe for centuries to protect hunting grounds for use by kings and nobles, but the establishment of modern national parks and nature reserves gained momentum only after World War I or, in some cases, after World War II. Great Britain established the administrative machinery for both national parks and nature reserves in 1949. It also began establishing national parks in India and its African colonies after the war, and this practice was continued and expanded by those new nations

after reaching independence. Japan and Mexico established their first national parks in the 1930s, but interest in parks generally came later in Asia and Latin America than it did in the Anglo-American countries and Europe.

The national parks of various countries differ greatly in their effectiveness in protecting their resources. Some governments provide their park systems with large enough budgets to make possible strict enforcement of regulations; others do not. Most national parks have a built-in paradox: although they often depend for their existence on tourism stimulated by public interest in nature, the preservation of their wildlife depends on its not being molested. This paradox is usually resolved by allowing visitors to travel only within limited areas in the park. This lets them see the park while it minimizes their contact with the wildlife. See also conservation; nature reserve; national forest.

Famous National Parks and Wild Life Sanctuary

The land of India is blessed with an amazing topography that accommodates mountains, plains, lush greenery, vast forests, and small tributaries. Each of these landscapes varies in terms of physical divisions and climatic discrepancies. These vast forests serve as a natural home to an enormous variety of flora and fauna. Several wildlife sanctuaries and national parks have come into existence all throughout India with the purpose of the conservation of wildlife species.

Famous National Parks in India in 2020-21

1. Corbett National Park, Uttarakhand

Formerly known as 'Hailey National Park', Corbett National Park is a famous refuge for tigers as well as for most of the other wild species. It was established in 1936 to protect the imposing Bengal Tigers. A perfect adventurous destination, this is the oldest park in the country and also fit for an Eco tour with amazing natural bounties.

The park has been named after the popular British officer cum hunter 'Jim Corbett'. Owing to its beauty and wilderness, the park attracts enthusiasts from various parts of the globe. Corbett National Park has been a subject for many wildlife documentaries produced in India.

2. Kaziranga National Park, Assam

Popular as a UNESCO World Heritage Site, Kaziranga National Park is the only natural habitat of the endangered One-horned Rhinoceros in India. It is also famous as a Tiger Reserve. Apart from One-horned Rhinoceros, it can also be applauded for water buffaloes, elephants, and other animals. It is also a highly visited park amongst the top 10 national parks in India. Make your stay comfortable at these hotels near Kaziranga National Park. Best time to visit Kaziranga – November till April.

3. Ranthambore National Park, Rajasthan

One of the royal national parks in India, the Ranthambore National Park is ranked as one of the top 10 national parks in India. The majestic Tigers are the pride of this national park. Here, you can see many predators and dry deciduous forests. Various lakes and forts are also here, which will increase the adventure.

The other two attractions of this National Park include Ranthambore Fort and Padam Talao. While the Ranthambore Fort dates back to the 10th century and stands as a testimony to the glorious history of Rajasthan, Padam Talao is the largest water body of all. The wonderful Jogi Mahal is located at the corner of this lake. Feel the thrill of jungle with these Top 10 Jungle Resorts in Ranthambore.

4. Periyar National Park, Kerala

Nestled on the Western Ghats, the Periyar National Park is the only wildlife sanctuary in South India as well as in India that has an artificial lake flowing through the forests. It is quite popular for its sheer beauty and tourism. It is also a popular Project Tiger Reserve, and also offers jeep safaris for the tourists. A boat ride on the beautiful Periyar Lake will enhance the fun.

Some popular things to do in and around Periyar National Park include Fruitful Nature Walks, Elephant Safari, Tiger Trailing, Boat Cruise and the trip to Cardamom Hills. Also make your stay lavish at Top 10 Luxury Jungle Resorts Near Periyar National Park.

5. Gir Wildlife Sanctuary, Gujarat

Also known as the Sasan Gir Sanctuary of Gujarat, the Gir Wildlife Sanctuary is the sole home of Asiatic Lions in India. With amazing flora and fauna, the park is treated well and is looked after by the government forest department and various NGO's. The park was established on 18th September, 1965. It is one of the largest and elegantly preserved areas for the Asiatic Lions. October to June is the ideal time to visit the place.

Besides Asiatic Lions, there are around 210 leopards that live within the forest area. You can also explore animals such as Sambar, Chausingha, Chinkara, Flamingoes, Nilgai, Woodpeckers and Crested Serpent Eagles

3.13 SUMMARY

- A mountain is a large landform that rises above the surrounding land in a limited area, usually in the form of a peak. A mountain is generally considered to be steeper than a hill. Mountains are formed through tectonic forces or volcanism. These forces can locally raise the surface of the earth.
- A river is a natural flowing watercourse, usually freshwater, flowing towards an ocean, sea, lake or another river. In some cases a river flows into the ground and becomes dry at the end of its course without reaching another body of water.
- National park, an area set aside by a national government for the preservation of the natural environment. A national park may be set aside for purposes of public recreation and enjoyment or because of its historical or scientific interest. Most of the landscapes and their accompanying plants and animals in a national park are kept in their natural state.

- The term flora in Latin means "Goddess of the Flower." Flora is a collective term for a group of plant life found in a particular region. The whole plant kingdom is represented by this name. Fauna represents the animal life indigenous to a region. There are many explanations regarding the origin of the word.
- A wildlife sanctuary is an area where animal habitats and their surroundings are protected from any sort of disturbance. The capturing, killing and poaching of animals is strictly prohibited in these regions.
- Attributes are non-spatial characteristics that describe spatial entities. Attributes are commonly arranged in tables where a row is equivalent to one entity and a column is equivalent to one attribute, or descriptor of that entity.

3.14 KEYWORDS

- **Alpine climate:** Alpine climate is the typical weather (climate) for the regions above the tree line. This climate is also referred to as a mountain climate or highland climate.
- **Hill:** A mountain range or hill range is a series of mountains or hills ranged in a line and connected by high ground.
- **Hillslope:** In hillslope geomorphology, a rill is a shallow channel cut into soil by the erosive action of flowing water.
- **Glacier**: A glacier is a persistent body of dense ice that is constantly moving under its own weight.
- **Himalayas:** The Himalayas, or Himalaya, is a mountain range in Asia separating the plains of the Indian subcontinent from the Tibetan Plateau.

3.15 LEARNING ACTIVITY

1. Outline how different Mountain belts are securing borders of India.

_____

_____

2. Draw a comparative study between National Parks of Northern and Southern India

_____

_____

3.16 UNIT END QUESTIONS

A. Descriptive Type Questions

1. Explain geomorphic characteristics of mountains. What are the major types of mountain

belts?

2. Discus term River? Explain the importance of river. Explain floodplains and river terraces.
3. Explain the origin of desert? Explain biological productivity of the desert.
4. Explain flora and fauna. What is the importance of flora and fauna?
5. Discuss the difference of wild life sanctuary and national parks?

B. Multiple Choice Questions

1. It stands above the surrounding surface, which may be a coastal plain, as along the western Andes in northern Chile, or a high plateau, as within and along the Plateau of Tibet in southwest …….. .

a. India
b. Nepal
c. Bhutan
d. China

2. ……, any large, extremely dry area of land with sparse vegetation. It is one of Earth's major types of ecosystems, supporting a community of distinctive plants and animals specially adapted to the harsh environment.

a. Desert
b. Sahar
c. Thar
d. National park

3. Sedentary settlement in Hither …….. began about 10,000 years ago at the site of Arīḥ ā (ancient Jericho).

a. Europe
b. Malaysia
c. Asia
d. Mauritius

4. Most of the …….. and their accompanying plants and animals in a national park are kept in their natural state.

a. Landscapes
b. Area
c. Surrounding
d. None of these

5. A …….. is an area where animal habitats and their surroundings are protected from any sort of disturbance.

a. national park
b. desert
c. park
d. wildlife sanctuary

Answer

1. d 2. a 3. c 4. a 5. d

3.17 REFERENCES

- Hall, CM and Page, SJ. (2014). The Geography of Tourism and Recreation.UK and New York: Routledge publishers.
- Sinha, P.C. (2005). Tourism Geography, New Delhi: Anmol Publication.
- International Atlas, Penguin Publication and DK Publication
- Boniface B. and Cooper C. (1987) The Geography of Travel and Tourism. London and England: Heinemann Professional Publisher.
- Rohinson H.|A.A. (1976). Geography of Tourism. London: Macdonaled and Evans.
- Gopal Singh. (2010). A Geography of India. Delhi: Atma Ram & Sons
- Roller, Duane W. (24 January 2010). Eratosthenes' Geography. Translated by Roller, Duane W. Princeton: Princeton University Press. ISBN 978-0-691-14267-8. Archived from the original on 19 November 2015.
- Siebold, Jim (1998). "Babylonian clay tablet, 600 B.C." henry-davis.com. Henry Davis Consulting Inc. Archived from the original on 9 November 2016. Retrieved 10 November 2016.
- Geographical Data: Characteristics and Sources - Page 87› books" Nigel Walford · 2002
- Geographical Data Acquisitionbooks.google.co.in › books Yong-Qi Chen, ⁋ Yuk-Cheung Lee · 2012
- Smith, Sir William (1846). Dictionary of Greek and Roman Biography and Mythology: Earinus-Nyx. 2nd. London: Taylor and Walton.

UNIT 4: GEOGRAPHICAL ATTRIBUTES – II

Structure

4.0 LEARNING OBJECTIVES

After studying this unit, you will be able to:

- State about longitude
- Explain about latitude
- Discuss about International Date Line.

4.1 INTRODUCTIONS

Geography is a systematic study of the Universe and its features. Traditionally, geography has been associated with cartography and place names. Although many geographers are trained in toponymy and cartology, this is not their main preoccupation. Geographers study the space and the temporal database distribution of phenomena, processes, and features as well as the interaction of humans and their environment. Because space and place affect a variety of topics, such as economics, health, climate, plants and animals, geography is highly interdisciplinary. The interdisciplinary nature of the geographical approach depends on an attentiveness to the relationship between physical and human phenomena and its spatial patterns.

Names of places...are not geography...To know by heart a whole gazetteer full of them would not, in itself, constitute anyone a geographer. Geography has higher aims than this: it seeks to classify phenomena (alike of the natural and of the political world, in so far as it treats of the latter), to compare, to generalize, to ascend from effects to causes, and, in doing so, to trace out the laws of nature and to mark their influences upon man. This is 'a description of the

world'—that is Geography. In a word Geography is a Science—a thing not of mere names but of argument and reason, of cause and effect.

— William Hughes, 1863

Just as all phenomena exist in time and thus have a history, they also exist in space and have a geography.

— United States National Research Council, 1997

Geography as a discipline can be split broadly into two main subsidiary fields: human geography and physical geography. The former largely focuses on the built environment and how humans create, view, manage, and influence space. The latter examines the natural environment, and how organisms, climate, soil, water, and landforms produce and interact. The difference between these approaches led to a third field, environmental geography, which combines physical and human geography and concerns the interactions between the environment and humans.

4.2 LATITUDE AND LONGITUDE

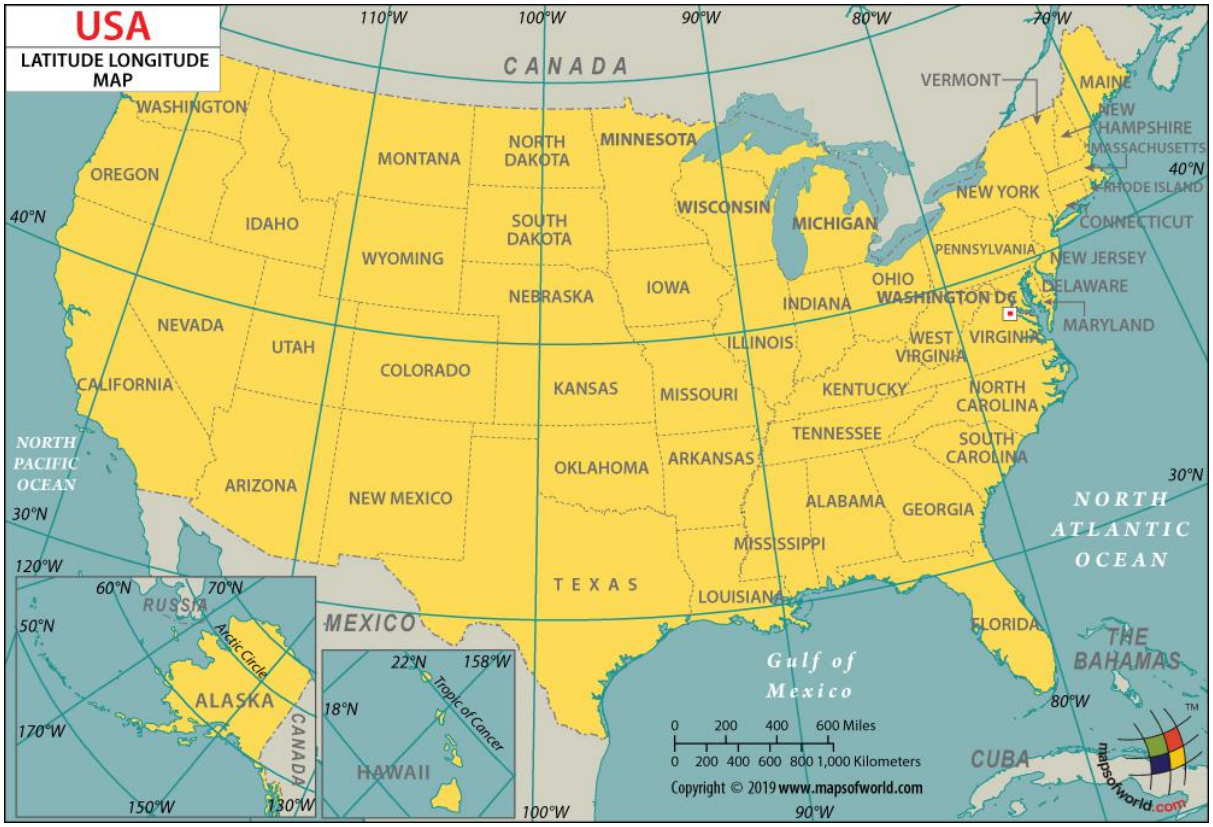


Figure 4.1 Latitude and longitude

Latitude and longitude, coordinate system by means of which the position or location of any place on Earth's surface can be determined and described.

Latitude is a measurement on a globe or map of location north or south of the Equator. Technically, there are different kinds of latitude—geocentric, astronomical, and geographic (or geodetic)—but there are only minor differences between them. In most common

references, geocentric latitude is implied. Given in degrees, minutes, and seconds, geocentric latitude is the arc subtended by an angle at Earth's centre and measured in a north-south plane poleward from the Equator. Thus, a point at 30°15′20″ N subtends an angle of 30°15′20″at the centre of the globe; similarly, the arc between the Equator and either geographic pole is 90° (one-fourth the circumference of the Earth, or 1/4 × 360°), and thus the greatest possible latitudes are 90° N and 90° S. As aids to indicate different latitudinal positions on maps or globes, equidistant circles are plotted and drawn parallel to the Equator and each other; they are known as parallels, or parallels of latitude.

In contrast, geographic latitude, which is the kind used in mapping, is calculated using a slightly different process. Because Earth is not a perfect sphere—the planet's curvature is flatter at the poles—geographic latitude is the arc subtended by the equatorial plane and the normal line that can be drawn at a given point on Earth's surface. (The normal line is perpendicular to a tangent line touching Earth's curvature at that point on the surface.) Different methods are used to determine geographic latitude, as by taking angle-sights on certain polar stars or by measuring with a sextant the angle of the noon Sun above the horizon. The length of a degree of arc of latitude is approximately 111 km (69 miles), varying, because of the nonuniformity of Earth's curvature, from 110.567 km (68.706 miles) at the Equator to 111.699 km (69.41 miles) at the poles. Geographic latitude is also given in degrees, minutes, and seconds.

Longitude is a measurement of location east or west of the prime meridian at Greenwich, the specially designated imaginary north-south line that passes through both geographic poles and Greenwich, London. Measured also in degrees, minutes, and seconds, longitude is the amount of arc created by drawing first a line from the Earth's centre to the intersection of the Equator and the prime meridian and then another line from the Earth's centre to any point elsewhere on the Equator. Longitude is measured 180° both east and west of the prime meridian. As aids to locate longitudinal positions on a globe or map, meridians are plotted and drawn from pole to pole where they meet. The distance per degree of longitude at the Equator is about 111.32 km (69.18 miles) and at the poles, 0.

The combination of meridians of longitude and parallels of latitude establishes a framework or grid by means of which exact positions can be determined in reference to the prime meridian and the Equator: a point described as 40° N, 30° W, for example, is located 40° of arc north of the Equator and 30° of arc west of the Greenwich meridian.

4.2.1 Preliminaries of latitude

Two levels of abstraction are employed in the definition of latitude and longitude. In the first step the physical surface is modeled by the geoid, a surface which approximates the mean sea level over the oceans and its continuation under the land masses. The second step is to approximate the geoid by a mathematically simpler reference surface. The simplest choice for the reference surface is a sphere, but the geoid is more accurately modeled by an ellipsoid.

The definitions of latitude and longitude on such reference surfaces are detailed in the following sections. Lines of constant latitude and longitude together constitute a graticule on the reference surface. The latitude of a point on the actual surface is that of the corresponding point on the reference surface, the correspondence being along the normal to the reference surface which passes through the point on the physical surface. Latitude and longitude together with some specification of height constitute a geographic coordinate system as defined in the specification of the ISO 19111 standard.

Since there are many different reference ellipsoids, the precise latitude of a feature on the surface is not unique: this is stressed in the ISO standard which states that "without the full specification of the coordinate reference system, coordinates (that is latitude and longitude) are ambiguous at best and meaningless at worst". This is of great importance in accurate applications, such as a Global Positioning System (GPS), but in common usage, where high accuracy is not required, the reference ellipsoid is not usually stated.

In English texts the latitude angle, defined below, is usually denoted by the Greek lower-case letter phi (φ or ϕ). It is measured in degrees, minutes and seconds or decimal degrees, north or south of the equator. For navigational purposes positions are given in degrees and decimal minutes. For instance, The Needles lighthouse is at 50°39.734′N 001°35.500′W.

The precise measurement of latitude requires an understanding of the gravitational field of the Earth, either to set up theodolites or to determine GPS satellite orbits. The study of the figure of the Earth together with its gravitational field is the science of geodesy.

This article relates to coordinate systems for the Earth: it may be extended to cover the Moon, planets and other celestial objects by a simple change of nomenclature.

4.3 INTERNATIONAL DATE LINE

Figure 4.2 IDL

International Date Line, also called Date Line, imaginary line extending between the North Pole and the South Pole and arbitrarily demarcating each calendar day from the next. It corresponds along most of its length to the 180th meridian of longitude but deviates eastward through the Bering Strait to avoid dividing Siberia and then deviates westward to include the Aleutian Islands with Alaska. South of the Equator, another eastward deviation allows certain island groups to have the same day as New Zealand.

The International Date Line is a consequence of the worldwide use of timekeeping systems arranged so that local noon corresponds approximately to the time at which the sun crosses the local meridian of longitude (see Standard Time). A traveler going completely around the world while carrying a clock that he advanced or set back by one hour whenever he entered a new time zone and a calendar that he advanced by one day whenever his clock indicated midnight would find on returning to his starting point that the date according to his own experience was different by one day from that kept by persons who had remained at the starting point. The International Date Line provides a standard means of making the needed readjustment: travelers moving eastward across the line set their calendars back one day, and those traveling westward set theirs a day ahead.

4.3.1 Geography

Circumnavigating the globe

- People traveling westward around the world must set their clocks:
- Back by one hour for every 15° of longitude crossed, and
- Forward by 24 hours upon crossing the International Date Line.

For anyone traveling eastward, they must set their clocks:

- Forward by one hour for every 15° of longitude crossed, and
- Back by 24 hours upon crossing the International Date Line.
- Failing to do this would make their time inaccurate to the local time.

The Arab geographer Abulfeda (1273–1331) predicted that circumnavigators would accumulate a one-day offset to the local date. This phenomenon was confirmed in 1522 at the end of the Magellan–Elcano circumnavigation (1519–1522), the first successful circumnavigation. After sailing westward around the world from Spain, the expedition called at Cape Verde for provisions on Wednesday, 9 July 1522 (ship's time). However, the locals told them that it was actually Thursday, 10 July 1522. The crew was surprised, as they had recorded each day of the three-year journey without omission. Cardinal Gasparo Contarini, the Venetian ambassador to Spain, was the first European to give a correct explanation of the discrepancy.

The IDL is roughly based on the meridian of 180° longitude, roughly down the middle of the Pacific Ocean, and halfway around the world from the Greenwich meridian. In many places, the IDL follows the 180° meridian exactly. In other places, however, the IDL deviates east or west away from that meridian. These various deviations generally accommodate the political and/or economic affiliations of the affected areas.

Proceeding from north to south, the first deviation of the IDL from 180° is to pass to the east of Wrangel Island and the Chukchi Peninsula, the easternmost part of Russian Siberia. (Wrangel Island lies directly on the meridian at 71°32′N 180°0′E, also noted as 71°32′N 180°0′W.) It then passes through the Bering Strait between the Diomede Islands at a distance of 1.5 kilometers (0.93 mi) from each island at 168°58′37″ W. It then bends considerably west of 180°, passing west of St. Lawrence Island and St. Matthew Island.

The IDL crosses between the U.S. Aleutian Islands (Attu Island being the westernmost) and the Commander Islands, which belong to Russia. It then bends southeast again to return to 180°. Thus, all of Russia is to the west of the IDL, and all of the United States is to the east except for the insular areas of Guam, the Northern Mariana Islands, and Wake Island.

The IDL remains on the 180° meridian until passing the equator. Two US-owned uninhabited atolls, Howland Island and Baker Island, just north of the equator in the central Pacific Ocean (and ships at sea between 172.5°W and 180°), have the latest time on Earth (UTC−12:00 hours).

The IDL circumscribes Kiribati by swinging far to the east, almost reaching the 150°W meridian. Kiribati's easternmost islands, the southern Line Islands south of Hawaii, have the most advanced time on Earth, UTC+14:00 hours. South of Kiribati, the IDL returns

westwards but remains east of 180°, passing between Samoa and American Samoa.
In much of this area, the IDL follows the 165°W meridian. Accordingly, Samoa, Tokelau, Wallis and Futuna, Fiji, Tonga, Tuvalu, and New Zealand's K Kermode Islands and Chatham Islands are all west of the IDL and have the same date. American Samoa, the Cook Islands, Niue, and French Polynesia are east of the IDL and one day behind.
The IDL then bends southwest to return to 180°. It follows that meridian until reaching Antarctica, which has multiple time zones. Conventionally, the IDL is not drawn into Antarctica on most maps.

4.4 SUMMARY

- Latitude and longitude, coordinate system by means of which the position or location of any place on Earth's surface can be determined and described. Latitude is a measurement on a globe or map of location north or south of the Equator.
- Longitude is a measurement of location east or west of the prime meridian at Greenwich, the specially designated imaginary north-south line that passes through both geographic poles and Greenwich, London
- The International Date Line (IDL) is an imaginary line of demarcation on the surface of Earth that runs from the North Pole to the South Pole and demarcates the change of one calendar day to the next. It passes through the middle of the Pacific Ocean, roughly following the 180° line of longitude but deviating to pass around some territories and island groups.
- Cartographers and geographers trace horizontal and vertical lines called latitudes and longitudes across Earth's surface to locate points on the globe.
- The Earth is, almost, but not quite, a sphere that rotates around its axis. Scientists call this shape a spheroid or ellipsoid. If we draw a line passing through the center of the Earth along its rotational axis, the line would pass through the North and the South Pole.
- The Equator is an imaginary line perpendicular to this axis. It is equidistant from the North and South Poles, and divides the globe into the Northern Hemisphere and the Southern Hemisphere.
- Most locations on the Equator experience consistently high temperatures throughout the year. They also experience at least 12 hours of daylight every day during the year. On the Equinoxes – September and March – the Sun is directly overhead the Equator, resulting in almost exactly 12 hour days and 12 hour nights.
- The Equator passes through 14 countries, including Uganda, Kenya, Somalia, Indonesia, Ecuador, Colombia, and Brazil.

4.5 KEYWORDS

- **Earth:** Earth is the third planet from the Sun and the only astronomical object known to harbor life.
- **Meridian:** A (geographic) meridian is the half of an imaginary great circle on the Earth's surface, terminated by the North Pole and the South Pole, connecting points of equal longitude, as measured in angular degrees east or west of the Prime Meridian
- **Circumnavigation**: is the complete navigation around an entire island, continent, or astronomical body.
- **Prime Meridian:** The prime meridian is a geographical reference line that passes through the Royal Observatory, Greenwich, in London, England.
- **Cape Verde**: or Cabo Verde, officially the Republic of Cabo Verde, is an island country in the central Atlantic Ocean.

4.6 LEARNING ACTIVITY

1. Explain how different physiographic divisions are economically complementary to each other

_____

_____

2. Describe with the help of a map and a globe, the importance of the location of India in terms of neighboring countries, continents, hemispheres and the Indian Ocean; compare India with other countries in terms of area;

_____

_____

4.7 UNIT END QUESTIONS

A. Descriptive Type Questions

1. Explain the term latitude.
2. State the term longitude.
3. Describe International Date Line.
4. Discuss the preliminaries of latitude?
5. Explain the geography of IDL.

B. Multiple Choice Questions

1. Latitude is used together with longitude to specify the precise location of features on the surface of the ……..

a. Mars
b. Jupiter
c. Earth
d. None of these

2. The ……. is formed by the lines of constant latitude and constant longitude, which are constructed with reference to the rotation axis of the Earth.

a. Graticule
b. Latitude
c. Longitude
d. Equator

3. It passes through the middle of the Pacific Ocean, roughly following the 180° line of longitude but deviating to pass around some territories and island groups.

a. IDL
b. Longitude
c. Latitude
d. Equator

4. It is an imaginary line of demarcation on the surface of Earth that runs from the North Pole to the South Pole and demarcates the change of one calendar day to the next.

a. Longitude
b. Latitude
c. Equator
d. International Date Line

5. Longitude is generally given using the geometrical or astronomical …….. .

a. Vertical.
b. Horizontal
c. Diagonal
d. None of these

Answer

1. c 2. a 3. a 4. d 5. a

4.8 REFERENCES

- Hall, CM and Page, SJ. (2014). The Geography of Tourism and Recreation.UK and New York: Routledge publishers.
- Sinha, P.C. (2005). Tourism Geography, New Delhi: Anmol Publication.

- International Atlas, Penguin Publication and DK Publication
- Boniface B. and Cooper C. (1987) The Geography of Travel and Tourism. London and England: Heinemann Professional Publisher.
- Rohinson H.|A.A. (1976). Geography of Tourism. London: Macdonaled and Evans.
- Gopal Singh. (2010). A Geography of India. Delhi: Atma Ram & Sons
- Finkel, Irving (1995). A join to the map of the world: A notable discovery. British Museum Magazine. ISBN 978-0-7141-2073-7.
- Goodman, Lenn Evan (1992). Avicenna. Great Britain: Routledge. ISBN 978-0-415-01929-3.
- Hayes-Bohannan, James (29 September 2009). "What is Environmental Geography, Anyway?". webhost.bridgew.edu. Bridgewater State University. Archived from the original on 26 October 2006. Retrieved 10 November 2016.
- Principles of Geographical Information Systems - Page 128books.google.co.in › books Peter A. Burrough, ‎ Rachael McDonnell, ‎ Rachael A. McDonnell · 2015
- The Climate of the Earth - Page 37books.google.co.in › books Paul E. Lydolph, ‎ Don Temple, ‎ Denise Temple · 198

UNIT 5: INDIAN GEOGRAPHY

Structure

5.0 LEARNING OBJECTIVE

After studying this unit, you will be able to:

- Define Indian geography and its importance
- State about Political and physical geography of Indian geography
- Explain about physical and political features of India

5.1 INTRODUCTIONS

Historically, India is an ancient country, known as Bharatvarsh. It is surrounded by the sea on three sides, separated from the rest of Asia by a lofty mountain chain. Hence, it has become an independent entity called the Indian subcontinent. In size, India is the seventh largest country in the world. It is a vast country characterized by great diversity in its physical feature. Therefore, it is necessary to acquire some knowledge about principal physical features. The students should make themselves familiar with the main aspects of its geography, the broad facts regarding the external relief, mountain systems, plateaus, plains, drainage systems, glaciers, volcanoes etc.

India lies on the Indian Plate, the northern part of the Indo-Australian Plate, whose continental crust forms the Indian subcontinent. The country is situated north of the equator between 8°4' north to 37°6' north latitude and 68°7' east to 97°25' east longitude. It is the seventh-largest country in the world, with a total area of 3,287,263 square kilometers (1,269,219 sq mi). India measures 3,214 km (1,997 mi) from north to south and 2,933 km (1,822 mi) from east to west. It has a land frontier of 15,200 km (9,445 mi) and a coastline of

7,516.6 km (4,671 mi).

On the south, India projects into and is bounded by the Indian Ocean—in particular, by the Arabian Sea on the west, the Lakshadweep Sea to the southwest, the Bay of Bengal on the east, and the Indian Ocean proper to the south. The Palk Strait and Gulf of Mannar separate India from Sri Lanka to its immediate southeast, and the Maldives are some 125 kilometers (78 mi) to the south of India's Lakshadweep Islands across the Eight Degree Channel. India's Andaman and Nicobar Islands, some 1,200 kilometers (750 mi) southeast of the mainland, share maritime borders with Myanmar, Thailand and Indonesia. Kanyakumari at 8°4′41″N and 77°55′230″E is the southernmost tip of the Indian mainland, while the southernmost point in India is Indira Point on Great Nicobar Island. The northernmost point which is under Indian administration is Indira Col, Siachen Glacier. India's territorial waters extend into the sea to a distance of 12 nautical miles (13.8 mi; 22.2 km) from the coast baseline. India has the 18th largest Exclusive Economic Zone of 2,305,143 km2 (890,021 sq mi).

The northern frontiers of India are defined largely by the Himalayan mountain range, where the country borders China, Bhutan, and Nepal. Its western border with Pakistan lies in the Karakoram range, Punjab Plains, the Thar Desert and the Rann of Kutch salt marshes. In the far northeast, the Chin Hills and Kachin Hills, deeply forested mountainous regions, separate India from Burma. On the east, its border with Bangladesh is largely defined by the Khasi Hills and Mizo Hills, and the watershed region of the Indo-Gangetic Plain.

The Ganga is the longest river originating in India. The Ganga–Brahmaputra system occupies most of northern, central, and eastern India, while the Deccan Plateau occupies most of southern India. Kangchenjunga, in the Indian state of Sikkim, is the highest point in India at 8,586 m (28,169 ft) and the world's third highest peak. The climate across India ranges from equatorial in the far south, to alpine and tundra in the upper regions of the Himalayas.

5.2 POLITICAL GEOGRAPHY

Figure 5.1 Political geography

India is divided into 28 States (further subdivided into districts) and 8 union territories including the National capital territory (I.e., Delhi). India's borders run a total length of 15,200 km (9,400 mi).

Its borders with Pakistan and Bangladesh were delineated according to the Radcliffe Line, which was created in 1947 during Partition of India. Its western border with Pakistan extends up to 3,323 km (2,065 mi), dividing the Punjab region and running along the boundaries of the Thar Desert and the Rann of Kutch. This border runs along the Indian states of Jammu

and Kashmir, Rajasthan, Gujarat, and Punjab. Both nations delineated a Line of Control (LoC) to serve as the informal boundary between the Indian and Pakistan-administered areas of Jammu and Kashmir. India claims the whole state of Jammu and Kashmir, which includes Pakistan-administered Kashmir and China-administered Aksai Chin, which, according to India are illegally occupied areas.

India's border with Bangladesh runs 4,096.70 km (2,545.57 mi). West Bengal, Assam, Meghalaya, Tripura and Mizoram are the states which share the border with Bangladesh. Before 2015, there were 92 enclaves of Bangladesh on Indian soil and 106 enclaves of India were on Bangladeshi soil. These enclaves were eventually exchanged in order to simplify the border. After the exchange, India lost roughly 40 km2 (10,000 acres) to Bangladesh.

The Line of Actual Control (LAC) is the effective border between India and the People's Republic of China. It traverses 4,057 km along the Indian states of Jammu and Kashmir, Uttarakhand, Himachal Pradesh, Sikkim and Arunachal Pradesh. The border with Burma (Myanmar) extends up to 1,643 km (1,021 mi) along the southern borders of India's northeastern states viz. Arunachal Pradesh, Nagaland, Manipur and Mizoram. Located amidst the Himalayan range, India's border with Bhutan runs 699 km (434 mi). Sikkim, West Bengal, Assam and Arunachal Pradesh are the states which share the border with Bhutan. The border with Nepal runs 1,751 km (1,088 mi) along the foothills of the Himalayas in northern India. Uttarakhand, Uttar Pradesh, Bihar, West Bengal and Sikkim are the states which share the border with Nepal. The Siliguri Corridor, narrowed sharply by the borders of Bhutan, Nepal and Bangladesh, connects peninsular India with the northeastern states.

5.3 POLITICAL FEATURE OF INDIA

Every major country has its physical and political features. India, being one of the ancient countries developed in Asia, also has its segregated physical features and political features.

A political feature or a political division of a country is the geographic area of the country which is applicable of residing by people and are divided accordingly into states and districts for easier administration and jurisdiction by the government. The political features of a country consist of federated states, counties, districts or provinces and states, cities or towns.

India, till date, has been announced as the seventh largest country in the world after Russia being the largest country which is situated in the Western Hemisphere, followed by Canada, United States of America, China, Brazil and Australia, in order. The area under India has been determined to be 1,269,338 square miles.

Indian states and union territories are considered as the political features of India.

Presently, it is estimated that India has 29 states and 7 union territories as its political division.

5.4 PHYSICAL FEATURES OF INDIA

Figure 5.3 Physical Geography India

The regions in India are not uniform. Every region is unique in every way. Some lands are horizontal and flat, while some are hilly, some are wastelands while some are hilly with a flat surface. These features of different land forms are considered as the physical features of a country.

A huge landmass of South Asia is flanked by new fold towering mountains on the northwest, north and northeast. The Arabian sea lies to its southwest, the Bay of Bengal to its southeast and the Indian Ocean to its south. This well-defined South Asian landmass is called Indian sub-continent. This sub-continent consists of the countries of India, Pakistan, Bangladesh,

Nepal and Bhutan including Sri Lanka, an island narrowly separated by the Palk Strait. India alone covers about three fourths of the area of this sub-continent and has common frontier with each one of them. She along with her five neighbors, forms a clearly identifiable geographical unit, with certain common cultural parameters. Since old times, the country has been known by various names such as Aryavarta, Bharat, Hindustan and lately India. The Indian Ocean or Hind Mahasagar has also been named after India - the only country to be so. According to the Constitution of India, the country is known as Bharat or India. India lies wholly in the Northern Hemisphere. The Indian mainland extends between 8°4'N to 37°6' N latitudes and from 68°7' E to 97°25' E longitudes. Thus the latitudinal and longitudinal extent of India is of about 29 degrees. It measures about 3,214 km from north to south, and 2,933 km from east to west. Though the latitudinal and longitudinal extent is almost the same, the actual distances do differ considerably. Why is it so? This is because the east-west distance between two successive meridians of longitude along the equator is at its maximum - 111 km. This, however, goes on decreasing as one moves from the equator to the poles, where it is zero. This is because all the meridians of longitude merge in a single point at the poles - both North and South. On the other hand, the north-south distance between any two successive parallels of latitude along any meridian of longitude remains almost uniform, i.e., 111 km.

The northern most point of the Indian mainland lies in the state of Jammu and Kashmir and the southernmost point is Kanyakumari in TamilNadu. However, the southernmost point of the country as a whole lies further south in Andaman and Nicobar Islands. It is now called Indira Point. It is situated at 6°30'N latitude. The westernmost point of India lies in Gujarat and the eastern most in Arunachal Pradesh. Let us see the impact of such large latitudinal extent upon the lives of the people of India. The northern parts of the country are quite far off from the equator. Therefore, the rays of the sun strike those parts more obliquely. Consequently, this part of the country receives lesser amount of insolation and has cold climate unlike the southern parts. Secondly, the difference between the length of day and right in southern most part of India is much less only about 45 minutes as they are situated near the equator, This difference between day and night in the northern parts of India steadily goes on increasing till it becomes as much as 5 hours. The Tropic of Cancer passes almost halfway through the country. Thus, half of the country to the south of the Tropic of Cancer is situated in the Tropical or Torrid zone and the other half lying north of the Tropic of Cancer falls in the Sub-tropical zone. The earth takes 24 hours to complete one rotation on its axis. The Sun rises first in the east and then in the west because the earth rotates from west to east. The earth’s longitudinal expanse of 360° is thus covered in 24 hours, at the pace of 15° per hour. As the longitudinal extent of India is nearly 29°, the real time difference in India between its eastern and western extremities is roughly of two hours. While at the eastern extremity of India the day may have just broken out, the western extremity would take nearly another two full hours to do so. To iron out this big chunk of time difference, India, like all other countries of the world, follows the local time of its relatively central meridian as the

standard time for the whole country. For the convenience of all, each country chooses its standard meridian in a multiple of 7°30'. Accordingly, the standard meridian of India has been chosen to be 82°30' E. The north-central part of India is broad while the southern part tapers down towards the Indian Ocean in the south. Thus, the northern part of the Indian Ocean has been divided into two, by the sheer presence of Indian Peninsula. The western part of northern Indian Ocean is called the Arabian Sea while the eastern part is called the Bay of Bengal. The total length of the coastline of India including the island groups is about 7,516.6 km. The Palk Strait separates Indian mainland from Sri Lanka. Structurally, Sri Lanka is an extension of the peninsular block of India.

India accounts for 2.42 per cent of the world's total land area; whereas it sustains 16 per cent of the world population. You will know more about it in lesson No. 26 on population of India. The land frontiers of India measure 15,200 km. Pakistan, Afghanistan, China, Nepal, Myanmar and Bangladesh share common boundaries with India. The kingdom of Bhutan is situated in the Eastern Himalaya. It is a small country and the responsibility of its defense rests with India. Most of our boundary with Pakistan and Bangladesh is almost man-made. There is no mountain range or river to form a natural boundary. The international boundary of India passes through a variety of landforms - barren desert lands, lush green agricultural fields, gushing rivers, snow clad mountains as well as densely forested mountain ranges. The defense of such an international boundary passing through various kinds of terrains is certainly a difficult job. An Indian soldier is, therefore, exposed to various types of extremely hostile conditions on the course of his duty. Sometime, he is posted on the icy cold glaciers. At times he has to bear the wrath of the burning sun and he has to face in the hot sands of the desert. Often he is posted in the marshy, riverine, rainy and thickly forested tracts of the northeast. Our country has to spend crores of rupees daily for the defense of such a long and inhospitable boundary that passes through various kinds of terrain.

5.4.1 Physiographic Divisions of India

India is a land of physical diversities. Almost all types of picturesque and breath taking landforms are found here. According to one estimate, 29.3 per cent of area of India is occupied by mountains and hills, 27.7 per cent by plateaus and 43 per cent by plains. From a physiographical point of view, India can be divided into following four regions:

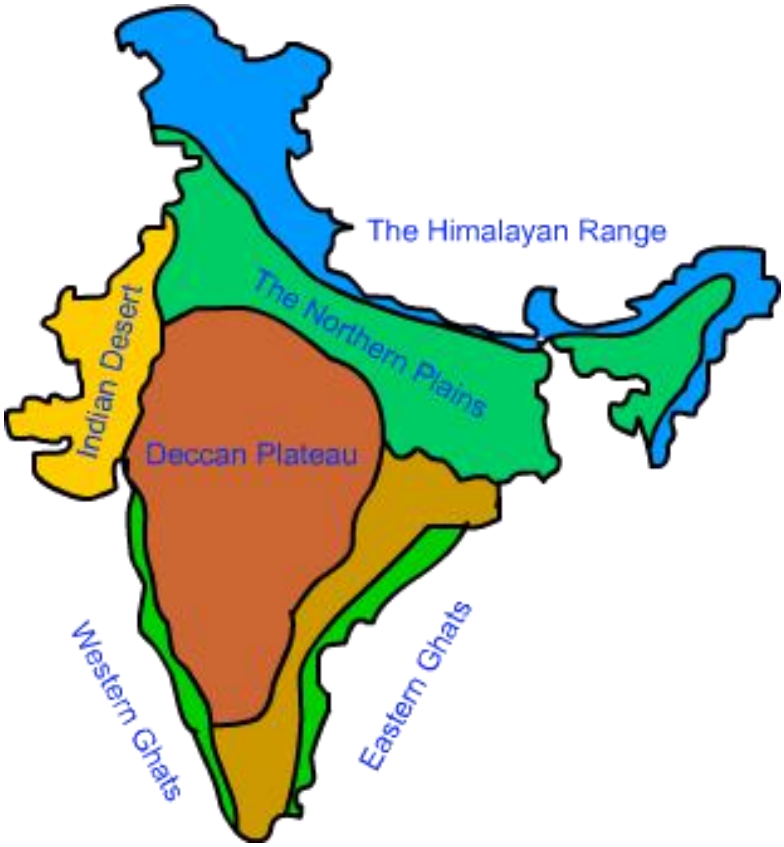


Figure 5.4 Physiographic Divisions of India

1. Great Northern Mountains :

The Himalayan Mountains form the northern mountain region of India. They are the highest mountain ranges in the world. These mountain ranges start from Pamir Knot in the west and extend up to Purvanchal in the east.

Figure 5.5 Great Northern Mountains

2. Great Northern Plains :

Northern plains are the youngest physiographic function in India. They misinform the south of the shivaliks, separated through the Himalayan frontal fault (HFF). The southern boundary is a wavy abnormal line along the northern edge of the peninsular India. On the Jap side, the plains are bordered via the purvanchal hills.

Because of the uplift of the Himalayas in the Tethys Sea, the northern a part of the Indian peninsula were given subsided and formed a massive basin. That basin turned into full of sediments from the rivers which came from the mountains inside the north and from the peninsula within the south. These large alluvial deposits led to the formation of the northern plains of India.

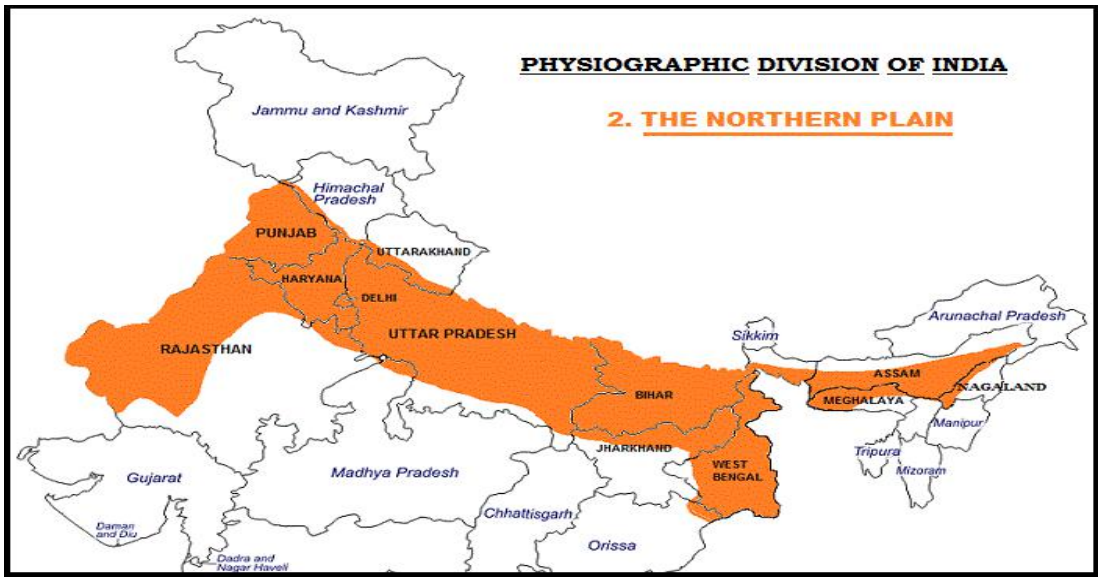


Figure 5.6 Great Northern Plains

3. Great Indian Plateau :

The peninsular plateau is a tableland composed of the old crystalline, igneous and metamorphic rocks. It became fashioned because of the breaking and drifting of the gondwana land and thus, making it part of the oldest landmass. The plateau has huge and shallow valleys and rounded hills. This plateau includes broad divisions, specifically, the central highlands and the Deccan plateau. The part of the peninsular plateau lying to the north of the Narmada River protecting a first-rate location of the malwa plateau is known as the critical highlands. The Deccan plateau is a triangular landmass that lies to the south of the river Narmada.

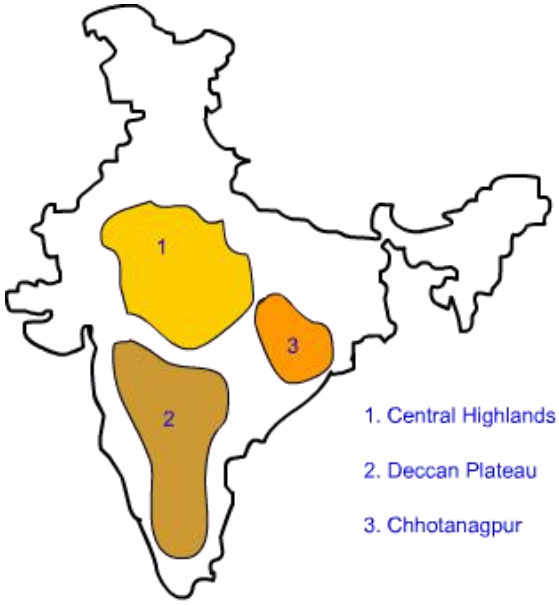


Figure 5.7 Great Indian Plateau

4. Coastal Plains and Islands:

The Great Plateau of India is surrounded by plains on all sides, in North the North Indian plain, in the west the western coastal plain and in the east the eastern coastal plain.

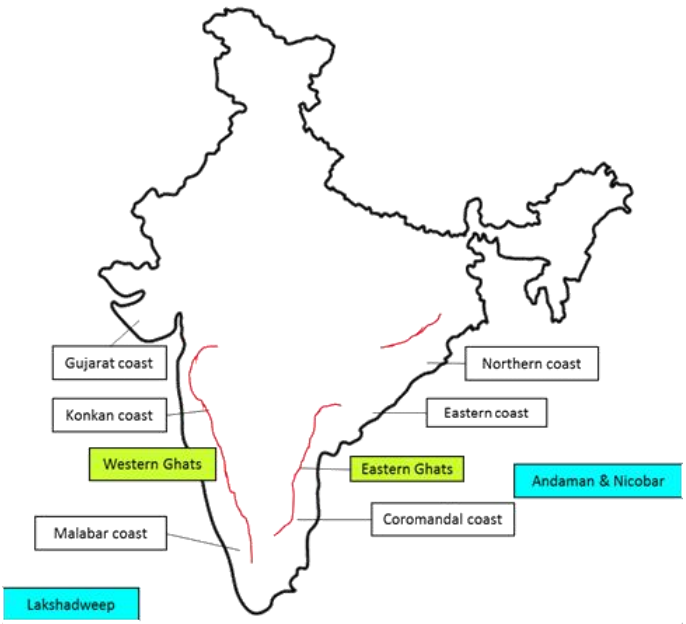


Figure 5.8 Coastal Plains and Islands

(1) The Western Coastal Plain
(2) The East Coastal Plain

The Islands:

There are a total of 1,208 islands (including uninhabited ones) in India.

There are two major island groups in India – one in the Bay of Bengal and the other in the Arabian Sea.

5.5 SUMMARY

- India is situated entirely on the Indian Plate, a major tectonic plate that was formed when it split off from the ancient continent Gondwanaland (ancient landmass, consisting of the southern part of the supercontinent of Pangea). The Indo-Australian plate is subdivided into the Indian and Australian plates. About 90 million years ago, during the late Cretaceous Period, the Indian Plate began moving north at about 15 cm/year (6 in/yr.).
- About 50 to 55 million years ago, in the Eocene Epoch of the Cenozoic Era, the plate collided with Asia after covering a distance of 2,000 to 3,000 km (1,243 to 1,864 mi), having moved faster than any other known plate. In 2007, German geologists determined that the Indian Plate was able to move so quickly because it is only half as thick as the other plates which formerly constituted Gondwanaland.
- The collision with the Eurasian Plate along the modern border between India and Nepal formed the orogenic belt that created the Tibetan Plateau and the Himalayas. As of 2009, the Indian Plate is moving northeast at 5 cm/yr. (2 in/yr.), while the Eurasian Plate is moving north at only 2 cm/yr. (0.8 in/yr.). India is thus referred to as the "fastest continent". This is causing the Eurasian Plate to deform, and the Indian Plate to compress at a rate of 4 cm/yr. (1.6 in/yr.).
- The geography of India is extremely diverse, with landscape ranging from snow-capped mountain ranges to deserts, plains, hills and plateaus. India comprises most of the Indian subcontinent situated on the Indian Plate, the northerly portion of the Indo-Australian Plate. Having a coastline of over 7,000 km (4,300 miles), most of India lies on a peninsula in southern Asia that protrudes into the Indian Ocean. India is bounded in the southwest by the Arabian Sea and in the southeast by the Bay of Bengal.
- The fertile Indo-Gangetic plain occupies most of northern, central and eastern India, while the Deccan Plateau occupies most of southern India. To the west of the country is the Thar Desert, which consists of a mix of rocky and sandy desert. India's east and northeastern border consists of the high Himalayan range. The highest point in India is disputed due to a territorial dispute with Pakistan; according to India's claim, the highest point (located in the disputed Kashmir territory) is K2, at 8,611 m (28,251 feet). The highest point in undisputed Indian territory is Kangchenjunga, at 8,598 m (28,208 feet). Climate ranges from equatorial in the far south, to tundra in the Himalayan altitudes.
- India is bordered by Pakistan, the People's Republic of China, Bangladesh, Myanmar,

Nepal, Bhutan and Afghanistan. Sri Lanka and the Maldives are island nations to the south of India. Politically, India is divided into 28 states, six federally administered union territories and a national capital territory. The political divisions generally follow linguistic and ethnic boundaries rather than geographic transitions.

5.6 KEYWORDS

- **Indian Ocean:** The Indian Ocean is the third-largest of the world's oceanic divisions, covering 70,560,000 km2 (27,240,000 sq mi) or 19.8% of the water on Earth's surface.
- **Arakan Mountains:** The Arakan Mountains, also known as the Rakhine Mountains, are a mountain range in western Myanmar, between the coast of Rakhine State and the Central Myanmar Basin, in which flows the Irrawaddy River.
- **Hindu Kush:** The Hindu Kush is an 800-kilometre-long (500 mi) mountain range that stretches through Afghanistan, from its centre to Northern Pakistan and into Tajikistan.
- **Partition:** The Partition of India of 1947 was the division of British India into two independent dominion states, India and Pakistan.
- **Cratons:** Cratons are a specific kind of continental crust made up of a top layer called platform and an older layer called basement

5.7 LEARNING ACTIVITY

1. Divide the Great Plateau into two physiographic divisions and describe briefly the Central High Lands under the following heading - (a) Aravalli Hills (b) Malwa plateau and its eastern extensions (c) Vindhyachal Range

_____

_____

2. Write a brief description of Northern Plains, a sub-division of Great Northern Plains of India; under the following headings. (a) Location and extent (b) Major rivers

_____

_____

5.8 UNIT END QUESTIONS

A. Descriptive Type Questions

1. Explain term geography. What do you understand by political geography?
2. Discuss the political features and physical features of Indian subcontinent?

3. Name the countries which share the common land frontiers with India.
4. Between which latitudes and longitudes is India situated?
5. Describe the main characteristics of major physiographic divisions

B. Multiple Choice Questions

1. Cratons are a specific kind of continental crust made up of a top layer called platform and an older layer called……. .

a. Basement
b. Carons
c. Singh bum cartons
d. Deserts

2. The Indian Subcontinent occupies the major landmass of …….

a. North Asia
b. South Asia
c. Asia
d. Malaysia

3. The precise definition of an "…… " in a geopolitical context is somewhat contested as there is no globally accepted definition on which countries are a part of South Asia or the Indian subcontinent.

a. Indian subcontinent
b. American continent
c. African continents
d. None of these

4. Which of the following is not the essential feature of India's east coastal plain?

a. A. Lagoons are comparatively little in this plain
b. The eastern plain has more or less a straight coast where good ports are lacking.
c. Mostly of emergent type, characterized by offshore bars, fine sea beaches, sand ridges and lagoons.
d. It is a submerged coast and hence tilting has left no scope for depositional action of the rivers

5. Consider the following statement(s) is/are related to the climate of India I. Comprises a wide range of weather conditions across a vast geographic scale and varied topography, making generalizations difficult. II. Hosts six major climatic subtypes, ranging from arid desert in the west, alpine tundra and glaciers in the north, and humid tropical regions supporting rainforests in the southwest and the island territories. Which of the above statement(s) is/are correct?

a. A. Only I
b. B. Only II
c. C. Both I and II
d. D. Neither I nor II

Answer

1. a 2. b 3. a 4. d 5. c

5.9 REFERENCES

- Hall, CM and Page, SJ. (2014). The Geography of Tourism and Recreation.UK and New York: Routledge publishers.
- Sinha, P.C. (2005). Tourism Geography, New Delhi: Anmol Publication.
- International Atlas, Penguin Publication and DK Publication
- Boniface B. and Cooper C. (1987) The Geography of Travel and Tourism. London and England: Heinemann Professional Publisher.
- Rohinson H.|A.A. (1976). Geography of Tourism. London: Macdonaled and Evans.
- Gopal Singh. (2010). A Geography of India. Delhi: Atma Ram & Sons
- Haggett, Peter (2001). Encyclopedia of World Geography (Vol. 1). Marshall Cavendish. p. 2710. ISBN 0-7614-7289-4.
- "the Indian Subcontinent occupies the major landmass of South Asia" John R. Lukacs, The People of South Asia: the biological anthropology of India, Pakistan, and Nepal, page 59, Plenum Press, 1984, ISBN 9780306414077. "the seven countries of South Asia constitute geographically a compact region around the Indian Subcontinent".
- John McLeod, The history of India, page 1, Greenwood Publishing Group, 2002, ISBN 0-313-31459-4
- Stephen Adolphe Wurm, Peter Mühlhäusler & Darrell T. Tryon, Atlas of languages of intercultural communication in the Pacific, Asia, and the Americas, pages 787, International Council for Philosophy and Humanistic Studies, Published by Walter de Gruyter, 1996, ISBN 3-11-013417-9
- The Incredible History of India's Geographybooks.google.co.in › books: Sanjeev Sanyal, ‍ Sowmya Rajendran · 2017
- Indian & World Geographybooks.google.co.in › books: Husain

UNIT 6: INDIAN CLIMATE

Structure

6.0 LEARNING OBJECTIVE

After studying this unit, you will be able to:

- Explain about the Indian climate and its characteristics
- Discuss the Difference in theories of Monsoon
- Explain more about the major aspects of climate in India
- State the knowledge about Dynamic Theory

6.1 INTRODUCTION

During the Triassic period of some 251–199.6 Ma, the Indian subcontinent was part of a vast supercontinent known as Pangaea. Despite its position within a high-latitude belt at 55–75° S—latitudes now occupied by parts of the Antarctic Peninsula, as opposed to India's current position between 5 and 35° N—India likely experienced a humid temperate climate with warm and frost-free weather, though with well-denied seasons. India later merged into the southern super continent Gondwana, a process beginning some 550–500 Ma. During the Late Paleozoic, Gondwana extended from a point at or near the South Pole to near the equator, where the Indian craton (stable continental crust) was positioned, resulting in a mild climate favorable to hosting high-biomass ecosystems. This is underscored by India's vast coal reserves—much of it from the late Paleozoic sedimentary sequence—the fourth-largest

reserves in the world. During the Mesozoic, the world, including India, was considerably warmer than today. With the coming of the Carboniferous, global cooling stoked extensive glaciation, which spread northwards from South Africa towards India; this cool period lasted well into the Permian.

Tectonic movement by the Indian Plate caused it to pass over a geologic hotspot—the Réunion hotspot—now occupied by the volcanic island of Réunion. This resulted in a massive flood basalt event that laid down the Deccan Traps some 60–68 Ma, at the end of the Cretaceous period. This may have contributed to the global Cretaceous–Paleogene extinction event, which caused India to experience significantly reduced insolation. Elevated atmospheric levels of Sulphur gases formed aerosols such as Sulphur dioxide and sulphury acid, similar to those found in the atmosphere of Venus; these precipitated as acid rain. Elevated carbon dioxide emissions also contributed to the greenhouse effect, causing warmer weather that lasted long after the atmospheric shroud of dust and aerosols had cleared. Further climatic changes 20 million years ago, long after India had crashed into the Laurasian landmass, were severe enough to cause the extinction of many endemic Indian forms The formation of the Himalayas resulted in blockage of frigid Central Asian air, preventing it from reaching India; this made its climate significantly warmer and more tropical in character than it would otherwise have been.

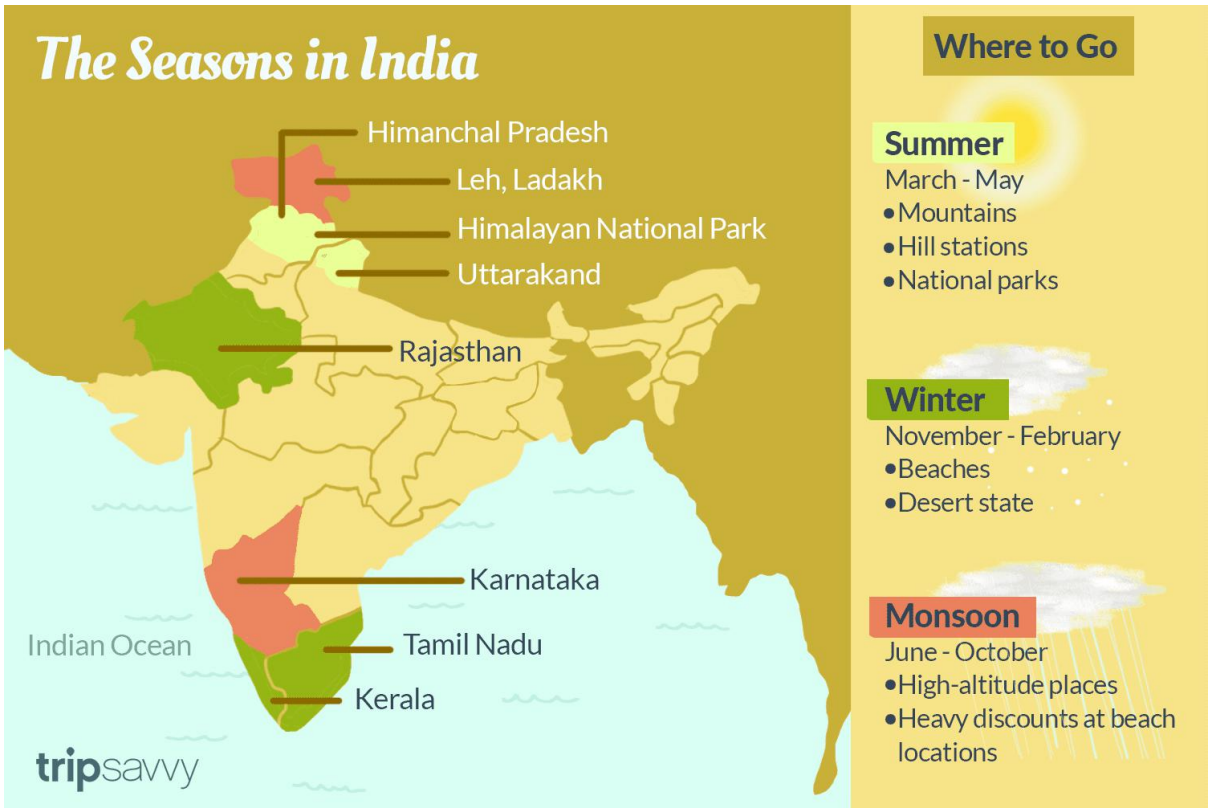


Figure 6.1 Seasons of India

6.2 CHARACTERISTIC OF INDIAN CLIMATE

- India's climate closely resembles the climate that of a tropical country although its northern part (north of tropic of cancer) is situated in the temperate belt.
- Indian subcontinent is separated from the rest of Asia by the lofty Himalayan ranges which block the cold air masses moving southwards from Central Asia.
- As a result, during winters, the northern half of India is warmer by 3°C to 8°C than other areas located on same latitudes.
- During summer, due to over the head position of the sun, the climate in the southern parts resemble equatorial dry climate.
- The north Indian plains are under the influence of hot dry wind called 'loo' blowing from the Thar, Baloch and Iranian Deserts, increasing the temperatures to a level comparable to that of the southern parts of the country.
- Thus, the whole of India, south of the Himalayas can be climatically treated as a tropical country.
- The seasonal reversal of winds in Arabian Sea and Bay of Bengal give India a typical tropical monsoon climate.
- So Indian climate, to be precise, is tropical monsoon type (a distinct wet and dry climate) rather than just a tropical or half temperate climate.

6.2.1 Features of Indian Climate Rainfall

1. The climate in most of the regions is characterized by distinct wet and dry seasons. Some places like Thar desert, Ladakh have no wet season.
2. Mean annual rainfall varies substantially from region to region. Mawsynramand Cherrapunji in Meghalaya receives around 1,000 cm of annual rainfall while at Jaisalmer the annual rainfall rarely exceeds 12cm.
3. The Ganga delta and the coastal plains of Odisha see intense rainfall in July and August while the Coromandel Coast goes dry during these months.
4. Places like Goa, Hyderabad and Patna receive south-west monsoon rains by the first quarter of June while the rains are awaited till early July at places in Northwest India.

6.2.2 Temperature

1. Diurnal and annual temperature ranges are substantial.
2. Highest diurnal temperature ranges occur in the Thar desert and the highest annual temperature ranges are recorded in the Himalayan regions.

3. Both diurnal and mean annual temperature ranges are least in coastal regions.
4. In December, the temperature may dip to – 40°C at some places in J&K while in many coastal regions average temperature is20-25°C.
5. Winters are moderately cold in most of the regions while the summers are extremely hot.
6. Himalayan regions experience brutal winters while the summers are moderate.

6.3 FACTORS THAT AFFECT INDIAN CLIMATE

Latitudinal location: Indian climate resembles the climate of a tropical country. The mainland of India extends between 8°N to 37°N. Areas south of the Tropic of Cancer are in tropics and hence receive high solar insulation. The summer temperatures are extreme and winters temperatures are moderate in most of the regions.

Distance from the Sea: Coastal regions have moderate or equable or maritime climate where as interior locations are deprived of the moderating influence of the sea and experience extreme or continental climate.

Himalayas and Indian Climate: This is the most important factor that influences Indian Climate. The Himalayas act as a climatic divide between India and Central Asia. During winter, Himalayas protect India from cold and dry air masses of Central Asia .During monsoon months these mountain ranges act as an effective physical barrier for rain bearing south-west monsoon winds. Himalayas divide the Bay of Bengal branch of monsoon winds into two branches – one branch flowing along the plain regions towards north-west India and the other towards South- East Asia

Physiographic and Indian Climate: Physiographic is the most important factor that determines the mean annual rainfall received by a region.

Monsoon Winds and Indian Climate: The most dominating factor of the Indian climate is the 'monsoon winds'.

Upper Air Circulation: The changes in the upper air circulation over Indian land mass is brought about by Jet streams

Tropical Cyclones and Western Disturbances: Tropical cyclones originate in the Bay of Bengal and Arabian Sea and the influence large parts of the peninsular India. Majority of the cyclones originate in the Bay of Bengal and influence the weather conditions during the south- west monsoon season (low intensity cyclones). Some cyclones are born during the retreating monsoon season, i.e., in October and November (high intensity cyclones) and influence the weather conditions along the eastern coast of India. The western disturbances originate over the Mediterranean Sea and travel eastward under the influence of westerly jet stream. They influence the winter weather conditions over most of Northern-plains and Western Himalayan region.

El-Nino, La Nina, ENSO and Indian Climate

El Nino: Adversely affects monsoon rainfall and cyclogenesis in Bay of Bengal. Good for cyclogeneses is in Arabian Sea. Droughts are common during El Nino events due to less monsoonal and cyclonic rainfall.
La Nina: Good for monsoons and cyclogenesis in Bay of Bengal. Suppressed cyclogenesis in Arabian Sea. Floods are common.

ENSO Southern Oscillation is simply the oscillation or alternating positions of low pressure and high pressure cells over eastern and western Pacific. Southern Oscillation coinciding with El Nino is called ENSO or El Nino Southern Oscillation. (SO usually coincides with EL Nino. This why El Nino is usually referred to as ENSO) .ENSO = [warm water in eastern Pacific + low pressure over eastern Pacific] + [cool water in western Pacific + high pressure in western Pacific].
Monsoon is a system of winds has the following features:

1. A system of winds, with marked **seasonal shifts,** caused by **differential heating of land and sea** in response to incoming solar radiation on the earth's surface.
2. A system of wind that is largely confined to the tropics, a region between **20^0 N and 20^0 S** on both the sides of equator.
3. Monsoons over northern hemisphere are the **trade winds** of southern hemisphere. On crossing the equator, the winds are deflected to the right due to earth's rotation. Consequently winds blow in south westerly direction. In the same way, on southern hemisphere, monsoons are the trade winds of northern hemisphere which, on crossing equator, are deflected to the left due to earth's rotation. Consequently, winds blow in north westerly direction.

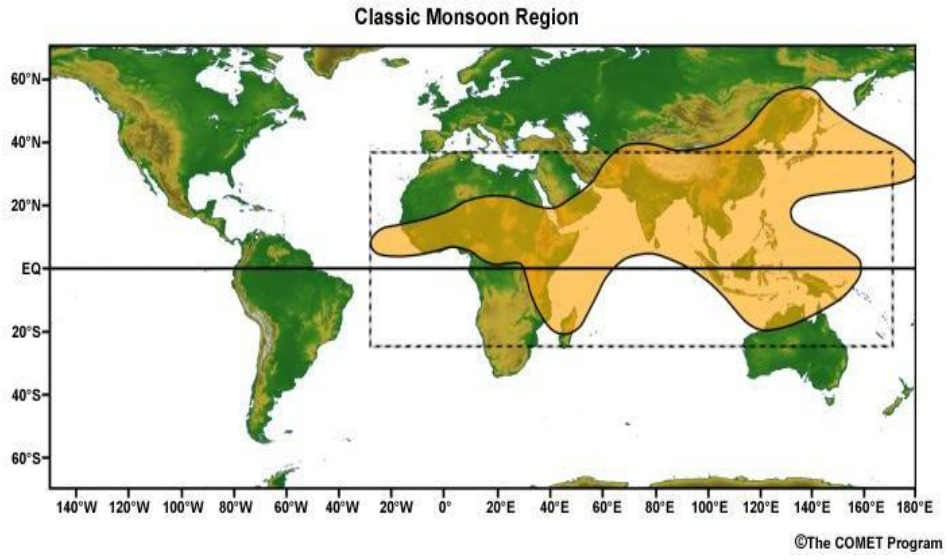


Figure 6.2 Classic monsoon region

6.4 THEORIES OF ORIGIN OF INDIAN MONSOON

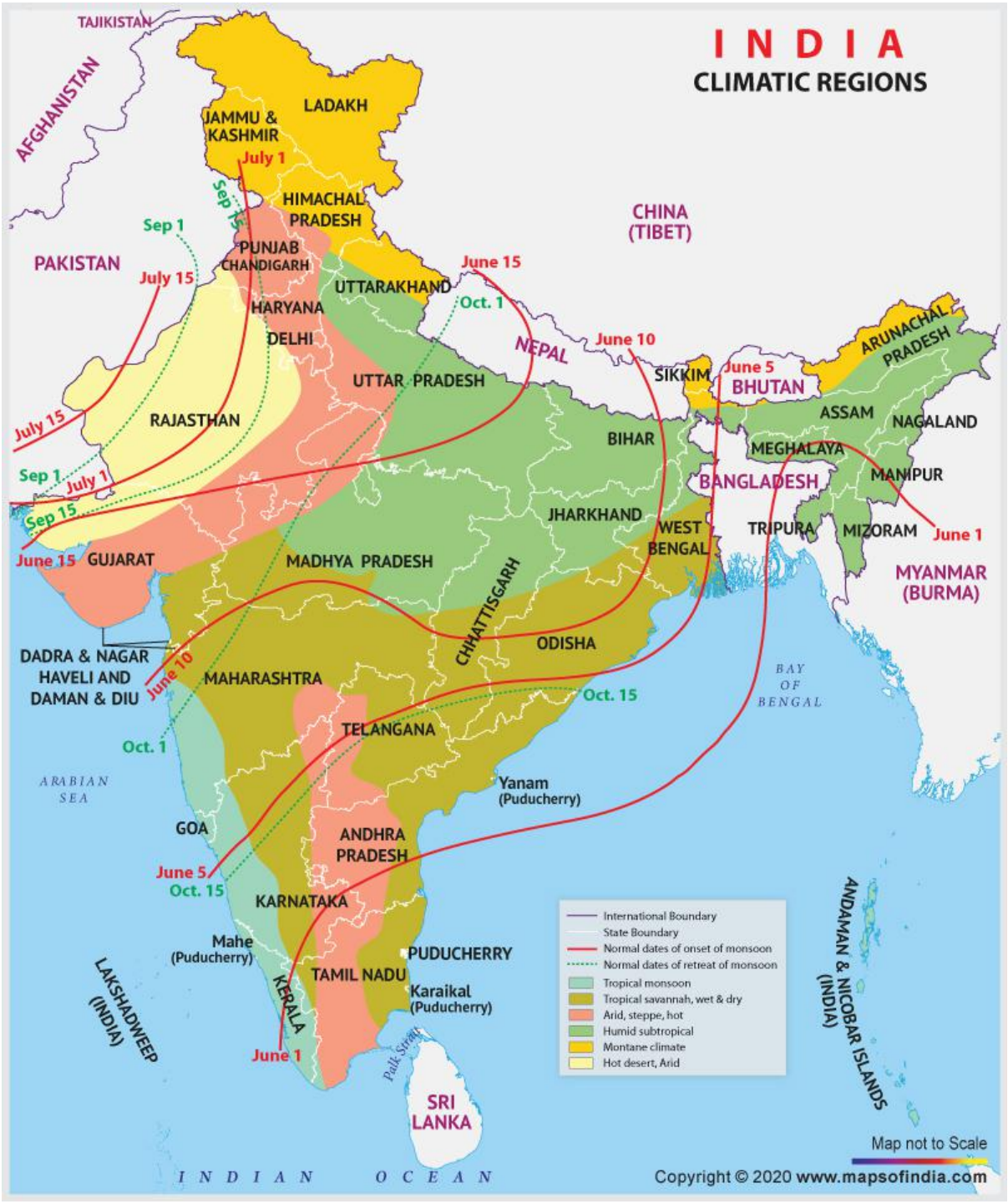


Figure 6.3 Monsoon in India

Indian Monsoons – Classical Theory: Sir Edmund Halley's Theory

Summer Monsoon

In summer the sun's apparent path is vertically over the Tropic of Cancer resulting in high temperature and low pressure in Central Asia.

- The pressure is sufficiently high over Arabian Sea and Bay of Bengal. Hence

winds flowed from Oceans flow towards landmass in summer.

- This air flow from sea to land bring heavy rainfall to the Indian subcontinent.

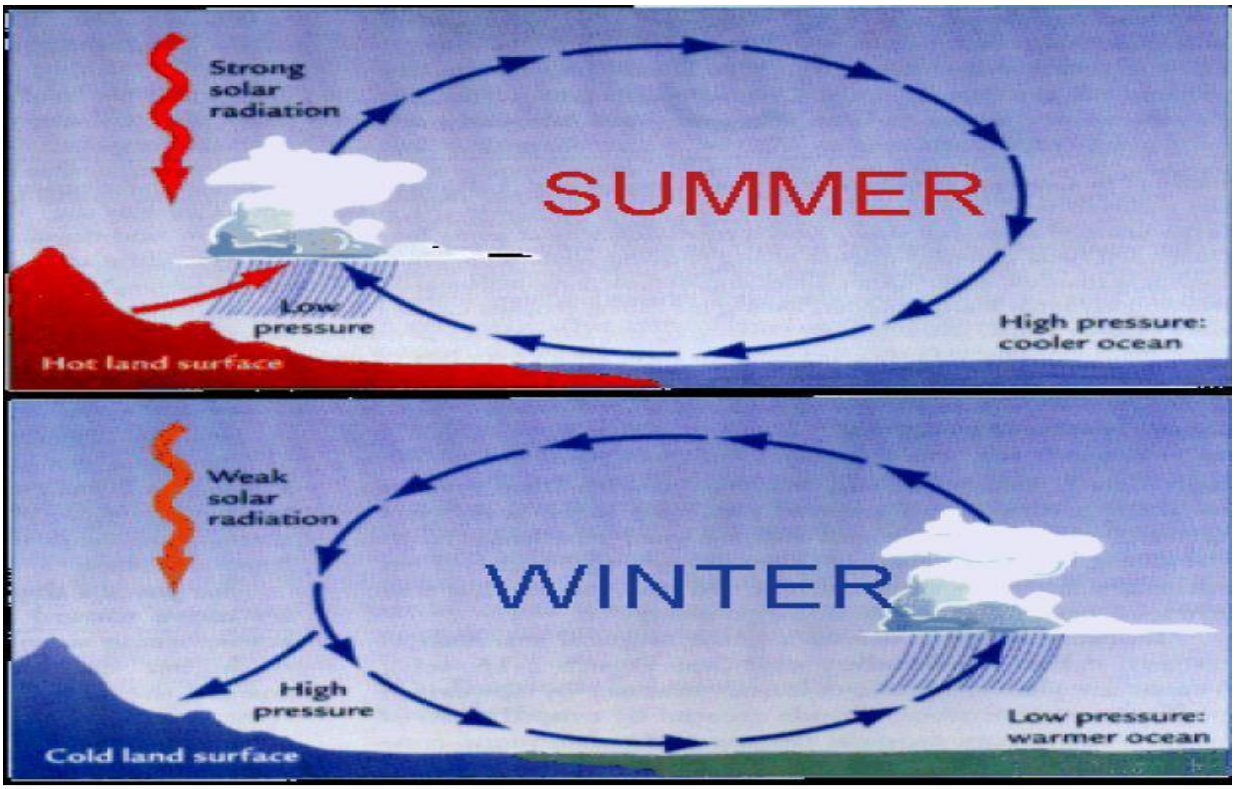
Winter Monsoon

- In winter the sun's apparent path is vertically over the Tropic of Capricorn.
- The north western part of India grows colder than Arabian Sea and Bay of Bengal and the flow of the monsoon is reversed.
- The basic idea behind Classical theory is similar to land and sea breeze formation except that in the case of monsoons the day and night are replaced by summer and winter.

Figure 6.4 Classical Theory: Sir Edmund Halley's Theory

Drawbacks:

The monsoons do not develop equally everywhere on earth and the thermal concept of Halley fails to explain the intricacies of the monsoons such as the **sudden burst** of monsoons, **delay** in on set of monsoons sometimes.



6.5 DYNAMIC THEORY: BY FLOHN

It was propounded by Flohn, a German Meteorologist, in 1951. The theory was further enriched by the research works of Krishna Rao (1952).

- Flohn, monsoon is the result of seasonal migration of planetary winds and pressure belts.
- The trade winds from both the hemispheres converge near equator and form
- Inter Tropical Convergence **(ITC) zone**. The northern and southern limits of ITC are known as NITC and SITC.
- A narrow belt of **doldrums** lies in between NITC and SITC and is characterized by 'equatorial westerly's.
- During **summer** solstice, trade winds of southern hemisphere (south-east trade winds) extend and shift northward. The south-east trades in association with equatorial westerly's produce south-west or summer monsoon around summer solstice when sun is overhead at tropic of Cancer.
- during **winter** solstice trade winds of northern hemisphere (northeast trade winds) extend and shift southward from their normal position. Similarly, around winter solstice when sun is overhead at tropic of Capricorn, north-east trades in association with equatorial westerly's produce north- west or winter monsoon.
- Thus, shifting position of pressure and wind belts due to dynamic motion of the earth is responsible for the origin of monsoon and reversal of wind patterns in the tropics.

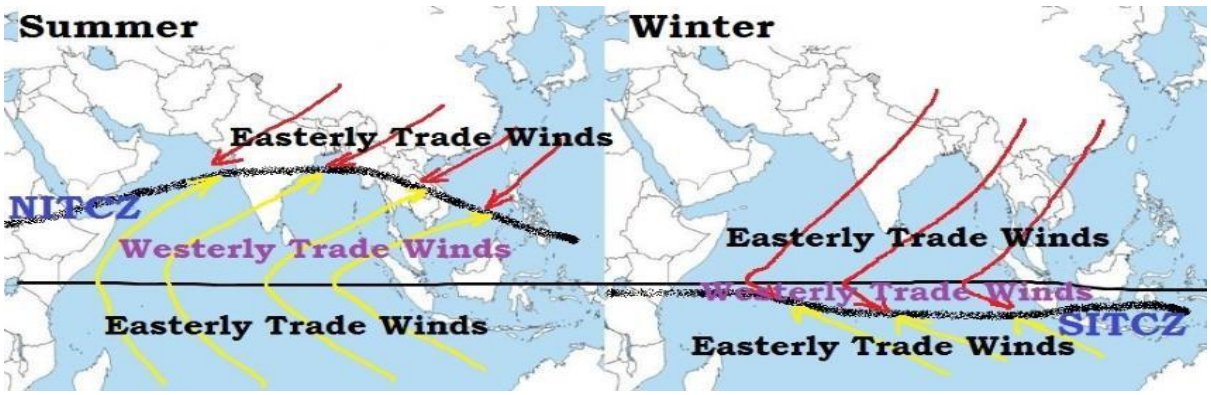


Figure 6.5 Dynamic Theory

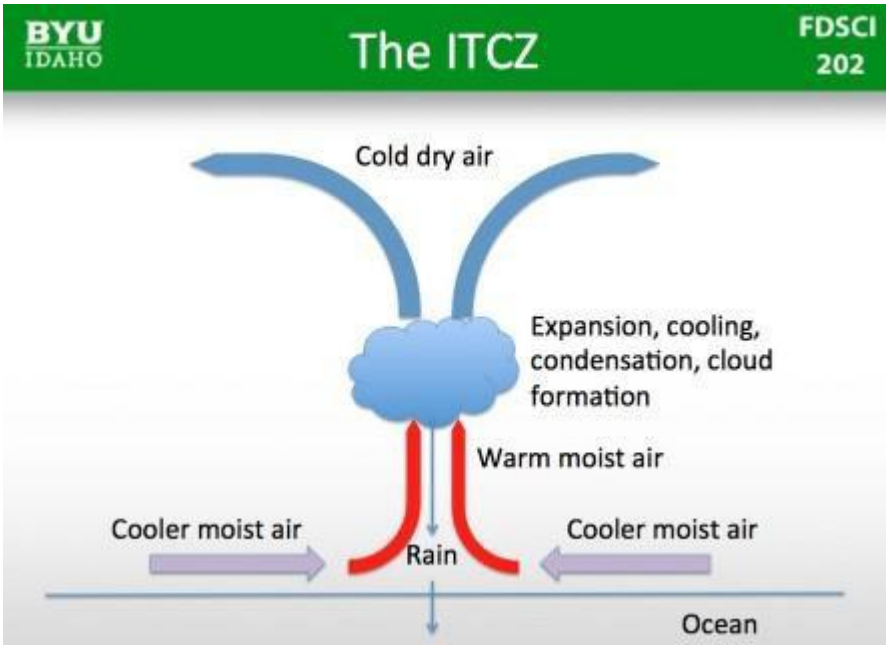


Figure 6.6 Explanation of Theory

Criticisms/ Limitations:

- Theory does not take into account the role of upper air circulation which remains significant in maintaining the rhythm of monsoon for a fairly long period and over extensive areas in tropics.
- Theory also seems to have ignored the oceanic circulation and temperature gradient in oceanic waters.

The position of air masses (warm/cold) and their gradual shift from tropics is one of the potent factors that affect the origin of monsoon. Theory does not seem to include these vital elements.

6.6 MAJOR TYPES OF CLIMATE FOUND IN INDIA ARE AS FOLLOWS:

The climate of India has distinct regional variations discernible by the pattern of winds, temperature, and rainfall; further, also in the form of rhythm of seasons and the degree of wetness or dryness.

1. The Cold Weather Season(December-February)
2. The Hot Weather Season(March-May)
3. The Rainy Season(June-September
4. The Season of Retreating South-west Monsoon (October-November).

Cold Weather Season:

January and February are the coldest months of this season. The temperature is between 10°C to 15°C in Northern India and about 25°C in Southern India.

Pressure: north of the Himalayas develops a high pressure center. This high pressure center gives rise to the flow of air at the low level from the north towards the Indian subcontinent (i.e. south of the mountain range).

Winds: All of Western and Central Asia remains under the influence of westerly winds (known as **Jet Stream**) along the altitude of **9-13 km** from west to east. These winds blow across the Asian continent at the latitudes, north of the Himalayas, roughly parallel to the Tibetan highlands. Tibetan highlands act as a barrier in the path of these jet streams, as a result of this; the jet streams get bifurcated into two branches. One branch is located to the south of the Himalayas, while the second branch is positioned to the north of Tibetan Plateau.

Rainfall: The western cyclonic disturbances, which enter the Indian subcontinent from the west and the northwest during the winter months, originate over the Mediterranean Sea and are brought into India by the westerly jet stream and give rainfall.

Hot Weather Season:

The North Indian region experiences a well-defined hot weather season during the month of April and May. Temperature starts rising by the middle of March and by mid-May, Mercury touches 41° to 42°C. Temperature even exceeds 45°C in areas of central and north-west India.

A. April, May, and June are the months of summer in north India.
B. **Pressure:** middle of July, the low pressure belt nearer the surface (ITCZ) moves northwards.
C. **Wind:** the wind circulation over the subcontinent undergoes a complete reversal at both, the lower as well as at the upper levels. In the heart of the ITCZ in the northwest, the dry and hot winds known as ***Loo***, blow in the afternoon.
D. **Rainfall:** Towards the end of the summer, there are pre-monsoon showers, which are a common phenomenon in Kerala and coastal areas of Karnataka. This phenomenon is locally known as **mango showers**, as it helps in the early ripening of mangoes.

The Rainy Season:

The inflow of south-westerly monsoon in India brings the season of rain in India. The Indian sub-continent receives the bulk of its rainfall during the south-west monsoon period.

This moist air current causing rainfall in India is popularly known as the **southwest monsoon**.

Simultaneously, an **easterly jet stream** flows over the southern part of the Peninsula in June.

The southwest monsoon, which is a continuation of the southeast trades, get deflected towards the Indian subcontinent after crossing the Equator.

The easterly jet stream is held responsible for the burst of the monsoon in India.

The southwest monsoon sets first over the Kerala coast by 1st1st of June and then moves swiftly to reach Mumbai and Kolkata between 10th10th and 13th13thJune. Further, by mid-July, southwest monsoon engulfs the entire sub-continent.

Southwest monsoon gets divided into two branches − the **Arabian Sea**, causing rain in western coast of India and the **Bay of Bengal branch**, causing rain in eastern coast to India.

Winter monsoons do not cause rainfall, as they move from land to the sea. Hence, primarily, they have little humidity; and secondly, due to anticyclonic circulation on land, the possibility of rainfall from them reduces.

However, in northwestern India, some weak temperate cyclones coming from the Mediterranean Sea (with little moisture) cause rainfall in Punjab, Haryana, Delhi, and western Uttar Pradesh.

The Season of Retreating Monsoon:

The south-west monsoon begins to retreat from northern India by the second week of September.

weather during the season is characterized by high day temperatures, but nights are pleasant with the mean minimum temperature going down to 20°C or even lower.

On the other hand, during October and November, northeast monsoon while crossing over the Bay of Bengal, picks up moisture and causes torrential rainfall over the Tamil Nadu coast, southern Andhra Pradesh, southeast Karnataka, and southeast Kerala.

6.7 SUMMARY

- The climate of India may be broadly described as tropical monsoon type. The term “monsoon” is derived from Arabic word ‘mausim’ which means seasonal reversal in the wind direction. The Indian Meteorological Department (IMD) designates four official seasons:

1. winter (From December to early April);
2. Summer or Pre-monsoon season (April to July in north-western India);
3. Monsoon or Rainy season (June-September);
4. Post-monsoon season (October-December).

- But traditionally, Indian note six seasons, each about two month long. These are spring (Sanskrit- Vasanta), late autumn (Hemanta) and winter (Shishira). These are

based on the astronomical division of the 12 months into six parts. The ancient Hindu calendar also reflects these seasons in its arrangement of months.

- The climate of India is described as a monsoon type. This type of climate is found in south and southeast Asia. However, there are variations in climatic conditions in the country itself. The coastal regions of India show the least amount of difference between the temperatures of night and day. In the interior regions, the difference in temperatures of day and night is huge.
- Climatic controls are the factors that control the variations in temperature in the climate of India. There are six major climatic controls. They are:
- Latitude: As the earth is round, sunlight does not reach everywhere equally. The temperature decreases as we move from the equator to the poles.
- Altitude: As we move from the surface of the earth to the higher altitudes, the temperature decreases.
- Pressure and wind system: The pressure and wind system of any area depend on the latitude and altitude of that place. Thus, it influences the temperature accordingly.
- Distance from the sea: Coastal regions are cooler as compared to interior regions. As the distance from the sea increases, its influence decreases and the people experience extreme weather conditions.
- Ocean currents: Cold ocean currents flowing over a region will decrease the temperature of that area whereas warm currents will increase the temperature.
- Relief features: Relief features are the barriers that block currents from entering the country. High mountains act as barriers for cold or hot winds.

6.8 KEYWORDS

- **The Tropic of Cancer:** which is also referred to as the Northern Tropic, is the most northerly circle of latitude on Earth at which the Sun can be directly overhead.
- **Economy of India**: The economy of India is characterized as a developing market economy. It is the world's fifth-largest economy by nominal GDP and the third-largest by purchasing power parity (PPP).
- **Climate Change**: Climate change includes both the global warming driven by human emissions of greenhouse gases, and the resulting large-scale shifts in weather patterns.
- **Katabatic Wind**: A katabatic wind is a drainage wind, a wind that carries high-density air from a higher elevation down a slope under the force of gravity.
- **Tectonic Plate**: Plate tectonics is a scientific theory describing the large-scale motion of seven large plates and the movements of a larger number of smaller plates of Earth's lithosphere,

6.9 LEARNING ACTIVITY

1. Compare the climate condition of India with neighboring countries.

_____

_____

2. Collect the data on climatic theory and check how it is suitable for Indian climate.

_____

_____

6.10 UNIT END QUESTIONS

A. Descriptive Type Questions

1. Write briefly about Indian climate.
2. Discuss the seasons India have and what is the importance of those climates.
3. Discuss the factors that affect Indian climate.
4. Explain the Dynamic theory by flohn.
5. Write few characteristics of Indian climate.

B. Multiple Choice Questions

1. Mean annual ……. varies substantially from region to region.
   a. Rainfall
   b. Winter
   c. Summer
   d. Spring

2. The pressure is sufficiently high over Arabian Sea and Bay of Bengal. Hence winds flowed from Oceans flow towards landmass in ……. .

   a. Winters
   b. Rainy
   c. Summer
   d. None of these

3. Though the…….the boundary between the tropics and subtropics—passes through the middle of India, the bulk of the country can be regarded as climatically tropical.
   a. Tropic of Capricorn
   b. Latitude
   c. Longitude

d. Tropic of Cancer

4. The north-east trade winds cause which of the following in India?
   a. Winter rain in Chennai
   b. Winter rain in northwest
   c. Dust storm in the Thar desert
   d. None of these

5. Which among the following cities of India does not fall in Torrid Zone?
   a. Jaipur
   b. Jodhpur
   c. Mumbai
   d. Chennai

Answer

1. a 2. c 3. d 4. a 5. a

6.11 REFERENCES

- Hall, CM and Page, SJ. (2014). The Geography of Tourism and Recreation.UK and New York: Routledge publishers.
- Sinha, P.C. (2005). Tourism Geography, New Delhi: Anmol Publication.
- International Atlas, Penguin Publication and DK Publication
- Boniface B. and Cooper C. (1987) The Geography of Travel and Tourism. London and England: Heinemann Professional Publisher.
- Rohinson H.|A.A. (1976). Geography of Tourism. London: Macdonaled and Evans.
- Gopal Singh. (2010). A Geography of India. Delhi: Atma Ram & Sons
- "Snow Fall and Avalanches in Jammu and Kashmir" (PDF), National Disaster Management Division, Ministry of Home Affairs, Government of India, 28 February 2005, archived from the original (PDF) on 1 July 2007, retrieved 24 March 2007
- Rain Brings Mumbai to a Halt, Rescue Teams Deployed, The Hindu, 5 July 2006, retrieved 1 October 2011
- Country Guide: India", BBC Weather, retrieved 23 March 2007
- Soil and Climate of Bihar, Government of Bihar, retrieved 13 September 2011
- India in a Warming World: Integrating Climate Change and ...books.google.co.in › books: Navroz K. Dubash · 2019
- The Climate Solution: India's Climate-Change Crisis and What ...books.google.co.in › books: Mridula Ramesh · 2018

UNIT 7: TOURISM GEOGRAPHY (INDIA)

Structure

7.0 LEARNING OBJECTIVES

After studying this unit, you will be able to:

- State about tourism in India, and its states
- Explain about nature and state of International Tourism
- State about various tourism attractions in states

7.1 INTRODUCTIONS

Tourism geography is the study of travel and tourism, as an industry and as a social and cultural activity. Tourism geography covers a wide range of interests including the environmental impact of tourism, the geographies of tourism and leisure economies, answering tourism industry and management concerns and the sociology of tourism and locations of tourism.

Tourism geography is that branch of human geography that deals with the study of travel and its impact on places.

Geography is fundamental to the study of tourism, because tourism is geographical in nature. Tourism occurs in places, it involves movement and activities between places and it is an activity in which both place characteristics and personal self-identities are formed, through the relationships that are created among places, landscapes and people. Physical geography provides the essential background, against which tourism places are created and environmental impacts and concerns are major issues, that must be considered in managing the development of tourism places.

The approaches to study will differ according to the varying concerns. Much tourism management literature remains quantitative in methodology and considers tourism as

consisting of the places of tourist origin (or tourist generating areas), tourist destinations (or places of tourism supply) and the relationship (connections) between origin and destination places, which includes transportation routes, business relationships and traveler motivations .Recent developments in human geography have resulted in approaches such as those from cultural geography, which take more theoretically diverse approaches to tourism, including a sociology of tourism, which extends beyond tourism as an isolated, exceptional activity and considering how travel fits into the everyday lives and how tourism is not only a consumptive of places, but also produces the sense of place at a destination. The Tourist by Dean MacCannell and The Tourist Gaze by John Urry are classics in this field.

7.2 NATURE AND STATE OF INTERNATIONAL TOURISM IN INDIA

Today tourism is the largest service industry in India with a contribution of 6.23% to national GDP and providing 8.78% of the total employment in the year 2011. On an average more than 5 million foreign tourist arrivals and 562 million domestic tourists visits are witnessed by India annually.

India is ranked 68th among the world's 139 most attractive destinations and scores very high on natural resources (ranked 8th) and cultural resources (24th); with 30 world heritage sites and strong creative industries in the country. India's air transport network is ranked 39th, the ground transport infrastructure however remains underdeveloped (ranked43rd). India is ranked first with regard to tourism air attendance. The promotional campaigns and marketing strategies to attract tourists remain average (ranked53rd). The World Economic Forum study states that India also benefits from excellent price competitiveness, ranked 6th overall, with low ticket-taxes and airport charges along with low prices in the economy as a whole. These rankings are based on the Travel & Tourism Competitive Index (TTCI) 2011, which measures the different regulatory and business related issues.

Moreover, India has been ranked the "best country brand for value for money" in the Country Brand Index (CBI) survey conducted by Future Brand, a leading global brand consultancy in the year 2011. India also claimed the second place in CBI‟s „best country brand for history‟ , as well as appears among the top 5 in the best country brand for authenticity of art and culture and the fourth best new country for business. India made it to the list of „rising stars‟ or the countries that are likely to become major tourist destinations in the next five years, led by the United Arab Emirates, China and Vietnam.

7.3 INTERNATIONAL TOURISM IN VARIOUS STATES OF INDIA

Rajasthan

Figure 7.1 Rajasthan

Rajasthan is one of the most popular tourist destinations in India, for both domestic and international tourists. Rajasthan attracts tourists for its historical forts, palaces, art and culture with its slogan 'Padharo mahare desh'. Every third foreign tourist visiting India travels to Rajasthan as it is part of the Golden Triangle for tourists visiting India.

The palaces of Jaipur, lakes of Udaipur, and desert forts of Jodhpur, Bikaner, and Jaisalmer are among the most preferred destinations of many tourists, Indian and foreign. Tourism accounts for eight percent of the state's domestic product. Many old and neglected palaces and forts have been converted into heritage hotels. It is the most beautiful place in India with heritage of old buildings build up years ago by Maharaja's of different castes.

Famous places in Rajasthan

Rajasthan is known for its historical hill forts & palaces; it is claimed as the best place for tourism-related to palaces.

a. Umaid Bhawan Palace: It is the largest Royal Palace in Rajasthan. It is also one of the largest private residences in the world.
b. Lake Palace: It is now a luxury hotel located in Pichola Lake, Udaipur.
c. Hawa Mahal: It is known as "Palace of Wind" or "Palace of Breeze" because there are more than 950 Windows in the Palace.

d. Rambaugh Palace: Formerly a Royal Palace now converted into a Heritage Hotel.
e. Devi Garh Palace: Formerly a palace now converted into a Heritage Hotel, in 2006, The New York Times named it as one if leading luxurious hotel in Indian subcontinent.

Goa

Figure 7.2 Goa

The state of Goa, in India, is famous for its beaches and places of worship. Tourism is its primary industry, and is generally focused on the coastal areas of Goa, with decreased tourist

activity inland.

Foreign tourists, mostly from Europe, arrive in Goa in winter, whilst the summer and monsoon seasons see many Indian tourists. Goa handled 2.29% of all foreign tourist arrivals in the country in 2011. This relatively small state is situated on the west coast of India, between the borders of Maharashtra and Karnataka, and is better known to the world as a former Portuguese enclave on Indian soil. Thus, Tourism forms the backbone of Goa's economy.

Influenced by over 450 years of Portuguese rule and Latin culture, Goa presents a somewhat different representation of the country to foreign visitors.[4] Major tourist attractions include Bom Jesus Basilica, Fort Aguada, a wax museum on Indian culture, and a heritage museum. The Churches and Convents of Goa have been declared a World Heritage Site by UNESCO.

As of 2013, Goa was the destination of choice for Indian and foreign tourists, particularly Britons, with limited means who wanted to party. The state was hopeful that changes could be made which would attract a more upscale demographic.

On 24 November 2017, Delta Corp Limited claimed to have set up the first casino game training course Centre in India at Goa.

Calangute: Go Beaching Like Never Before

One of the most popular beaches in Goa and also the largest beach in North Goa, Calangute beach is among the most recommended tourist places in Goa and popular with both domestic and international tourists. It is also the busiest and commercialized beaches in Goa and during peak seasons, this beach is swamped with people from all over the world. It offers a long coastline with an amazing view of the sea and the beach front is dotted shacks, restaurants, clubs and shopping outlets. Once can also enjoy a plethora of water sports at Calangute beach.

Fort Aguada

A well-preserved 17 century Portuguese fort, Fort Aguada is located on the Sinquerim Beach in North Goa. Built as the chief defense of Portuguese against the Dutch and Marathas, it was the most prized and crucial fort of the Portuguese. The fort is ringed by thick battlements and a deep dry moat. 2 things worth visiting inside the fort are the 13 metre high lighthouse built in 1864 and a vaulted cistern capable of storing ten million litres of fresh water. From here fresh water was supplied to the ships that stopped there.

Some buildings of the fort are still in good shape having been converted into a jail and interestingly, it happens to be the largest jail in Goa. Fort Aguada is one of the top sightseeing places in Goa.

Deltin Royale Casino

The Deltin Royale Casino boat is the largest casino boat in Panjim, Goa. It offers 24 hours of nonstop fun in an area spread over 40,000sq.ft of luxury live gaming on three levels with 850 gaming positions. Live entertainment is on the restaurant floor and during peak hours. You need to buy an entry and play package to gain access to the casino. You can also choose to buy a stay and play package which lets you stay at the Deltin hotel and access to the casino as

well. For those travelling during national holidays, the casino is closed on all national holidays.

Chapora Fort

Popular as the place where the Bollywood flick "Dil Chahta Hai" was picturized, the Chapora fort stands at the mouth of the Chapora river as an old guard. Today this laterite fort is almost in ruins but does offer some sensational views of the coastline from the top of the fort. That itself is reason enough for any photo enthusiasts.

Basilica of Bom Jesus

Churches in Goa are an important legacy of it being an erstwhile Portuguese colony. Built across centuries, these architectural wonders were more than just a place of worship; they hold a place of historical or cultural significance as well. One of the popular churches in Goa is the Basilica of Bom Jesus. The mortal remains of St. Francis Xavier is preserved here in this Basilica and hence revered by many. It also is an UNESCO World Heritage site.

Tamil Naidu

Figure 7.3 Tamil nadu

Tamil Nadu is a state in the south-eastern part of the Indian Peninsula. Tamil Nadu is previously a part of the United Madras Province, which was later partitioned based on languages. Tamil Nadu has more than 4,000 years of continuous cultural history. Tamil Nadu

has some of the most remarkable temple architecture in the country, and a living tradition of music, dance, folk arts and fine arts. Tamil Nadu is well renowned for its temple towns and heritage sites, hill stations, waterfalls, national parks, local cuisine and the natural environment and wildlife. The state has the largest tourism industry in India with an annual growth rate of 16%. In 2015, the number of domestic arrivals was at 333.5 million making the state the most popular tourist destination in the country, and foreign arrivals numbered 4.68 million, the highest in the country, making it the most popular state for tourism in the country.

UNESCO World Heritage Sites

The state houses a no. of heritage sites mainly composed of the ancient temples and deities of the Pallava and Chola empire scattered along various parts of Northern and Central-Eastern parts of Tamil Nadu. The following are the list of the Heritage sites in the state.

The Chola Temples

Figure 7.4 Chola temple

The Pallavi Temple at Darasuram, an 11th-century temple dedicated to Lord Shiva.

The Great Living Chola Temples constructed by the king Raja Raja Chola and his son Rajendra are part of the Cultural heritage site which includes the three great temples of 11th and 12th century namely, the Brihadisvara Temple at Thanjavur, the Brihadisvara Temple at Gangaikondacholisvaram and the Airavatesvara Temple at Darasuram.

Thanjavur – The home to the Chola Kingdom and the location of the Brihadisvara Temple built in the 11th century.

A Dravidian architecture Pillar in Airavatesvara Temple, Darasuram @ Thanjavur district.

Gangaikonda Cholapuram – The capital of the Chola kingdom for 250 years.
Temple at Gangaikonda Cholapuram
Darasuram – A small town close to Kumbakonam, the town has the prestigious Airavatesvara Temple dedicated to Lord Shiva along with the Brihadeeswara Temple and the temple of the Gangaikonda Cholapuram are three of the most venerated and architectural legacies of the Chola empire.
Airavateswara Temple, Darasuram in Thanjavur District is built by Rajaraja Chola II in the 12th century CE, is a UNESCO World Heritage Site.

Group of Monuments in Mahabalipuram

The Shore Temple in Mahabalipuram, a 7th-century Pallava monument
The Group of Monuments at Mahabalipuram declared as a World Heritage Site in 198, in Tamil Nadu, about 58 km from Chennai, were built by the Pallava kings in the 7th and 8th centuries. The town is said to have gained prominence under the rule of Mamalla. These monuments have been carved out of rock along the Coromandel coast. The following are the sites related. These monuments surprisingly survived the 2004 Tsunami that devastated the other coastal towns nearby.
Ratha Temples: Temples in the form of chariots.
The 11 Mandapas: Cave sanctuaries dedicated to various deities.
Rock Reliefs that include Descent of the Ganges and the Arjuna's Penance.
The Shore Temple and the other temples cut out of rock.
The Seven Pagodas
Karaikudi
Karaikudi is the famous heritage site of Tamil Nadu for its culture and its state or art architecture. It has the famous building called "Aairam jannal veedu"(Thousand windows house) which is Chettinad style.

The Nilgiris Mountain Railway
Part of the Mountain railways of India, the Nilgiris Mountain Railway (NMR) was stated to be an "outstanding examples of bold, ingenious engineering solutions for the problem of establishing an effective rail link through a rugged, mountainous terrain." The Nilgiris Mountain Railway was added to the list in 2005 preceding the Kalka-Shimla Railway which was granted the status in 2008.
The Route passes through the various terrains and thickly forested areas of the Nilgiris Mountains. The route consists of the following stations:

- The Nilgiris Mountain Railway, one of the most scenic railway lines in the country
- Mettupalayam
- Kaalar
- Hillgrove
- Runneymede

- Kateri Road
- Coonor
- Wellington
- Aruvankadu
- Ketti
- Lovedale
- Ooty

Uttarakhand

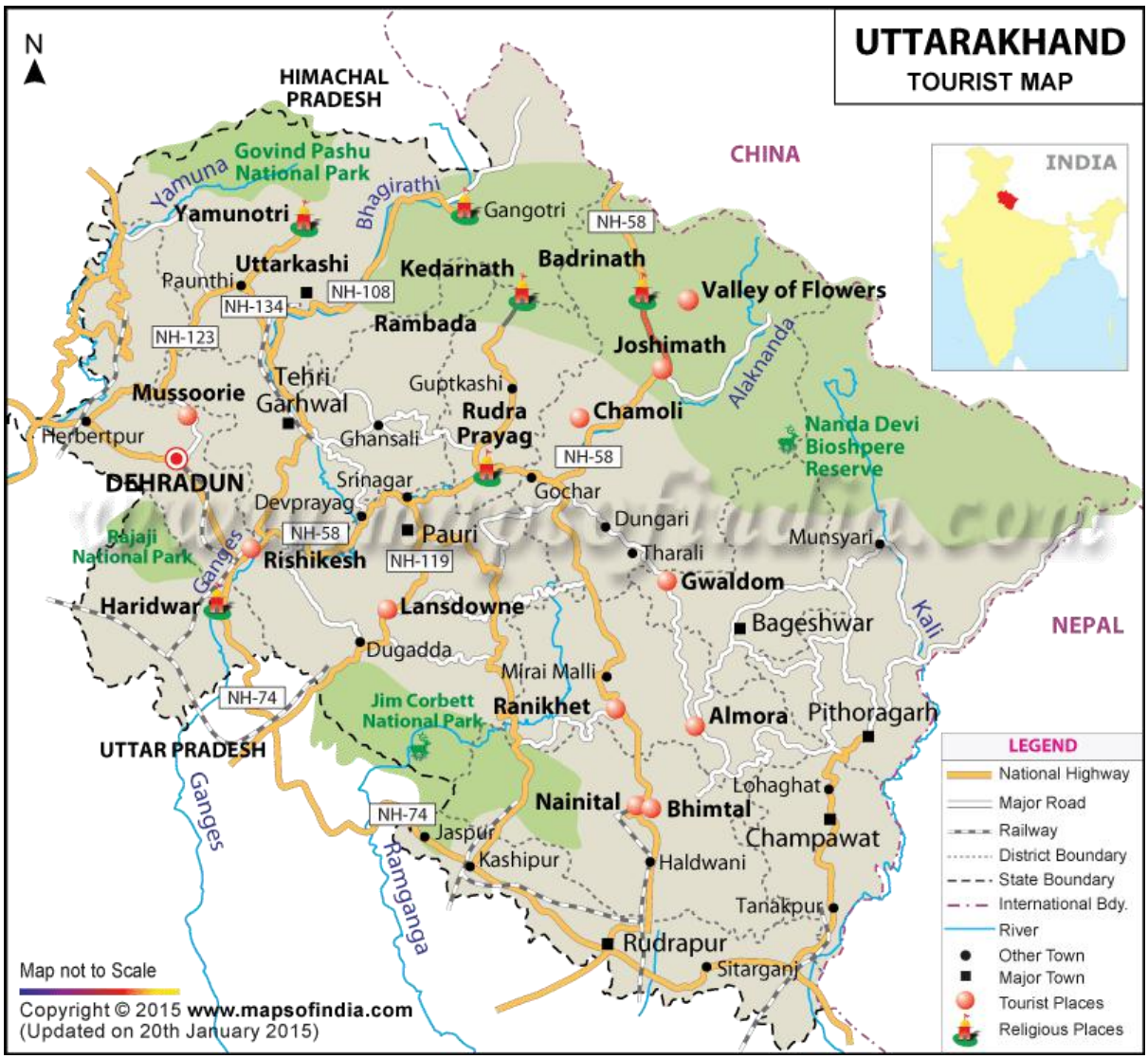


Figure 7.5 Uttarakhand

Uttarakhand is a state North Indian region of Himalayas. The state is popularly known as Devbhumi (land of Gods) due to the presence of numerous Hindu pilgrimage sites. As a result, religious tourism forms a major portion of the tourism in the state. The tourism business in Uttarakhand generated ₹ 23,000 crores during 2013-14.

Famous places to visit in Uttarakhand

Rishikesh – the adventure and Yoga capital

Rishikesh at the foothills of the Himalayas along the banks of River Ganga has some interesting pleasures for holidays in Uttarakhand. Go for exhilarating river rafting in Rishikesh, stay at beach camps, practice Yoga Asanas at ashrams with a perfect backdrop of mighty Himalayas or go exploring the mountains. This 'Yoga Capital of the World', holds International Yoga Festival and will never cease to amuse you with surprises at every turn.

Haridwar – Blessed by Ganga

Wash away all your sins by taking a holy dip in the sacred Ganges River, Haridwar is one of the seven holiest cities for Hindus. Although the city remains vivacious throughout the year but the footfall is maximum during the Kumbh Mela, and the month of Saavan. Pilgrims from far and wide visit the Temples in Haridwar. Har ki Pauri, the river ghat is also one of the best places to visit in the town. It is the site of the mesmerizing Ganga aarti in Haridwar. Every evening, there is a worship ritual for the River Goddess. A million of tiny flickering lamps are floated in the river with sounds of bells and devotees and priests singing praises with full devotion.

Kedarnath temple

Kedarnath is the highest and utmost among all Jyotirlingas. Kedarnath is a holy Hindu town located in Rudraprayag district of Uttarakhand in India and has gained importance because of Kedarnath Temple. Kedarnath has been a pilgrimage center since the olden times. It is one of the Char Dhams situated in the Himalayas. Kedarnath is located at an astounding height of 3584 meters above sea level near the head of the Mandakini River. On the way to Kedarnath, you will spot several striking sights, including the Vasuki Tal Mountain Lake and Gauri Kund. The Kedarnath Temple lies amongst the magnificent snow-capped Garhwal Himalayan ranges and is thronged by thousands of tourists each year.

Badrinath temple

An old Indian proverb goes, there are many sacred spots of pilgrimage on the earth but there has been none equal to Badrinath. Indians, known for their religious fervor, lay special significance to this holy town. Badrinath Temple dedicated to Lord Vishnu is one of the four Char Dham pilgrimage Yatra and best places to visit in Uttarakhand. According to Hindu fable, God Vishnu sat in the meditation at this place. Positioned at the height of 10,279 feet, the temple is encircled by lofty snow-clad Himalayas with Alaknanda River flowing by. The spiritual significance and purity of Badrinath Temple appeal scores of devotees.

Dehradun – the capital city of the Uttarakhand

Dehradun grabs much of the attention due its picturesque location. The capital of Uttarakhand is a city of myriad pleasures. Snuggled in the Doon Valley, between the rivers Ganga and Yamuna, it's a city of unmatched picturesque beauty. It's the gateway to the scenic hills of Uttarakhand. The town has a number of monuments from the colonial days of the British Raj. Having plethora of options to explore, it also serves as the picnic spot for many. It is well connected with other destinations and thus is a halting point for a short yet sweet getaway.

Nainital – gets its identity from mesmerizing Naini Lake

The City of Lakes, Nainital in Uttarakhand is one of the most popular places to visit in Uttarakhand. The city gets its name from Naini Lake, an awe-inspiring lake at the foothills of the mighty Himalayas present an exotic view. Nainital is a natural majesty. Snow covered mountains in backdrop, scenic beauty, lovely lakes and lush flora, grabs your attention instantly. Preferred by honeymooners and families alike, this serene hill station offers the best snowfall experience. ideal for honeymoon couples, families as well as nature lovers, it's one of best hill stations in India.

Almora – commercial headquarter of Kumaon

A magnificently beautiful offbeat place in Uttarakhand is Almora. Offering a soothing respite from the scorching heat, it is amongst the best summer destinations in India. Boasting of the architecture of colonial era, this commercial center is worth exploring. Nestled in the shape of a horse saddle, this hillock is dotted with Fir and Pine Trees.

Kerala

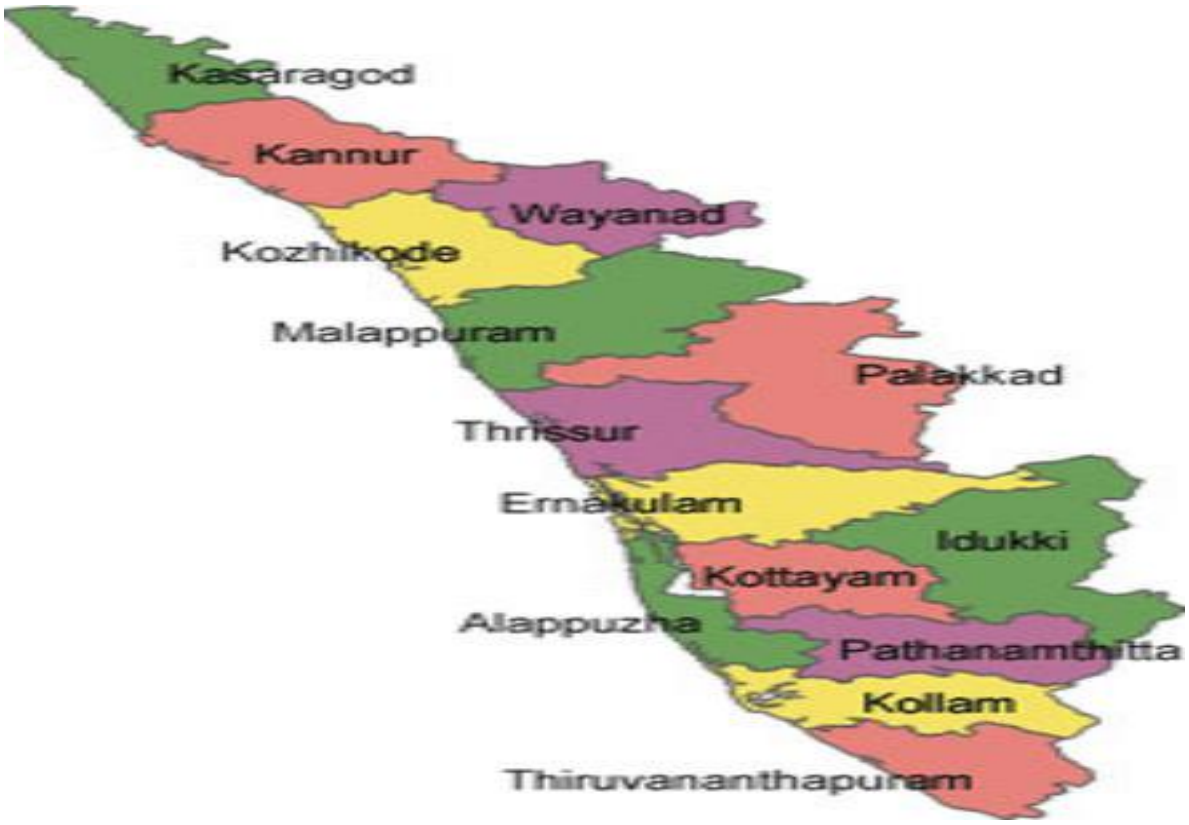


Figure 7.6 Kerala

Kerala, a state situated on the tropical Malabar Coast of southwestern India, is one of the most popular tourist destinations in the country. Named as one of the ten paradises of the world by National Geographic Traveler, Kerala is famous especially for its ecotourism initiatives and beautiful backwaters. Its unique culture and traditions, coupled with its varied demography, have made Kerala one of the most popular tourist destinations in the world. Growing at a rate of 13.31%, the tourism industry is a major contributor to the state's economy.

Until the early 1980s, Kerala was a relatively unknown destination, with most tourism circuits concentrated around the north of the country. Aggressive marketing campaigns launched by the Kerala Tourism Development Corporation—the government agency that oversees tourism prospects of the state—laid the foundation for the growth of the tourism industry. In the decades that followed, Kerala Tourism was able to transform itself into one of the niche holiday destinations in India. The tag line Kerala – God's Own Country was adopted in its tourism promotions and became a global super brand. Kerala is regarded as one of the destinations with the highest brand recall. In 2010, Kerala attracted 660,000 foreign tourist arrivals.

Kerala is a popular destination for both domestic as well as foreign tourists. Kerala is well known for its beaches, backwaters in Alappuzha and Kollam, mountain ranges and wildlife sanctuaries. Other popular attractions in the state include the beaches at Kovalam, Varkala, Kollam and Kappad; backwater tourism and lake resorts around Ashtamudi Lake, Kollam; hill stations and resorts at Munnar, Wayanad, Nelliampathi, Vagamon and Ponmudi; and national parks and wildlife sanctuaries at Periyar, Parambikulam and Eravikulam National Park. The "backwaters" region—an extensive network of interlocking rivers, lakes, and canals that centre on Ashtamudi Lake, Kollam, also see heavy tourist traffic. Heritage sites, such as the Padmanabhapuram Palace, Hill Palace, and Mattancherry Palace, are also visited. To further promote tourism in Kerala, the Grand Kerala Shopping Festival was started by the Government of Kerala in 2007. Since then it has been held every year during the December–January period.

The state's tourism agenda promotes ecologically sustained tourism, which focuses on the local culture, wilderness adventures, volunteering and personal growth of the local population. Efforts are taken to minimize the adverse effects of traditional tourism on the natural environment, and enhance the cultural integrity of local people.

Major attractions

Beaches

Flanked on the western coast by the Arabian Sea, Kerala has a long coastline of 580 km (360 mi); all of which is virtually dotted with sandy beaches.

Kovalam beach near Thiruvananthapuram was among the first beaches in Kerala to attract tourists. Rediscovered by back-packers and tan-seekers in the 1960s and followed by hordes of hippies in the 1970s, Kovalam is today the most visited beach in the state.

Other popularly visited beaches in the state include those at Kappad, Alappuzha, Kozhikode Beach, Marari Beach (Mararikulam, Alappuzha), Nattika (Thrissur), Vadanappilly beach (Thrissur), Cherai Beach, Beypore beach, Marari beach, Fort Kochi, and Varkala. The Muzhappilangad Beach at Kannur is the only drive-in beach in India. Marari beach was rated as one of the world's top five hammock beach by National Geographic survey and has been cited in the international press. Payambalam beach is one of the most beautiful beaches in Kerala situated in Kannur. Other beaches in Kannur include Baby beach, Meenkunnu Beach,

Azhikode Beach, Madaiparra Beach, Chootath Beach, Mermaid Beach.

Backwaters

The backwaters in Kerala are a chain of brackish lagoons and lakes lying parallel to the Arabian Sea coast (known as the Malabar Coast). Houseboat or Kettuvallam rides in the backwaters are a major tourist attraction. Backwater tourism is centered mostly around of Kerala like Alleppey, Kumarakoram, Ashtamudi Lake, Kollam and Bekal. Boat races held during festival seasons are also a major tourist attraction in the backwater regions.

The backwater network includes large lakes such as the Ashtamudi Lake, the largest among them, linked by 1500 km of canals, both man-made and natural and fed by several rivers, and extending virtually the entire length of Kerala state. The backwaters were formed by the action of waves and shore currents creating low barrier islands across the mouths of the many rivers flowing down from the Western Ghats range.

Backwaters in Kerala for honeymoon and family holiday are quite popular. You may sort some of the best Kerala backwaters tour packages after reading about Kerala backwaters reviews available on various websites.

Hill stations

Munnar Hillscape

Sithar Kundu View Point at Nelliyampathy, Palakkad Dist. Kerala, South India

Eastern Kerala consists of land encroached upon by the Western Ghats; the region thus includes high mountains, gorges, and deep-cut valleys. The wildest lands are covered with dense forests, while other regions lie under tea and coffee plantations (established mainly in the 19th and 20th centuries) or other forms of cultivation.

The Western Ghats rise on average to 1500 m elevation above sea level. Some of the popular hill stations in the region are Munnar, Vagamon, Paithalmala, Wayanad, Nelliyampathi, Elapeedika, Peermade, Thekkady and Ponmudi. Kurumbalakotta Hill in Wayand is becoming a great tourist attraction now.

Wildlife

Silent Valley National Park in Palakkad is home to the largest population of lion-tailed macaque. They are among the world's rarest and most threatened primates.

Most of Kerala, whose native habitat consists of wet evergreen rainforests at lower elevations and highland deciduous and semi-evergreen forests in the east, is subject to a humid tropical climate. However, significant variations in terrain and elevation have resulted in a land whose biodiversity registers as among the world's most significant. Most of Kerala's significantly biodiverse tracts of wilderness lie in the evergreen forests of its easternmost districts. Kerala also hosts two of the world's Ramsar Convention-listed wetlands: Lake Sasthamkotta and the Vembanad-Kol wetlands are noted as being wetlands of international importance. There are also numerous protected conservation areas, including 1455.4 km2 of the vast Nilgiris Biosphere Reserve. In turn, the forests play host to such major fauna as Asian elephant (Elephas maximus), Bengal tiger (Panthera tigris tigris), leopard (Panthera pardus), Nilgiris

tahr (Nilgiritragus hylocrius), and grizzled giant squirrel (Ratufa macroura).More remote preserves, including Silent Valley National Park in the Kundali Hills, harbour endangered species such as the lion-tailed macaque (Macaca silenus), Indian sloth bear (Melursus (Ursus) ursinus ursinus), and gaur (the so-called "Indian bison"—Bos gaurus). More common species include Indian porcupine (Hystrix indica), chital (Axis axis), sambar (Cervus unicolor), gray langur, flying squirrel, swamp lynx (Felis chaus kutas), boar (Sus scrofa), a variety of catarrhine Old World monkey species, gray wolf (Canis lupus), and common palm civet (Paradoxurus hermaphroditus). Many reptiles, such as king cobra, viper, python, various turtles and crocodiles are to be found in Kerala—again, disproportionately in the east. Kerala's avifauna include endemics like the Sri Lanka frogmouth (Batrachostomus moniliger), Oriental bay owl, large frugivores like the great hornbill (Buceros bicornis) and Indian grey hornbill, as well as the more widespread birds such as peafowl, Indian cormorant, jungle and hill myna, Oriental darter, black-hooded oriole, greater racket-tailed and black drongoes, bulbul (Pycnonotidae), species of kingfisher and woodpecker, jungle fowl, Alexandrine parakeet, and assorted ducks and migratory birds. Additionally, freshwater fish such as kadu (stinging catfish—Heteropneustes fossilis) and brackishwater species such as Choottachi (orange chromide—Etroplus maculatus, valued as an aquarium specimen) also are native to Kerala's lakes and waterways.

Waterfalls

- Athirappilly Falls
- Meenvallam falls
- Adyanpara Falls, near Nilambur
- Aruvikkuzhi, near Maramon, Kozhencherry in Pathanamthitta District
- Aruvikkuzhi, near Pallickathode, Kottayam District
- Athirappilly Falls 80 ft (24 m)
- Charpa Falls
- Cheeyappara Falls, near Adimali
- Chethalayam Falls, in Wayanad[20]
- Kumbhavurutty Falls in Kollam district
- Lakkom Water Falls
- Madatharuvi Falls, near Ranny in Pathanamthitta District
- Marmala waterfall
- Meenmutty Falls, Thiruvananthapuram
- Meenmutty Falls 984 ft (300 m), in Wayanad
- Mulamkuzhi, near Malayattoor in Ernakulam District
- Panieli Poru waterfalls Ernakulam
- Palaruvi Falls, 300 ft (91 m) in Aryankavu near Punalur in Kollam district
- Pattathippara Falls

- Perunthenaruvi Falls
- Siruvani Waterfalls Palakkad
- Soochipara Falls 656 ft (200 m) / Sentinelrock falls, in Wayanad
- Thommankuthu Falls, near Thodupuzha
- Thusharagiri Falls
- Valara Falls, near Adimali
- Vazhachal Falls, near Athirappilly
- Vazhvanthol waterfalls Trivandrum

Lighthouses

- Tangasseri Lighthouse in Kollam city. This is the tallest lighthouse in Kerala state which is actually built by the British in 1902
- Lighthouses are the main centre of attractions of Kerala beaches and coast line. There are 15 lighthouses in the entire state of Kerala. Districts of Kollam, Kannur, Kozhikode, Alappuzha, Thrissur and Thiruvananthapuram have more than one lighthouse.
- Major Lighthouses
- Alappuzha Lighthouse, Alappuzha
- Anjengo lighthouse, Thiruvananthapuram
- Azhikode Lighthouse, Thrissur
- Beypore Lighthouse, Kozhikode
- Vypin Lighthouse or Cochin Lighthouse, Ernakulam (Tallest in the state)
- Cannanore Lighthouse, Kannur
- Chetwai Lighthouse, Thrissur
- Kasargode Lighthouse, Kasargode
- Kovilthottam Lighthouse, Kollam
- Kozhikkode Lighthouse, Kozhikode (Defunct)
- Manakkodam Lighthouse, Alappuzha
- Mount Dilly Lighthouse, Kannur
- Ponnani Lighthouse, Malappuram
- Tangasseri Lighthouse, Kollam
- Vizhinjam Lighthouse, Thiruvananthapuram

7.4 SUMMARY

- India is a country popularly known for extending its lavish hospitality to all visitors, no matter where they come from. Due to its belief in the philosophy of „Vasudeva Kutumbkam‟ its visitor friendly traditions, varied life styles, vast cultural heritage and colorful fairs and festivals, it holds multiple attractions for the tourist.

- The other attractions include beautiful sun drenched bathing beaches, forests and wild life, majestic rivers, glorious architecture, fascinating fauna and flora and beautiful landscapes for ecotourism, snowclad mountain peaks etc for adventure tourism, technological parks and science museum for science tourism, centers of pilgrimage for spiritual tourism, heritage trains and hotels for heritage tourism, yoga, ayurveda and natural health resorts and hill stations also attract tourists. Indian handicrafts particularly jewellery, carpets, leather goods, ivory and brass work are the main shopping items of foreign tourists.
- Despite the economic slowdown, medical tourism in India is the fastest growing segment of tourism industry. Factors such as low cost scale and range of treatments provided in the country add to its attractiveness as a medical tourism destination. The major tourist attractions in India can be explained by dividing India into four zones. The major tourist attractions for foreign tourists in North India are New Delhi, Agra, Shimla and Dehradun. New Delhi is the capital city of 63 India and has a rich cultural past. Red Fort, India Gate, Qutub Minar, Jama Masjid are the important places for tourism in Delhi.
- Agra is the city of Taj Mahal and one of the greatest spot for tourist attractions in India. Shimla is a splendid hill station in the Himalayas. Dehradun, the capital of Uttaranchal is famous for its fantastic scenery. In East India the major tourist attractions are Kolkata, Guwahati, Shillong, Patna, Jamshedpur, Allahabad, Varanasi, Bhopal. Kolkata –a heritage city and the cultural capital of India. Many places to visit in Kolkata are Victoria memorial, Fort William, Nanda theatre, Race Course, National Library, Eden gardens, Botanical gardens, Allipur Zoo. Guwahati is an important base for tourism in the region. Shillong is the capital of Meghalaya and famous for its breath taking lush green landscapes. Patna is one of the oldest cities in India and famous for its historical relics.
- Jamshedpur is an important industrial township, home of Tata industries. Allahabad is the city of Prayag and the world-famous fair-Kumbh mela. Varanasi is the most auspicious city of the Hindus, famous for its temples and ghats. Bhopal is the capital of Madhya Pradesh and an important center of Tourism. In West India the major tourist attractions are Mumbai, Panjim and Udaipur. Mumbai is the commercial capital of India and the city that never sleeps. Panjim the capital city of Goa is famous for its Golden beaches and pristine waters. Udaipur is famous for its floating palaces in the middle of Lake Pichola. In South India the most important tourist sites are Kerala, Chennai, Bengaluru, Cochin, Trivandrum and Ooty. Kerala, known as „God's own country" is very famous among tourists for its lush greenery, coconut canopies and exotic beaches.
- Chennai is the automobile capital of India. Bangalore the silicon valley of India is famous for its software companies and has a pleasing weather round the year.

Trivandrum is the city of the famous Kovalam beach. Cochin is a coastal city famous for its historical relevance. Ooty is a fabulous hill station in the Nilgiris famous for its verdure valleys

7.5 KEYWORDS

- **Attraction** − It is a physical or cultural feature of a place that can satisfy tourists' leisure based need.
- **Cultural Heritage** − It is an expression of the manner of living developed by a community and passed on from one generation to the next. It includes customs, practices, places, objects, artistic expressions and values.
- **Dark Tourism** − (Black or Grief tourism) It is the tourism involving travel to places historically associated with death and tragedy.
- **Destination** − It is a place the tourist visits and stays there for at least 24 hours. The destination supports staying facilities, attractions, and tourist resources.
- **Ecotourism** − It involves maintenance and enhancement of natural systems such as water, air, woods and forests, and flora and fauna through tourism.

7.6 LEARNING ACTIVITY

1. Search and discuss about highest international tourism visitors state in India.

_____

_____

2. Compare between the UNESCO world heritage sites in India and around the world

_____

_____

7.7 UNIT END QUESTIONS

A. Descriptive Type Questions

1. Explain the tourism in India.
2. Explain the nature and scope of international tourism in India
3. Write about the tourism in Goa, and it is famous among international tourists?
4. Write few of the major attractions of Kerala in India.
5. Explain the significance of Tamil Naidu tourism?

B. Multiple Choice Questions

1. . ……is the land having The palaces of Jaipur, lakes of Udaipur, and desert forts of Jodhpur, Bikaner, and Jaisalmer are among the most preferred destinations of many tourists, Indian and foreign
    a. Rajasthan
    b. Uttar Pradesh
    c. Uttarakhand
    d. None of these

2. . …….represents a legacy of the Portuguese colonial regime of more than 450 years, some of these palatial homes are now converted into hotels while many are still inhabited by the people.
    a. Goa
    b. Tamil Naidu
    c. Kerala
    d. Chennai

3. The Route passes through the various terrains and thickly forested areas of the ……. Mountains.
    a. Nilgiris
    b. Everest
    c. Aravalli
    d. Himalaya

4. It is a place the tourist visits and stays there for at least 24 hours. The …… supports staying facilities, attractions, and tourist resources.
    a. Destination
    b. Travel
    c. Dark Tourism
    d. Stay

5. The term ……. has been used in many different ways. For cultural and environment and to stay at a safe place
    a. sense of place
    b. Tourism
    c. Everest
    d. Famous places

Answer

1. c 2. a 3. a 4. c 5. a

7.8 REFERENCES

- Hall, CM and Page, SJ. (2014). The Geography of Tourism and Recreation.UK and New York: Routledge publishers.
- Sinha, P.C. (2005). Tourism Geography, New Delhi: Anmol Publication.
- International Atlas, Penguin Publication and DK Publication
- Boniface B. and Cooper C. (1987) The Geography of Travel and Tourism. London and England: Heinemann Professional Publisher.
- Rohinson H.|A.A. (1976). Geography of Tourism. London: Macdonaled and Evans.
- Gopal Singh. (2010). A Geography of India. Delhi: Atma Ram & Sons
- Franklin, A and Crang, M (2001) 'The trouble with tourism and travel theory?' in Tourist Studies 1(5) p.5-22
- Larsen, J, Urry, J and Axhausen, K (2006) Mobilities, Networks, Geographies Aldershot:Ashgate
- https://www.evaneos.com/india/holidays/essential-information/8477-indian-geography/
- https://link.springer.com/chapter/10.1007/978-3-030-31776-8_27
- Worldwide Destinations: The geography of travel and tourismbooks.google.co.in › books: Brian Boniface, ‎ Robyn Cooper, ‎ Chris Cooper · 2016
- Geography of Transport Development in India - Page 349books.google.co.in › books: Balkrishna C. Vaidya · 2003

UNIT 8: WORLD GEOGRAPHY

Structure

8.0 LEARNING OBJECTIVES

After studying this unit, you will be able to:

- Explain about the introduction about Geography and leisure
- State about Tourism Mobility and Migration
- Explain about introduction to importance and significance of Tourism
- State the role of tourism in geography

8.1 INTRODUCTION

The old adage of needing a vacation to recover from a vacation trip reflects the often-strenuous nature of holiday travels, as we try to squeeze in as many activities as possible within the short period that we are free from work. Travel and tourism, therefore, are typically considered leisure activities and a form of recreation that takes place away from the home place. The fact that tourism involves travel from one place to another, and occurs in places that are often shaped intentionally by the tourism industry, also make it very geographical.

Most people have an inherent sense of what they consider to be a leisure activity. We generally know that it is not work and not something that you must do. In fact, it is easier to define what leisure is not than what it is. In part, this is because leisure is very subjective – what one person considers a leisure activity, another person may not consider leisure at all. A hike in the woods might be considered leisure by some, and work by someone else. Furthermore, the same person can hold these divergent views from one day to the next, depending on the social context and an individual ’s attitude. Despite the subjective

complexities of leisure, we can generally say that leisure occurs when an individual is undertaking an activity that he or she wants to do and enjoys doing. Leisure, therefore, can be defined as time spent free of obligation and necessity, when one is in control of one ’s own destiny. During pure leisure, there are no overt outside factors or forces that determine what we do and how we spend our time. While we have each been socialized to consider some forms of leisure activities more acceptable than others, we feel that during our leisure time we are free from society ’s expectations and demands of us. This definition of leisure raises some intriguing questions about free will and social expectations. However, it is also limited in that it is not easily quantifiable because it does not specifically address different types of leisure (for counting purposes), nor does it describe to what extent one is free from social obligation (such as when a business trip becomes a tourist holiday). Because defining leisure as the opposite of work and obligation is so vague, we will move on to a second definition of leisure that focuses on activities

8.2 GEOGRAPHY AND LEISURE

Almost every aspect of life is interwoven with leisure (including both recreation and tourism), either as a leisure activity or as its opposite. Because of this, the study of leisure is undertaken from a wide range of disciplinary perspectives, the most prominent being sociology and economics. Geographers have also made major contributions to leisure studies, especially in the area of tourism, because of their interests in the nature and development of places, how people use and behave in places, and the varied relationships that exist between places. The study of geography is distinct in that it encompasses both the physical sciences (physical geography) and social sciences (human or cultural geography).

Max Weber saw the Protestant world as being caught in an 'iron cage' in which the accepted values were asceticism, restraint, productivity, harder work for higher profits, etc. In this cage the Capitalist lost the ability to feel free from the necessity to work, and consequently lost the ability to be 'at leisure', in the classical sense. In fact, the meaning of the word leisure was changed. The early period of industrialization in the United States exemplifies this change, when society's achievements were firmly based on the ethic of salvation through work. The White Anglo-Saxon Protestant (WASP) moved to a position of greater power and affluence by way of this Protestant ideal, and in doing so lost the art of the Greeks and others-schole. An American, Thorstein Veblen, showed how an industrial elite emerged in his society at the end of the nineteenth century. They earned their leisure not through the accumulation of land, as in the Middle Ages, nor through war and colonization, as in Greece and Rome, but through the acceptable Protestant means of asceticism, restraint and hard work. Because of this, their leisure time was surrounded by a new and very different set of ideals and values. Finding themselves caught in the Weberian 'iron cage' in which to be productive was to be respectable and respected, they were faced with the dilemma of spending their time and money earned in an equally acceptable way. They had to reconcile leisure, which is by their definition

unproductive, with the need to be seen to be productive. Veblen's 'Leisure Class' achieved a certain degree of resolution by using leisure time to display their worth, wealth, power and status in society. They indulged in patterns of conspicuous consumption and conspicuous leisure; a way of life immortalized and criticized by Orson Welles in his film Citizen Kane. This elite used inactivity to advertise the extent of their forefathers' activity and productivity. Their extravagant and extrovert tastes and patterns of behavior were not a means of escape from the cage but simply a way of being at leisure and at the same time indicating that they were staying firmly inside it. The relevance of this elite to contemporary society is that their canons of taste have been largely adopted by a new leisured majority: the twentieth-century middle class. Despite a generally lower level of commitment to work, an increased preoccupation with consumption, there is no real evidence available to prove that the present leisured class find abundance any easier to live with than Veblen's elite did seventy years ago. The hedonistic values of the Greeks were based on an entirely different code of ethics from those which underlie the growing search for leisure and pleasure in the late twentieth century. Although assumptions have been made about contemporary fashion and taste which see leisure as a 'superior good' replacing Victorian distaste for decadence and their disapproval of all that was unproductive, the old values still have power to keep large sections of the population inside Weber's 'iron cage of capitalism' when they could afford to work less and enjoy more free time. There is at present a tendency towards more evening overtime working. Wilensky suggests that manual workers in the Middle Ages worked approximately the same hours as they do now, and the better paid worked less than they do now. Since the length of the working week has been shortened for labourers in manufacturing industry, mining, etc., we must assume that the Industrial Revolution reversed the balance of hours spent at work and at leisure. It has been suggested that the Capitalist 'religion of work' is being replaced by a new 'religion of leisure'. The situation is much more complex, and certainly it cannot be assumed that such a change would depend on the number of hours in an average working week. Leisure will never be adequately described or understood if it is defined only as a quantitative concept, that is, the length of time spent not working. Unfortunately it has become just that for the recreational planner, who allocates sufficient land, labour and capital for a population whose needs are calculated in terms of number of hours free from work, income levels, and car-ownership patterns. These factors are fundamental to any analysis of provision for leisure, but they do not always include an understanding of the most important, the qualitative aspects of contemporary leisure activities. Recreation should not be separated from a consideration of the educational and welfare needs of any urban society. Sport is primarily a social and not an athletic activity. The Arts are not an esoteric amusement for the intellectual elite but an integral part of the entire educational experience. The degree to which they are widely accessible is therefore of vital importance. 'It does not make sense to educate a whole generation to enjoy reading, acting, listening to music, painting, playing instruments, sport, etc., while they are at school, and then neglect to provide adequate opportunities and

activities for them later

8.3 TOURISM, MOBILITY AND MIGRATION

Another way of conceptualizing tourism is as a form of voluntary temporary mobility by which people travel to another location – often for leisure or visiting friends and relations (VFR). This way of thinking about tourism helps differentiate it from forced mobility, as in the case of political or environmental refugees, for example, people having to move because of a major flood, or permanent migration. The concept of temporary mobility therefore includes a wide range of tourism-related phenomenon such as leisure travel, health tourism, volunteer tourism, educational travel, travel to second homes, working holidays and business travel.

Although much migration and tourism is domestic, Many of the points apply to multiple scales although the crossing of international borders has special attributes and is important for both phenomena.

Globalization entails the rapidly increasing mobility of people across national borders, and is associated with large-scale movements of all kinds: temporary and permanent.

Mobility takes two forms: long-term migration and short-term tourism (Castles and Miller, 1998; Bell and Ward, 2000; Williams and Hall, 2000).

Temporary mobility is simply defined as "the complement of permanent migration: that is, as any form of territorial movement which does not represent a permanent, or lasting, change of usual residence" (Bell and Ward, 2000, p. 88). Tourism is one form of temporary population movement. Temporary movements as tourism and permanent movements as migration form part of "the same continuum of population mobility in time and space" (Bell and Ward, 2000, p. 88).

Migration entails the movement of people between two places for a specific period of time. However, it is difficult to determine a precise description for migration. The problem is in defining the distance a person needs to move and the time a person needs to stay away from the original destination. In terms of time: "there will be some permanence to a move described as a migration" (Boyle et al. 1998, p.35). However, according to Williams and Hall (2000b), this criterion is problematic, as no theoretically grounded definition of "permanence" exists. Therefore, the migration literature includes such terms as temporary migrants, seasonal workers, and travellers for specific forms of non-permanent migration. Spatially, migration is defined as "movement across the boundary of an aerial unit" (Boyle et al., 1998, p.34). This criterion is also problematic because, areas vary significantly in size. Accordingly, fairly long-distance movement of people will not be included as a form of migration because people do not cross boundaries, whereas shorter movements will be considered migration when they involve a border crossing. Furthermore, the definition of the areal unit is often crucial, as population movement and distribution between units usually have policy consequences (Boyle et al., 1998). One could move on to specify different types

of migration, although that will not be done here.

New forms of mobility can be found at many scales from the local and national to the global. They also include all age ranges but particularly those near the polar extremes of the life course - young, single adults and the active elderly (in contrast, families with young children and the frail elderly tend to be some of the least mobile socio-demographic groups). The heroes of this new mobility are figures such as the young New Zealanders or Australians taking their Big OE (Overseas Experience) in Europe, or the partly retired Canadian living a peripatetic life style between Toronto and Florida, or the German and Swedish long-term travelers visiting organic farms around the world. All straddle not only international boundaries but also the worlds of work and leisure, and so of tourism and migration. There is probably no finer example of this blurring of the spheres of consumption and production than Chris Stewart, the British author, farmer and ex rock-musician, who migrated from Britain to the Alpujarra's mountains in southern Spain. In his best sailing book, Driving Over Lemons, he describes their purchase of a near derelict farm house, and the love, pleasure and sheer hard labour that went into its renovation. His income is supplemented by stints working as a sheep shearer in Sweden, a form of circulation that parallels occasional visits to and from friends and relatives in the UK. There is, in a sense, nothing new in these examples. There have long been migrants whose love of place has over-ridden the logic of labour market material incentives, such as the British middle classes who eked out often meagre livings in Italy in the nineteenth and twentieth centuries (see King and Patterson, 1998). Similarly, the thousands of Europeans and North Americans who crossed the Atlantic in the second half of the twentieth century, to wash dishes or make beds in hotels and holiday camps were driven less by employment and income prospects than by the tourist goals of adventure, exploration and discovery (Cohen, 1972). None of these forms of mobility are new, but they have increased in volume and geographical scope in recent decades, for reasons that are discussed later in this paper. However, there are new forms of mobility which were unimaginable a generation earlier. The young Asian working in New York to pay for a graduate course may simultaneously be a student, a labour migrant and a tourist. Similarly, the young Pole visiting Germany on a tourist visa, but paying for his or her trip by taking casual work and petty trading (Wallace et air., 1996) also defines new forms of mobility. If this is labour migration, then it stands in marked contrast to the mass migrations of the 1960s from Southern to Northern Europe, driven mainly by the gulf in earnings and living standards across Europe, and involving long years of hardship in cramped accommodation and tough working conditions over many years (King, 1993). These new forms of mobility both constitute and are the results of globalization (Held, 2000) which, as is now widely acknowledged, serve to enhance rather than diminish place differences. The places locked together by these new forms of mobility are not, of course, the outcome of a random spatial lottery but are those with particular place features whether these be climatic (the lure of the Mediterranean), cultural (the excitement of Paris or London), economic (the booming economies of the West

Coast of the USA), or activity based (the seasonal attraction of ski resorts in North America, Europe and Australasia). They are also places which have been interconnected by earlier migration, trade or investment flows, such as the China Towns of the Pacific Rim, or the European colonial powers and what had once been the outposts of empire. In all these examples, place differences shape both the origins and the flows of mobility. Moreover, places may actively promote themselves in the global marketplace on the bases of these new forms of mobility - Florida and the Queensland coast as Centre's of easeful retirement migration, San Francisco and Sydney as vibrant, young multi-cultural cities where young in-migrants can combine party time with making a quick dollar. In short, mobility can be branded, marketed and commodified. The consequences of these new forms of mobility extend beyond the individuals concerned. There are obvious direct consequences experienced by the real estate developer who sells a house to the second homer, the surfboard training school who hires the itinerant Australian surfer for a season, and the long lost cousin in Scotland who hosts a seemingly endless flow of distant relatives in search of their ancestral roots. But the implications of the new forms of mobility, directly or indirectly, touch most people in the communities or origin or destination: on the one hand, the consequences include gains and losses in labour supply, innovation and contact networks whilst, on the other hand, they include changes in house prices, services, and in the cultural images of places.

8.4 SIGNIFICANCE OF TOURISM

Tourism has been the direct subject of geographical analysis since the 1920s and has developed into a significant area of applied human geography as well as other social scientific fields. In that time methodologies and philosophies have changed, as has the subject matter. Building on initial research on tourism in American and German economic geography in the 1920s and 1930s, research was primarily undertaken in the post-war period on the economic impact of tourism in both a regional destination setting and on travel routes. Research on issues of seasonality and travel motivations was already being undertaken by 1947. The geography of recreation and tourism was of sufficient profile in the discipline to warrant a chapter in an overview text on the state of geography in the United States in the 1950s. In Britain significant research was undertaken pre- and post- Second World War on the development of British seaside resorts which was also influential in the European context. However, little further direct research was undertaken on tourism and recreation in the United Kingdom until the 1960s. In Canada over the same period substantive geographical research on tourism was primarily focused work on cottaging which laid the foundation for later research on the geography of second home development at an international level, particularly in Scandinavia which has a long-standing tradition of second home ownership and access. In the 1960s research started to accelerate with a major growth in publications on tourism and recreation in the 1970s. During the 1960s several influential reviews were undertaken of the geography of tourism and recreation in Anglo-American geography, while a substantive

contribution to the development of the area also came from regional sciences, economic geography and migration studies.

French geography also has a strong tradition of research on tourism and recreation that was, arguably, much further advanced in the 1960s and 1970s in terms of both theoretical development and extent of publication than the Anglo-American tradition. One reason for this advanced interest possibly lay in the long recognition of tourism as a factor in the economic development of French alpine regions and its impact on the cultural and physical landscape. In addition, the growth of tourism in the Mediterranean coast provided a basis for research on coastal resort development while the significance of second homes for tourism and leisure also has a strong research tradition. During the 1970s and early 1980s, a number of influential texts and monographs appeared in the geography literature providing significant impetus to research.

The 1970s and 1980s also witnessed the development of several journals solely devoted to the study of tourism. However, it was from the late 1980s onwards that the study of the geography of tourism began to enter a rapid phase of development in which it is still engaged. Several reasons can be given for this growth: first, recognition of the economic importance of tourism by government and industry; second, as a result of recognition increasing funding for university courses in tourism and, to a lesser extent, research monies for tourism research; three, greater recognition by government, industry and the public that tourism development may have substantial positive and negative impacts which require effective management and planning; four, increased use of tourism as a mechanism for regional development; five, increased recognition in the social sciences.

8.5 SUMMARY

- World regional geography studies various world regions as they compare with the rest of the world. Factors for comparison include both the physical and the cultural landscape. The main questions are, who lives there? What are their lives like? What do they do for a living? Physical factors of significance can include location, climate type, and terrain. Human factors include cultural traditions, ethnicity, language, religion, economics, and politics.
- World regional geography focuses on regions of various sizes across the earth's landscape and aspires to understand the unique character of regions in terms of their natural and cultural attributes. Spatial studies can play an important role in regional geography. The scientific approach can focus on the distribution of cultural and natural phenomena within regions as delimited by various natural and cultural factors.
- The focus is on the spatial relationships within any field of study, such as regional economics, resource management, regional planning, and landscape ecology.
- Again, we take a regional approach with a focus on themes that illustrate the

globalization process, which in turn helps us better understand our global community. The regions studied in world regional geography can be combined into larger portions called realms. Realms are large areas of the planet, usually with multiple regions, that share the same general geographic location.

8.6 KEYWORDS

- **Terrain** − It is a stretch of land, especially with regard to its physical features.
- **Tourism Carrying Capacity** − The maximum number of people that may visit a tourist destination at the same time, without causing destruction of the physical, economic, socio-cultural environment, and an unacceptable decrease in the quality of visitors' satisfaction.
- **Travel** − The act of moving outside one's home community for business or pleasure but not for commuting or traveling to or from usual places.
- **United Nations World Tourism Organization (UNWTO)** − It is the United Nations (UN) agency responsible for the promotion of responsible, sustainable, and universally accessible tourism.
- **WTO** − World Tourism Organization.

8.7 LEARNING ACTIVITY

1. Define how leisure tourism is becoming the new trend in tourism industry.

_____

_____

2. Compare and contrast the world geography of tourism with top 5 countries of tourism.

_____

_____

8.8 UNIT END QUESTIONS

A. Descriptive Type Questions

1. Illustrate the importance of geography in leisure tourism?
2. Discuss significance aspects of Tourism.
3. Explain world geography? What is the role of world geography in tourism?
4. Discuss the term mobility.
5. Explain Tourism Migration?

B. Multiple Choice Questions

1. During the …….. s several influential reviews were undertaken of the geography of tourism and recreation in Anglo-American geography, while a substantive contribution to the development of the area also came from regional sciences, economic geography and migration studies.

a. 1999
b. 1940
c. 1935
d. 1960

2. Space is another central or transcendent theme of…….

a. Geography
b. History
c. Chemistry
d. None of these

3. Geography deals with two basic areas of inquiry about the world around us: ……. and space

a. Place
b. Location
c. Region
d. World

4. …….. is not as easily broken down into sub disciplinary areas as is physical geography

a. Physical Geography
b. Cultural Geography
c. Human geography
d. None of these

5. Geography is sometimes called a spatial science because of the importance of spatial relationships in a geographic understanding of the…….

a. World
b. India
c. States
d. Country

Answer

1. d 2. a 3. a 4. c 5. a

8.9 REFERENCES

- Hall, CM and Page, SJ. (2014). The Geography of Tourism and Recreation.UK and New York: Routledge publishers.
- Sinha, P.C. (2005). Tourism Geography, New Delhi: Anmol Publication.
- International Atlas, Penguin Publication and DK Publication
- Boniface B. and Cooper C. (1987) The Geography of Travel and Tourism. London and England: Heinemann Professional Publisher.
- Rohinson H.|A.A. (1976). Geography of Tourism. London: Macdonaled and Evans.
- Gopal Singh. (2010). A Geography of India. Delhi: Atma Ram & Sons
- Hall, C.M. (2000). Tourism Planning: Policies, Processes and Relationships, 236 pp. Harlow: Prentice Hall. [Presents a comprehensive overview of approaches to tourism planning at different scales]
- Hall, C.M. and Lew, A.A. (ed.) (1998). Sustainable Tourism Development: Geographical Perspectives, 236 pp. Harlow: Addison Wesley Longman. [Focuses on the contribution of various geographic approaches to understanding sustainable tourism development].
- Crouch, D. (ed.) (1999). Leisure / tourism geographies: practices and geographical knowledge, 299 pp. London, New York: Routledge. [Provides a selection of chapters which perceive tourism as an encounter]
- World Geographybooks.google.co.in › books: Majid Husain · 2008
- World Geography: The Worldbooks.google.co.in › books: Ray Sumner · 2001 · ⁋ Snippet view

UNIT 9: TOURISM GEOGRAPHY (WORLD) – I

Structure

9.0 LEARNING OBJECTIVES

After studying this unit, you will be able to:

- Discuss about Tourism of France and South Africa
- State about Major attractions of France and South Africa
- Explain about the cultural aspects of France and South Africa

9.1 INTRODUCTION

Tourism in France directly contributed 79.8 billion euros to gross domestic product, 30% of which comes from international visitors and 70% from domestic tourism spending. The total contribution of travel and tourism represents 9.7% of GDP and supports 2.9 million jobs (10.9% of employment) in the country. Tourism contributes significantly to the balance of payments.

France was visited by 89 million foreign tourists in 2018, making it the most popular tourist destination in the world, however considering the number of nights spent in the country, it is in sixth place, after United States, United Kingdom, China, Spain and Italy. France ranks fifth in tourist spending behind the United Kingdom, United States, China and Spain.

France has 37 sites inscribed in the UNESCO's World Heritage List and features cities or sites of high cultural interest (Paris being the foremost, but also Loire Valley, Toulouse, Strasbourg, Bordeaux, Lyon, and others), beaches and seaside resorts, ski resorts, and rural regions that many enjoy for their beauty and tranquility (green tourism). Small and picturesque French villages of quality heritage (such as Collonges-la-Rouge, Locronan, or Montsoreau) are promoted through the association Les Plus Beaux Villages de France

(literally "The Most Beautiful Villages of France"). The "Remarkable Gardens" label is a list of the over two hundred gardens classified by the French Ministry of Culture. This label is intended to protect and promote remarkable gardens and parks.

9.2 FRANCE

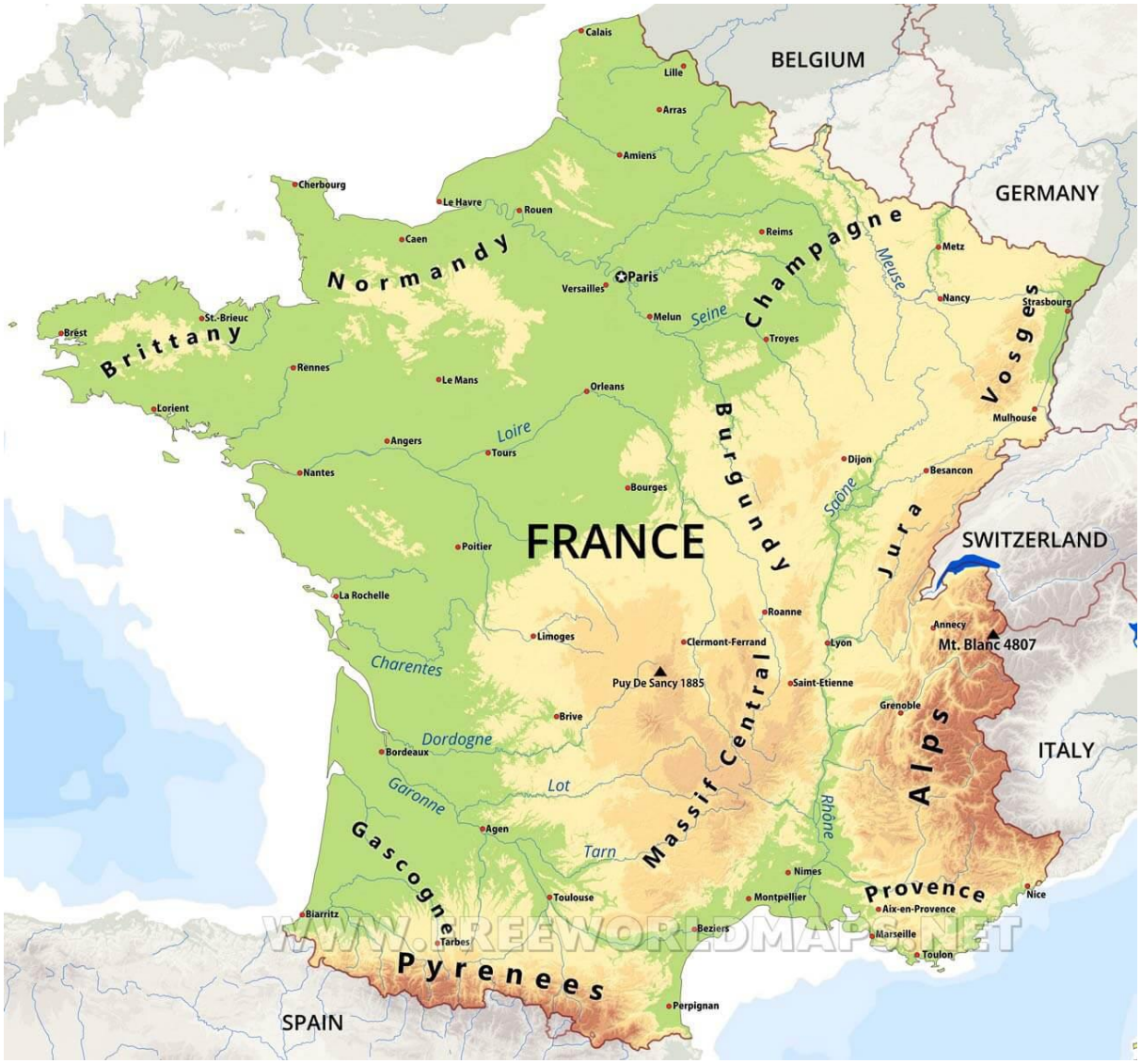


Figure 9.1 France

France borders Belgium, Luxembourg and Germany to the northeast, Switzerland, Monaco, and Italy to the east, and Andorra and Spain to the south. The overseas territories include French Guiana in South America and several islands in the Atlantic, Pacific and Indian oceans. The country's 18 integral regions (five of which are situated overseas) span a combined area of 643,801 square kilometers (248,573 sq mi) and a total population of 67.07 million (as of May 2020).[10] France is a unitary semi-presidential republic with its capital in Paris, the country's largest city and main cultural and commercial centre. Other major urban areas include Lyon, Marseille, Toulouse, Bordeaux, Lille and Nice. France, including its

overseas territories, has the most time zones of any country, with a total of 12.

During the Iron Age, what is now metropolitan France was inhabited by the Gauls, a collection of Celtic tribes. The area was annexed by Rome in 51 BC, developing a distinct Gallo-Roman culture that laid the foundation of the French language. The Germanic Franks arrived in 476 and formed the Kingdom of Francia, which became the heartland of the Carolingian Empire. The Treaty of Verdun of 843 partitioned the empire, with West Francia becoming the Kingdom of France in 987.

For much of the High Middle Ages, France was a highly decentralized feudal kingdom in which the authority of the king was barely felt. King Philip Augustus achieved remarkable success in the strengthening of royal power and the expansion of his realm, doubling its size and defeating his rivals. By the end of his reign, France had emerged as the most powerful state in Europe. In the mid-14th century, French monarchs were embroiled in a series of dynastic conflicts with their English counterparts, which lasted over 100 years. Emerging victorious from said conflicts, disputes with Spain and the Holy Roman Empire soon followed during the Renaissance but were ultimately less successful. However, French culture flourished and a global colonial empire was established, which by the 20th century would become the second largest in the world. The second half of the 16th century was dominated by religious civil wars between Catholics and Protestants (Huguenots), which severely weakened the country. But France once again emerged as Europe's dominant cultural, political, and military power in the 17th century under Louis XIV following the Thirty Years' War. An inadequate financial model and inequitable taxation system as well as endless and costly wars to maintain its predominant position, the Seven Years' War and American War of Independence among them, left the heavily indebted kingdom in a precarious situation by the end of the 18th century. The French Revolution in 1789 saw the fall of the absolute monarchy that characterized the Ancient Régime and from its ashes, rose one of modern history's earliest republics, which drafted the Declaration of the Rights of Man and of the Citizen. The declaration expresses the nation's ideals to this day.

Following the revolution, France reached its political and military zenith in the early 19th century under Napoleon Bonaparte, subjugating much of continental Europe and establishing the First French Empire. The French Revolutionary and Napoleonic Wars shaped the course of European and world history. After the collapse of the empire and a relative decline, France endured a tumultuous succession of governments culminating in the establishment of the French Third Republic in 1870 in the midst of the Franco-Prussian War. France was one of the prominent participants of World War I, from which it emerged victorious, and was one of the Allied powers in World War II, but came under occupation by the Axis in 1940. Following liberation in 1944, a Fourth Republic was established and later dissolved in the course of the Algerian War. The Fifth Republic, led by Charles de Gaulle, was formed in 1958 and remains to this day. Algeria and nearly all other French colonies became independent in the 1960s, with most retaining close economic and military connections with

France.

France retains its centuries-long status as a global centre of art, science, and philosophy. It hosts the world's fifth-largest number of UNESCO World Heritage Sites and is the leading tourist destination, receiving over 89 million foreign visitors in 2018. France is a developed country with the world's seventh-largest economy by nominal GDP, and the tenth-largest by PPP. In terms of aggregate household wealth, it ranks fourth in the world. France performs well in international rankings of education, health care, life expectancy, and human development. It remains a great power in global affairs, being one of the five permanent members of the United Nations Security Council and an official nuclear-weapon state. France is a founding and leading member of the European Union and the Eurozone, and a member of the Group of 7, North Atlantic Treaty Organization (NATO), Organization for Economic Co-operation and Development (OECD), the World Trade Organization (WTO), and La Francophonie.

In France tourism is a major industry. France is the world's leading tourist destination. Not only is it situated at the heart of western Europe, bordering on all the larger countries in the region - Italy, Spain, Germany, Belgium, Switzerland and - across the straits of Dover - the UK; it also has Europe's second busiest airport - Paris Charles de Gaulle airport - and dozens more airports with international connections.

As a country, France offers a fabulous historic heritage and probably the most diversified natural environment of any country in Europe. Its tourist attractions illustrate the history of the human race, from the prehistoric sites of Cro Magnon to the steel and glass of the Futuroscope; they include fine vestiges of all European civilizations, from the prehistoric megaliths of Carnac and the Roman remains of Provence, through medieval castles and cathedrals, to the splendors of Versailles, the nineteenth century Eiffel Tower, or the resolute modernity of the TGV.

In addition, France has the necessary tourism infrastructure to cope with its status as leading tourist destination - more hotels and campsites than any other country of Europe, probably more gites or holiday cottages, the best and most modern rail network in Europe, and a fine system of motorways linking all main towns and cities.

9.3 MAJOR ATTRACTION IN FRANCE

Paris

The Eiffel Tower seen from the Place du Trocadéro Paris, the capital city of France, is the third most visited city in the world.

It has some of the world's largest and renowned museums, including the Louvre, which is the most visited art museum in the world, but also the Musée d'Orsay which, like the nearby Musée de l'Orangerie, is mostly devoted to impressionism, and Centre Georges Pompidou, dedicated to Contemporary art.

Paris hosts some of the world's most recognizable landmarks such as the Eiffel Tower, which

is the most-visited paid monument in the world, the Arc de Triomphe, the cathedral of Notre-Dame, or the Sacré-Cœur on Montmartre. The Cité des Sciences et de l'Industrie, located in Parc de la Villette, is the biggest science museum in Europe. Near Paris are located the Palace of Versailles, the former palace of the Kings of France, now a museum, and the medieval village of Provins. Both attractions are protected as UNESCO World Heritage Sites.

French Riviera

With more than 10 million tourists a year, the French Riviera (French: Côte d'Azur), in southeastern France, is the second leading tourist destination in the country, after the Parisian region.

According to the Côte d'Azur Economic Development Agency, it benefits from 300 days of sunshine per year, 115 kilometers (71 mi) of coastline and beaches, 18 golf courses and 3,000 restaurants. Each year the Côte d'Azur hosts 50% of the world's superyacht fleet, with 90% of all superyachts visiting the region's coast at least once in their lifetime.

Main cities on the French Riviera include Nice, Antibes and Cannes; Cap Ferrat is also a popular destination. Cannes hosts the annual Cannes Film Festival. Tourists also often visit the Port-Cros National Park, east of Toulon, and Monaco, near the Italian border.

Provence

A large part of Provence, with Marseille as its leading city, was designed as the 2013 European Capital of Culture. Numerous famous natural sites can be found in the region, as the Gorges du Verdon, the Camargue, the Calanques National Park and the typical landscape of Luberon. Provence hosts dozens of renowned historical sites like the Pont du Gard, the Arles' Roman Monuments or the Palais des Papes in Avignon. Several smaller cities also attract a lot of tourists, like Aix-en-Provence, La Ciotat or Cassis, on the Mediterranean Sea coastline.

Loire Valley

Another major destination is the Châteaux (castles) of the Loire Valley. The French Revolution saw a number of the great French châteaux destroyed and many ransacked, their treasures stolen. The overnight impoverishment of many of the deposed nobility, usually after one of its members lost his or her head to the guillotine, saw many châteaux demolished.

During World War I and World War II, some chateaux were commandeered as military headquarters. Some of these continued to be used this way after the end of the Second World War.

This World Heritage Site is noteworthy for the quality of its architectural heritage, in its historic towns such as Amboise, Angers, Blois, Chinon, Orléans, and Saumur, but in particular for its castles, such as the Châteaux d'Amboise, de Chambord, d'Ussé, de Villandry, de Chenonceau, and de Montsoreau, which illustrate to an exceptional degree the ideals of the French Renaissance.

French Alps

The French Alps are the portions of the Alps mountain range that stand within France,

located in the Rhône-Alpes and Provence-Alpes-Côte d'Azur regions. While some of the ranges of the French Alps are entirely in France, others, such as the Mont Blanc massif, are shared with Switzerland and Italy.

More than 20 skiing resorts make it a popular destination among Europeans in the winter.

Corsica

Corsica is the fourth largest island in the Mediterranean Sea after Sicily, Sardinia and Cyprus. It is a popular attraction for tourists with both cultural aspects (with its main cities Ajaccio and Bastia and smaller towns like Porto-Vecchio and Sartène) and geographical features (Parc naturel regional de Corse).

The Calanques de Piana and Scandola Nature Reserve are listed on the UNESCO World Heritage List. The island is 183 kilometers (114 miles) long at longest, 83 kilometers (52 miles) wide at widest, has 1,000 kilometers (620 miles) of coastline, more than 200 beaches, and is very mountainous, with Monte Cinto as the highest peak at 2,706 metres (8,878 feet) and around 120 other summits of more than 2,000 metres (6,600 feet).

Mountains comprise two-thirds of the island, forming a single chain. Forests make up 20% of the island.

9.4 SOUTH AFRICA

Figure 9.2 South Africa

South Africa is a tourist destination and the industry accounts for a substantial amount of the country's revenue. The official marketing agency for the country South African Tourism is responsible for marketing South Africa to the world. According to the World Travel & Tourism Council, the tourism industry directly contributed ZAR 102 billion to South African GDP in 2012, and supports 10.3% of jobs in the country. The official national marketing agency of the South African government, with the goal of promoting tourism in South Africa both locally and globally is known as South African Tourism.

South Africa offers both domestic and international tourists a wide variety of options, among others the picturesque natural landscape and game reserves, diverse cultural heritage and highly regarded wines. Some of the most popular destinations include several national parks, such as the expansive Kruger National Park in the north of the country, the coastlines and beaches of the KwaZulu-Natal and Western Cape provinces, and the major cities like Cape Town, Johannesburg and Durban.

According to Statistics South Africa's latest Tourism and Migration Survey, almost 3,5 million travelers passed through the country's ports of entry in August 2017.The top five overseas countries with the largest number of tourists visiting South Africa were the USA, UK, Germany, the Netherlands and France. Most of the tourists arriving in South Africa from elsewhere in Africa came from SADC countries. Zimbabwe tops the list at 31%, followed by Lesotho, Mozambique, Swaziland and Botswana. In addition, Nigeria was the country of origin for nearly 30% of tourists arriving in South Africa.

Biodiversity and ecotourism

South Africa is ranked sixth out of the world's seventeen megadiverse countries and is home to a large variety of animal life. Among the large mammals found in the northern bushveld include lions, leopards, cheetahs, white rhinoceroses, blue wildebeest, kudus, impalas, hyenas, hippopotamuses and giraffes. A significant extent of the bushveld exists in the north-east, including the Kruger National Park, one of the largest game reserves in Africa, and the Sabi Sand Game Reserve. The Kruger National Park, established in 1926, is one of the most visited national parks in the country, with a total of 1 659 793 visitors in the 2014/15 period.

The country is also particularly rich in plant diversity, with a wide variety of biomes found across the country. These include the grasslands in the Highveld, the succulent Karoo in central South Africa, and the endemic fynbos biome, constituting the majority of the area and plant life in the Cape floristic region of the Western Cape. This rare vegetation is protected as part of the Table Mountain National Park (which also includes the iconic flat-topped Table Mountain), which was the most-visited national park in South Africa in 2014/15, with a total of 2 677 767 visitors.

Ecotourism

It is difficult to know if there is regulation of the term 'ecotourism' as well as what a foundation/association/company needs to do to fall into the category of 'eco-travel'. However,

there is a non-profit association that represents the private sector of the "incoming tourism industry in South Africa" (which is a large group) called the South African Tourism Services Association (SATSA), they are "dedicated to providing and maintaining the highest possible standards in the tourism industry within South Africa." (SATSA, 2007) SATSA is focused on the accountability, integrity, and quality control of the tourism industry in South Africa as well as with the companies and associations they are connected to. In addition to SATSA, the website responsibletravel.com partnered with The Metro, World Travel Market and Travel Trade Gazette Magazine have established the World Responsible Tourism Awards. The goal of the award is to "recognize individuals, companies and organizations in the travel industry that are making a significant commitment to the culture and economies of local communities and are providing a positive contribution to biodiversity conservation."

Cultural attractions

In addition to its numerous natural attractions, South Africa also boasts numerous attractions of cultural significance. These include the fossil-bearing caves forming part of the Cradle of Humankind in Gauteng, the ruins of the Kingdom of Mapungubwe in northern Limpopo, the wine routes of the Western Cape, and various historical sites in the cities of Cape Town and Johannesburg (such as Robben Island, the Castle of Good Hope and Soweto township).

UNESCO World Heritage Sites

Eight South African sites are inscribed on the UNESCO World Heritage List, including the iSimangaliso Wetland Park and uKhahlamba Drakensberg Park in KwaZulu-Natal.

Cultural Life

Blending Western technology with indigenous technology, Western traditions with African and Asian traditions, South Africa is a study in contrasts. It also provides lessons in how cultures can sometimes blend, sometimes collide; for example, within a short distance of one another can be found the villas of South Africa’s white elite and the tar-paper shacks of black day labourers, office buildings with the most sophisticated electronic wiring and one-room houses that lack electricity. A great gulf still exists between the white minority and the black majority in matters of education and economic opportunity. Yet, South Africa is making steady progress in erasing some of these historic disparities and their consequences. Daily life is better for most of its people, and culture and the arts, which sometimes were forced into exile, are flourishing in the free climate of the post-apartheid era.

The arts

A century and a half of white domination in most of the country (more than three centuries in the Western Cape) and the great extent of its ties to the global market economy have profoundly transformed black culture in South Africa. The strongest links to traditional societies have been through the many languages embodying the country’s cultural diversity, whose nuances of idiom and sensibility carry over into the arts. Traditional art forms such as dancing and textile weaving are used as vehicles of ethnic identity and are carefully preserved, while modern art forms from painting to literature have flourished in the years since the end

of apartheid. Still, much of this has taken place through private initiatives because major institutional support for culture has been largely abandoned, especially for cultural projects perceived as elitist or European in orientation; the closing of the National Symphony Orchestra in 2000 is one such example.

Music

Many popular South African arts represent a fusion of cultural influences, such as township jazz and pop music, religious choral music, and so-called "traditional" dances performed competitively by mine workers in decidedly untraditional settings. Others are innovations created in response to new circumstances, such as the lifela song-poems composed by Sotho migrant workers to express and comment upon the life of miners. Because miners were frequently so far away from home, traditional rituals had to be performed during the weekends or on holidays. Mining companies often sponsored dances as an outlet for the men, and tourists came to view the exotic African musical forms.

South African music is a fusion of various musical styles such as traditional indigenous music, jazz, Christian religious music, and forms of popular music from the United States. These combinations are evident in the music of such performers as the African Jazz Pioneers, Ladysmith Black Mambazo, Miriam Makeba, Hugh Masekela, and others. During the apartheid period, black and white musicians were segregated, although they still collaborated on occasion; a notable example is Johnny Clegg, a white South African who learned traditional Zulu music and formed the mixed-race bands Juluka and Savuka, both of which had international followings. Township music, a lively form of music that flourished in the townships during the apartheid era, has also been popular within the country and abroad.

Art

Rock and cave art attributable to the San, some of which is thought to be about 26,000 years old, has been found across much of Southern Africa. The greatest number of paintings, which primarily depict human figures and such animals as elands, elephants, cattle, and horses, have been found in the Drakensberg mountains (part of uKhahlamba/Drakensberg Park, designated a UNESCO World Heritage site in 2000). Terra-cotta figures dated to AD 500 are known as Lydenburg heads, named after the town in which they were discovered. Excavations at Bambandyanalo and Mapungubwe in the Limpopo River valley have found gold animal statues as well as a wealth of pottery and clay animal figurines. More recently, Zulu wooden statues, produced in the 19th century before the Anglo-Zulu War (1879), are further examples of South Africa's artistic history.

Major attractions – South Africa

South Africa is diverse and beautiful country, about the size of France and Spain combined or roughly twice the size of Texas. Its varied cultures, intriguing wildlife, stunning scenery, and remarkable beaches make it a haven for travelers from around the world. Visitors quickly discover that the rich history and colorful inhabitants ideally complement the top tourist attractions in South Africa, which creates an unforgettable experience.

Sun City Resort

Known regionally as Africa's Kingdom of Pleasure, Sun City Resort is a luxury casino and resort, situated about two hours' drive from Johannesburg. The complex contains four hotels, two championship golf courses, two casinos, an atmospheric South African cultural village and more than 7000 crocodiles within a sanctuary. The adjacent Pilanesberg Game Reserve is the most popular public Game Reserve in South Africa.

Hluhluwe-Umfolozi Game Reserve

As the only park under a formal conservation effort in KwaZulu Natal where you can see the Big Five – lions, elephants, leopards, buffalo and rhinoceros – the Hluhluwe-Umfolozi Game Reserve offers visitors wildlife viewing opportunities second to none. Wildlife enthusiasts may enjoy the vast expanses of native plants and native animals during guided walks, self-guided drives, or opt for a thrilling viewing experience by boat along the Hluhluwe dam.

Blyde River Canyon

Blyde River Canyon is the second largest canyon in Africa, after the Fish River Canyon, although it is much greener due to its lush subtropical foliage. Walking treks through the rich diversity of flora and fauna filled canyon offer views of magnificent escarpments, waterfalls and ancient geological phenomenon. Visitors have the opportunity to encounter all five of South Africa's primates here, as well as hippos and crocodiles near the wetlands of Swadini Dam.

Cape Winelands

The fertile valleys of the Cape Winelands are surrounded by majestic mountains, sleepy villages, brilliant monuments, fruitful orchards and some of the lushest scenery in South Africa. Visitors can follow the Wine Routes of the Cape to visit the vineyards of the country's finest winemakers, whose sherries, ports, brandies and intriguing whites and reds are world famous for their delicate flavors and savory palatability.

Victoria and Alfred Waterfront Find Hotels

As one of Cape Town's largest tourist attractions and most visited destinations, the Victoria and Alfred Waterfront invokes images of the earliest days of the harbor. Situated within an entertainment mecca filled with restaurants, specialty shops, pubs, and theaters, there is something here for everyone to enjoy. Beyond amusements, there are also some attractions including the infamous Clock Tower, Chavonnes Battery, the South African Maritime Museum and the coastal Seal Landing where Cape Fur Seals reside.

Knysna

The Garden Route is one of South Africa's most popular tourist attractions and is generally thought to stretch from Mossel Bay to St Francis along the Indian ocean and also includes parts of the inland. A trove of indigenous canopied forests, mountains, rivers, tranquil lakes and golden beaches grace this extensive South Africa region.

One of the Garden Route's best-known travel destinations, Knysna is situated between lush forests and the shores of a peaceful lagoon. Extensive opportunities for outdoor adventure are

easily accessible in Knysna, as well as plenty of leisurely strolling paths filled with authentic dining and shopping venues. Visiting the heads – two cliffs guarding the mouth of the lagoon – is a must, and each one offers spectacular views of the adjacent colorful cliffs and the brilliant lagoon where seasonal whale watching is top-notch.

9.5 SUMMARY

- According to Statistics South Africa's latest Tourism and Migration Survey, almost 3,5 million travelers passed through the country's ports of entry in August 2017.The top five overseas countries with the largest number of tourists visiting South Africa were the USA, UK, Germany, the Netherlands and France. Most of the tourists arriving in South Africa from elsewhere in Africa came from SADC countries. Zimbabwe tops the list at 31%, followed by Lesotho, Mozambique, Swaziland and Botswana. In addition, Nigeria was the country of origin for nearly 30% of tourists arriving in South Africa.
- France, officially called the Republic of France, is a country located in Western Europe. The country also has several overseas territories and islands around the world, but the mainland of France is called Metropolitan France. It stretches north to south from the North Sea and the English Channel to the Mediterranean Sea and from the Rhine River to the Atlantic Ocean. France is known for being a world power and has been an economic and cultural center of Europe for hundreds of years.
- France has a long history and, according to the U.S. Department of State, it was one of the earliest countries to develop an organized nation-state. As a result of the mid-1600s, France was one of the most powerful countries in Europe. By the 18th century, though, France began having financial problems due to the lavish spending of King Louis XIV and his successors. These and social problems eventually led to the French Revolution that lasted from 1789–1794. Following the revolution, France shifted its government between "absolute rule or constitutional monarchy four times" during the Empire of Napoleon, the reigns of King Louis XVII and then Louis-Philippe and finally the Second Empire of Napoleon III.
- In 1870 France was involved in the Franco-Prussian War, which established the country's Third Republic that lasted until 1940. France was hit hard during World War I and in 1920 it established the Maginot Line of border defenses to protect itself from the rising power of Germany. Despite these defenses, however, France was occupied by Germany early during World War II. In 1940 it was divided into two sections—one that was directly controlled by Germany and another that was controlled by France (known as the Vichy Government). By 1942 though, all of France was occupied by the Axis Powers. In 1944, the Allied Powers liberated France.

9.6 KEYWORDS

- **Hiking** − A long and vigorous walk on the trail.
- **Intermediaries** − They are the intermediate links between the form of goods and services tourists do not require and the form of goods and services the tourist's demand.

- **Itinerary** − A documented plan of the tour.
- **Leisure** − The free time when obligations are at a minimum and one can relax.
- **Recreation** − The activities carried out during leisure time.

9.7 LEARNING ACTIVITY

1. Learn and discuss about France cultural aspects of tourism.

_____

_____

2. List and compare the most visited tourists place of South Africa.

_____

_____

9.8 UNIT END QUESTIONS

A. Descriptive Type Questions

1. Explain the art culture of South Africa.
2. Explain the cultural institutions of France?
3. Do you know why Kruger national park is famous in South Africa?
4. Discuss the significance of Table Mountain in south Africa?
5. Explain the tourism of France.

B. Multiple Choice Questions

1. The…… is the highest mountain range in Southern Africa, rising to 3,482 meters (11,420 ft) in height?

a. Drakensberg
b. Table Mountain
c. Alpes
d. None of these

2. A long and vigorous walk on the trail.

a. The glorious cost
b. City resort
c. Hiking
d. National park

3. The Garden Route is one of South Africa's most popular tourist attractions and is generally thought to stretch from Mossel Bay to St Francis along the Indian ocean and also includes parts of the inland.

a. Durban beaches
b. Knysna
c. Cape winelands
d. Blyden river

4. A large part of Provence, with Marseille as its leading city, was designed as the ……. European Capital of Culture.

a. 2014
b. 2015
c. 2013
d. 2011

5. …… is the fourth largest island in the Mediterranean Sea after Sicily, Sardinia and Cyprus.

a. French alps
b. Loire valley
c. Corsica
d. Paris

Answer

1. a 2. c 3. a 4. c 5. c

9.9 REFERENCES

- Hall, CM and Page, SJ. (2014). The Geography of Tourism and Recreation.UK and

New York: Routledge publishers.

- Sinha, P.C. (2005). Tourism Geography, New Delhi: Anmol Publication.
- International Atlas, Penguin Publication and DK Publication
- Boniface B. and Cooper C. (1987) The Geography of Travel and Tourism. London and England: Heinemann Professional Publisher.
- Rohinson H.|A.A. (1976). Geography of Tourism. London: Macdonaled and Evans.
- Gopal Singh. (2010). A Geography of India. Delhi: Atma Ram & Sons
- Eade, John. "Pilgrimage and tourism at Lourdes, France." Annals of Tourism Research 19.1 (1992): 18-32 online.
- Endy, Christopher. Cold war holidays: American tourism in France (U of North Carolina Press, 2004).
- Hughes, H.L. (1989). "Tourism and the arts". Tourism Management. 10 (2): 97–99. doi:10.1016/0261-5177(89)90050-2.
- Phelps, A (1986). "Holiday destination image: The problem of assessment—an example developed in Minorca". Tourism Management. 7 (3): 168–80. doi:10.1016/0261-5177(86)90003-8.
- Richardson, S.; Crompton, J. (1988). "Cultural variations in perceptions of vacation attributes". Tourism Management. 9 (2): 128–36. doi:10.1016/0261-5177(88)90022-2.
- Worldwide Destinations: The geography of travel and tourismbooks.google.co.in › books: Brian Boniface, ‎ Robyn Cooper, ‎ Chris Cooper · 2016
- World Geography of Travel and Tourism: A Regional Approachbooks.google.co.in › books: Alan A. Lew, ‎ Colin Michael Hall, ‎ Dallen J. Timothy · 2008

UNIT 10: TOURISM GEOGRAPHY (WORLD) – II

Structure

10.0 LEARNING OBJECTIVES

After studying this unit, you will be able to:

- State of Tourism of Egypt and Switzerland
- Explain about Major attractions of these countries
- List about the cultural aspects of countries

10.1 INTRODUCTION

Tourism geography is that branch of human geography that deals with the study of travel and its impact on places.

Geography is fundamental to the study of tourism, because tourism is geographical in nature. Tourism occurs in places, it involves movement and activities between places and it is an activity in which both place characteristics and personal self-identities are formed, through the relationships that are created among places, landscapes and people. Physical geography provides the essential background, against which tourism places are created and environmental impacts and concerns are major issues, that must be considered in managing the development of tourism places.

10.2 EGYPT

Figure 10.1 Egypt

Egypt has one of the longest histories of any country, tracing its heritage along the Nile Delta back to the 6th–4th millennia BCE. Considered a cradle of civilization, Ancient Egypt saw some of the earliest developments of writing, agriculture, urbanization, organized religion and central government. Iconic monuments such as the Giza Necropolis and its Great Sphinx, as well the ruins of Memphis, Thebes, Karnak, and the Valley of the Kings, reflect this legacy and remain a significant focus of scientific and popular interest. Egypt's long and rich cultural heritage is an integral part of its national identity, which has endured, and often assimilated, various foreign influences, including Greek, Persian, Roman, Arab, Ottoman Turkish, and Nubian. Egypt was an early and important centre of Christianity, but was largely Islamized in the seventh century and remains a predominantly Muslim country, albeit with a significant Christian minority.

From the 16th to the beginning of the 20th century, Egypt was ruled by foreign imperial powers: the Ottoman Empire and the British Empire. Modern Egypt dates back to 1922, when

it gained nominal independence from the British Empire as a monarchy. However, British military occupation of Egypt continued, and many Egyptians believed that the monarchy was an instrument of British colonialism. Following the 1952 revolution, Egypt expelled British soldiers and bureaucrats and ended British occupation, nationalized the British-held Suez Canal, exiled King Farouk and his family, and declared itself a republic. In 1958 it merged with Syria to form the United Arab Republic, which dissolved in 1961. Throughout the second half of the 20th century, Egypt endured social and religious strife and political instability, fighting several armed conflicts with Israel in 1948, 1956, 1967 and 1973, and occupying the Gaza Strip intermittently until 1967. In 1978, Egypt signed the Camp David Accords, officially withdrawing from the Gaza Strip and recognizing Israel. The country continues to face challenges, from political unrest, including the recent 2011 revolution and its aftermath, to terrorism and economic underdevelopment. Egypt's current government is a semi-presidential republic headed by President Abdel Fattah el-Sisi, which has been described by a number of watchdogs as authoritarian or heading an authoritarian regime.

Islam is the official religion of Egypt and Arabic is its official language. With over 100 million inhabitants, Egypt is the most populous country in North Africa, the Middle East, and the Arab world, the third-most populous in Africa (after Nigeria and Ethiopia), and the thirteenth-most populous in the world. The great majority of its people live near the banks of the Nile River, an area of about 40,000 square kilometers (15,000 sq mi), where the only arable land is found. The large regions of the Sahara desert, which constitute most of Egypt's territory, are sparsely inhabited. About half of Egypt's residents live in urban areas, with most spread across the densely populated Centre’s of greater Cairo, Alexandria and other major cities in the Nile Delta.

Egypt is considered to be a regional power in North Africa, the Middle East and the Muslim world, and a middle power worldwide. With one of the largest and most diversified economies in the Middle East, which is projected to become one of the largest in the world in the 21st century, Egypt has the third-largest economy in Africa, the world's 40th-largest economy by nominal GDP, and the 19-largest by PPP. Egypt is a founding member of the United Nations, the Non-Aligned Movement, the Arab League, the African Union, and the Organization of Islamic Cooperation.

Egypt lies primarily between latitudes 22° and 32°N, and longitudes 25° and 35°E. At 1,001,450 square kilometers (386,660 sq mi), it is the world's 30th-largest country. Due to the extreme aridity of Egypt's climate, population Centre’s are concentrated along the narrow Nile Valley and Delta, meaning that about 99% of the population uses about 5.5% of the total land area. 98% of Egyptians live on 3% of the territory.

Egypt is bordered by Libya to the west, the Sudan to the south, and the Gaza Strip and Israel to the east. Egypt's important role in geopolitics stems from its strategic position: a transcontinental nation, it possesses a land bridge (the Isthmus of Suez) between Africa and Asia, traversed by a navigable waterway (the Suez Canal) that connects the Mediterranean

Sea with the Indian Ocean by way of the Red Sea.

Apart from the Nile Valley, the majority of Egypt's landscape is desert, with a few oases scattered about. Winds create prolific sand dunes that peak at more than 30 metres (100 ft) high. Egypt includes parts of the Sahara desert and of the Libyan Desert. These deserts protected the Kingdom of the Pharaohs from western threats and were referred to as the "red land" in ancient Egypt.

Towns and cities include Alexandria, the second largest city; Aswan; Asyut; Cairo, the modern Egyptian capital and largest city; El Mahalla El Kubra; Giza, the site of the Pyramid of Khufu; Hurghada; Luxor; Kom Ombo; Port Safaga; Port Said; Sharm El Sheikh; Suez, where the south end of the Suez Canal is located; Zagazig; and Minya. Oases include Bahariya, Dakhla, Farafra, Kharga and Siwa. Protectorates include Ras Mohamed National Park, Zaranik Protectorate and Siwa.

On 13 March 2015, plans for a proposed new capital of Egypt were announced.

10.3 MAJOR ATTRACTIONS IN EGYPT

Major tourist destinations include the millennia-old monuments in the Nile Valley. Principal among them are the Pyramids and Great Sphinx at Giza, the Abu Simbel temples south of Aswan and the Karnak Temple Complex and Valley of the Kings near Luxor. Attractions in Cairo include the Cairo Museum and the Mosque of Muhammad Ali Pasha. The coast of the Sinai Peninsula has well-visited seaside resorts, in addition to Hurghada city on the Red Sea coast and the Famous El Gouna Resort 25 km Hurghada.

1. Giza, 20 km southwest of Cairo, has several remains from the 26th century BC such as temples and monuments to pharaohs including the Great Sphinx, and the Great Pyramids of Giza.
2. Saqqara, 30 km south of Cairo is a vast, ancient burial ground which served as the necropolis for the Ancient Egyptian capital of Memphis. It features numerous pyramids, including the world's oldest standing step pyramid, as well as a number of mastabas.
3. Luxor, about 500 km south of Cairo, is the site of the ancient city of Thebes. It includes the ruins of the temple complexes at Karnak and Luxor, which stand within the modern city. On the opposite side of the Nile River lie the monuments, temples and tombs on the West Bank Necropolis, which include the Valley of the Kings and Valley of the Queens.
4. Abu Simbel, about 850 km south of Cairo (near the Sudanese border) is an archaeological site comprising two massive rock temples originally carved out of a mountainside during the reign of Pharaoh Ramesses II (13th century BC). The complex was relocated in its entirety in the 1960s to avoid being submerged during the creation of Lake Nasser. They are now situated on an artificial hill made from a domed structure high above the Aswan High Dam reservoir.

5. Alexandria is a main summer resort, due to its beaches, ancient history and Museums, especially the Bibliotheca Alexandrina, a modern project based on reviving the ancient Library of Alexandria.
6. Sinai Peninsula- Sinai has the beach resorts of Sharm el-Sheikh, Dahab, Nuweiba and Taba as well as locations mentioned in the Bible such as Mount Sinai ("Jabal Musa"). Saint Catherine's Monastery may be the oldest working Christian monastery in the world.
7. Ain Sukhna, about 110 km east of Cairo has a number of beach resorts.
8. Assiut:in south of Egypt has historic buildings from the time of the pharaohs and ancient mosques.
9. Hurghada and El Gouna resort on the Red Sea Coast, 25 km from Hurghada International Airport, are both famous for their beaches, snorkeling and diving,[citation needed] and El Gouna is famous for its nightlife

10.4 SWITZERLAND

Figure 10.2

Switzerland, officially the Swiss Confederation, is a country situated at the confluence of Western, Central, and Southern Europe. It is a federal republic composed of 26 cantons, with federal authorities based in Bern. Switzerland is a landlocked country bordered by Italy to the south, France to the west, Germany to the north, and Austria and Liechtenstein to the east. It

is geographically divided among the Swiss Plateau, the Alps, and the Jura, spanning a total area of 41,285 km2 (15,940 sq mi), and land area of 39,997 km2 (15,443 sq mi). While the Alps occupy the greater part of the territory, the Swiss population of approximately 8.5 million is concentrated mostly on the plateau, where the largest cities and economic Centre's are located, among them Zürich, Geneva and Basel, where multiple international organizations are domiciled (such as FIFA, the UN's second-largest Office, and the Bank for International Settlements) and where the main international airports of Switzerland are.

The establishment of the Old Swiss Confederacy dates to the late medieval period, resulting from a series of military successes against Austria and Burgundy. Swiss independence from the Holy Roman Empire was formally recognized in the Peace of Westphalia in 1648. The Federal Charter of 1291 is considered the founding document of Switzerland which is celebrated on Swiss National Day. Since the Reformation of the 16th century, Switzerland has maintained a strong policy of armed neutrality; it has not fought an international war since 1815 and did not join the United Nations until 2002. Nevertheless, it pursues an active foreign policy and is frequently involved in peace-building processes around the world. Switzerland is the birthplace of the Red Cross, one of the world's oldest and best-known humanitarian organizations, and is home to numerous international organizations, including the United Nations Office at Geneva, which is its second-largest in the world. It is a founding member of the European Free Trade Association, but notably not part of the European Union, the European Economic Area or the Eurozone. However, it participates in the Schengen Area and the European Single Market through bilateral treaties.

Switzerland occupies the crossroads of Germanic and Romance Europe, as reflected in its four main linguistic and cultural regions: German, French, Italian and Romansh. Although the majority of the population are German-speaking, Swiss national identity is rooted in a common historical background, shared values such as federalism and direct democracy, and Alpine symbolism. On coins and stamps, the Latin name, Confoederatio Helvetica – frequently shortened to "Helvetia" – is used instead of the four national languages.

The sovereign state is one of the most developed countries in the world, with the highest nominal wealth per adult and the eighth-highest per capita gross domestic product. It ranks at or near the top in several international metrics, including economic competitiveness and human development. Zürich, Geneva and Basel have been ranked among the top ten cities in the world in terms of quality of life, with Zürich ranked second globally. In 2019, IMD placed Switzerland first in attracting skilled workers. The World Economic Forum ranks it the 5th most competitive country globally.

Extending across the north and south side of the Alps in west-central Europe, Switzerland encompasses a great diversity of landscapes and climates on a limited area of 41,285 square kilometers (15,940 sq mi). The population is about 8 million, resulting in an average population density of around 195 people per square kilometer (500/sq mi). The more mountainous southern half of the country is far more sparsely populated than the northern

half.[56] In the largest Canton of Graubünden, lying entirely in the Alps, population density falls to 27 /km² (70 /sq mi).

Switzerland lies between latitudes 45° and 48° N, and longitudes 5° and 11° E. It contains three basic topographical areas: the Swiss Alps to the south, the Swiss Plateau or Central Plateau, and the Jura mountains on the west. The Alps are a high mountain range running across the central-south of the country, constituting about 60% of the country's total area. The majority of the Swiss population live in the Swiss Plateau. Among the high valleys of the Swiss Alps many glaciers are found, totaling an area of 1,063 square kilometers (410 sq mi). From these originate the headwaters of several major rivers, such as the Rhine, Inn, Ticino and Rhône, which flow in the four cardinal directions into the whole of Europe. The hydrographic network includes several of the largest bodies of freshwater in Central and Western Europe, among which are included Lake Geneva (also called le Lac Léman in French), Lake Constance (known as Bodensee in German) and Lake Maggiore. Switzerland has more than 1500 lakes, and contains 6% of Europe's stock of fresh water. Lakes and glaciers cover about 6% of the national territory. The largest lake is Lake Geneva, in western Switzerland shared with France. The Rhône is both the main source and outflow of Lake Geneva. Lake Constance is the second largest Swiss lake and, like the Lake Geneva, an intermediate step by the Rhine at the border to Austria and Germany. While the Rhône flows into the Mediterranean Sea at the French Camargue region and the Rhine flows into the North Sea at Rotterdam in the Netherlands, about 1,000 kilometers (620 miles) apart, both springs are only about 22 kilometers (14 miles) apart from each other in the Swiss Alps.

Forty-eight of Switzerland's mountains are 4,000 metres (13,000 ft) above sea in altitude or higher. At 4,634 m (15,203 ft), Monte Rosa is the highest, although the Matterhorn (4,478 m or 14,692 ft) is often regarded as the most famous. Both are located within the Pennine Alps in the canton of Valais, on the border with Italy. The section of the Bernese Alps above the deep glacial Lauterbrunnen valley, containing 72 waterfalls, is well known for the Jungfrau (4,158 m or 13,642 ft) Eiger and Mönch, and the many picturesque valleys in the region. In the southeast the long Engadin Valley, encompassing the St. Moritz area in canton of Graubünden, is also well known; the highest peak in the neighbouring Bernina Alps is Piz Bernina (4,049 m or 13,284 ft).

The more populous northern part of the country, constituting about 30% of the country's total area, is called the Swiss Plateau. It has greater open and hilly landscapes, partly forested, partly open pastures, usually with grazing herds, or vegetables and fruit fields, but it is still hilly. There are large lakes found here and the biggest Swiss cities are in this area of the country.

Within Switzerland there are two small enclaves: Büsingen belongs to Germany, Campione d'Italia belongs to Italy. Switzerland has no exclaves in other countries.

The Swiss climate is generally temperate, but can vary greatly between the localities, from glacial conditions on the mountaintops to the often pleasant near Mediterranean climate at

Switzerland's southern tip. There are some valley areas in the southern part of Switzerland where some cold-hardy palm trees are found. Summers tend to be warm and humid at times with periodic rainfall so they are ideal for pastures and grazing. The less humid winters in the mountains may see long intervals of stable conditions for weeks, while the lower lands tend to suffer from inversion, during these periods, thus seeing no sun for weeks.

A weather phenomenon known as the föhn (with an identical effect to the chinook wind) can occur at all times of the year and is characterized by an unexpectedly warm wind, bringing air of very low relative humidity to the north of the Alps during rainfall periods on the southern face of the Alps. This works both ways across the alps but is more efficient if blowing from the south due to the steeper step for oncoming wind from the south. Valleys running south to north trigger the best effect. The driest conditions persist in all inner alpine valleys that receive less rain because arriving clouds lose a lot of their content while crossing the mountains before reaching these areas. Large alpine areas such as Graubünden remain drier than pre-alpine areas and as in the main valley of the Valais wine grapes are grown there.

The wettest conditions persist in the high Alps and in the Ticino canton which has much sun yet heavy bursts of rain from time to time. Precipitation tends to be spread moderately throughout the year with a peak in summer. Autumn is the driest season, winter receives less precipitation than summer, yet the weather patterns in Switzerland are not in a stable climate system and can be variable from year to year with no strict and predictable periods.

Tourism begins with British mountaineers climbing the main peaks of the Bernese Alps in the early 19th century (Jungfrau 1811, Finsteraarhorn 1812). The Alpine Club in London was founded in 1857. Reconvalescence in the Alpine climate, in particular from Tuberculosis, is another important branch of tourism in the 19th and early 20th centuries for example in Davos, Graubünden. Due to the prominence of the Bernese Alps in British mountaineering, the Bernese Oberland was long especially known as a tourist destination. Meiringen's Reichenbach Falls achieved literary fame as it was the site of the fictional death of Sir Arthur Conan Doyle's Sherlock Holmes (1893). The first organized tourist holidays to Switzerland were offered during the 19th century by the Thomas Cook and Lunn Travel companies.

Official statistics of tourism were planned since 1852, but were only realized from 1934, and continued until 2003. Since 2004, the Federal Statistical Office had discontinued its own statistics, but collaborates with Switzerland Tourism in the publication of yearly "Swiss Tourism Figures". In the year 2011 as a total number of 4,967 registered hotels or hostels, offering a total of 240,000 beds in 128,000 rooms. This capacity was saturated to 41.7% (compared to 39.7% in 2005), amounting to a total of 38.8 million lodging nights. 14% of hotels were in Grisons, 12% each in the Valais and Eastern Switzerland, 11% in Central Switzerland and 9% in the Bernese Oberland. The ratio of lodging nights in relation to resident population ("tourism intensity", a measure for the relative importance of tourism to local economy) was largest in Grisons (8.3) and Bernese Oberland (5.3), compared to a Swiss average of 1.3. 56.4% of lodging nights were by visitors from abroad (broken down by

nationality: 16.5% Germany, 6.3% United Kingdom, 4.8% United States, 3.6% France, 3.0% Italy).

The total financial volume associated with tourism, including transportation, is estimated to CHF 35.5 billion (as of 2010) although some of this comes from fuel tax and sales of motorway vignettes. The total gross value added from tourism is 14.9 billion. Tourism provides a total of 144,838 full time equivalent jobs in the entire country. The total financial volume of tourist lodging is 5.19 billion CHF and eating at the lodging provides an additional 5.19 billion. The total gross value added of 14.9 billion is about 2.9% of Switzerland's 2010 nominal GDP of 550.57 billion CHF.

10.5 MAJOR ATTRACTIONS IN SWITZERLAND

Known for its mountains, clocks, chocolate, cheese, and political neutrality, Switzerland's picturesque alps are a storybook place to visit. The country has some unique features to it, like the fact that it has three national languages. Depending on the region of Switzerland, tourists will find French, Italian, and German being spoken. Though there is no Swiss language, a dialect of German, called Swiss German, is often spoken by those near the German border. Here are some of the top tourist attractions in Switzerland for tourists planning a Swiss trip.

Zytglogge

The clock tower gate in Bern is the oldest city gate in town, and is a great historical site. The gate was built in the 1100s, and the clock that graces the tower is one of the most spectacular and oldest clocks that can be visited anywhere in the world. Built in 1530, this clock was the city's master clock for centuries. The Baroque style with gold accents is a beautiful picture for both amateur and professional photographers. The tower boasts an astronomical clock, figurines, hour chimes, and two tower clocks that are all driven by a single central mechanism. This is one of the items that have secured Switzerland as one of the premiere clockmaking regions in the world.

Bernina Express

The Bernina Express is a brightly colored scarlet train that crosses the Alps beginning in the town of Chur and ends in Tirano, just across the border in northern Italy. Arguable the most scenic Swiss train ride, the route takes about 4hours, and goes over 196 bridges and through 55 tunnels. Views of glaciers and mountain peaks and towns, bridges spanning across 60 meter (200 foot) drops and many more breathtaking sights are speeding by outside of the train, while porters bring snacks and drinks directly to your seat. This is not a trip to miss.

Chapel Bridge

The Chapel Bridge is a 204 meter (670 foot) long bridge crossing the Reuss River in the city of Lucerne. It is the oldest wooden covered bridge in Europe, and one of main tourist attractions in Switzerland. The covered bridge, constructed in 1333, was designed to help protect the city of Lucerne from attacks. Inside the bridge are a series of paintings from the

17th century, depicting events from Luzerne's history. Much of the bridge, and the majority of these paintings, were destroyed in a 1993 fire, though it was quickly rebuilt.

Jungfraujoch

The Jungfraujoch is a col in the Bernese Alps accessible by railway, ending at Europe's highest mountain station. Highlights include views of spectacular mountain summits like the Eiger, Monch, and Jungfrau, and views of the large Eiger Glacier that nestles below them. The Sphinx observatory, one of the highest astronomical sighting stations in the world, is located here as well. Views are endless and pristine, though amenities are small. There is no place to stay overnight, and just a handful of restaurants. The train trip to visit for a day and the experience are, however, unforgettable.

Chateau de Chillon

Chillon Castle (Château de Chillon) is located on the shores of Lake Geneva. For over four centuries, the water castle was the main fortress that monitored water freight on the lake, and guarded the land route to St Bernhard Pass. The castle boasts art from the 14th century, subterranean vaults, 25 separate buildings with three courtyards, and two circular walls. Hundreds of thousands of guests each year tour the castle. For those who dream of the ultimate big fairy tale wedding, the castle can be privately rented for personal events.

Matterhorn

The famous Matterhorn is an iconic emblem of the Swiss Alps. The mountain derives its name from the German words Matte, meaning meadow, and Horn, which means peak. With its 4,478 meters (14,692 ft) high summit, lying on the border between Switzerland and Italy, it is one of the highest peaks in the Alps. It is also one of the deadliest peaks in the Alps. From the first time it was climbed in 1865 to 1995, 500 alpinists have died on it. The Matterhorn's faces are steep, and only small patches of snow and ice cling to them while regular avalanches send the snow down to accumulate on the glaciers at the base of each face.

10.6 SUMMARY

- Tourism is one of the most important sectors in Egypt's economy. More than 12.8 million tourists visited Egypt in 2008, providing revenues of nearly $11 billion. The tourism sector employs about 12% of Egypt's workforce. Tourism Minister Hisham Zaazou told industry professionals and reporters that tourism generated some $9.4 billion in 2012, a slight increase over the $9 billion seen in 2011.
- The Giza Necropolis is one of Egypt's best-known tourist attractions; it is the only one of the Seven Wonders of the Ancient World still in existence.
- Egypt's beaches on the Mediterranean and the Red Sea, which extend to over 3,000 kilometers (1,900 miles), are also popular tourist destinations; the Gulf of Aqaba beaches, Safaga, Sharm el-Sheikh, Hurghada, Luxor, Dahab, Ras Sidr and Marsa Alam are popular sites.

- Tourism begins with British mountaineers climbing the main peaks of the Bernese Alps in the early 19th century (Jungfrau 1811, Finsteraarhorn 1812). The Alpine Club in London was founded in 1857. Reconvalescence in the Alpine climate, in particular from Tuberculosis, is another important branch of tourism in the 19th and early 20th centuries for example in Davos, Graubünden. Due to the prominence of the Bernese Alps in British mountaineering, the Bernese Oberland was long especially known as a tourist destination. Meiringen's Reichenbach Falls achieved literary fame as it was the site of the fictional death of Sir Arthur Conan Doyle's Sherlock Holmes (1893).
- The first organized tourist holidays to Switzerland were offered during the 19th century by the Thomas Cook and Lunn Travel companies.

10.7 KEYWORDS

- **Dark Tourism** − (Black or Grief tourism) It is the tourism involving travel to places historically associated with death and tragedy.
- **Destination** − It is a place the tourist visits and stays there for at least 24 hours. The destination supports staying facilities, attractions, and tourist resources.
- **Ecotourism** − It involves maintenance and enhancement of natural systems such as water, air, woods and forests, and flora and fauna through tourism.
- **Excursionist** − Persons traveling for pleasure in a period less than 24 hours
- **Foreign Tourist** − Any person visiting a country, other than that in which he/she usually resides, for a period of at least 24 hours.

10.8 LEARNING ACTIVITY

1. Learn and discuss about the geographical representation of these countries.

_____

_____

2. Discuss about average footfall these countries received on tourism aspects.

_____

_____

10.9 UNIT END QUESTIONS

A. Descriptive Type Questions

1. Explain the word tourist.
2. Discuss about Egypt and Switzerland geography.

3. Do you know the famous tourist destinations of Egypt? List out any 5.
4. Discuss the famous tourist's destination of Switzerland?
5. Explain the significance of Giza pyramid?

B. Multiple Choice Questions

1. It is a physical or cultural feature of a place that can satisfy tourists' leisure based need.
    a. Attraction
    b. Distraction
    c. Consumption
    d. None of these

2. The clock tower gate in Bern is the oldest city gate in town, and is a great historical site.
    a. Bernina Express
    b. Zytglogge
    c. Chapel Bridge
    d. Jungfraujoch

3. ……., about 110 km east of Cairo has a number of beach resorts in Egypt.
    a. Ain Sukhna
    b. Assiut:i
    c. Sinai Peninsula
    d. Alexandria

4. There are more than 70 pyramids along the Nile, with ……. pyramids of Giza being the best-known.
    a. 5
    b. 3
    c. 2
    d. 1

5. The famous …… is an iconic emblem of the Swiss Alps. The mountain derives its name from the German words Matte, meaning meadow, and Horn, which means peak.
    a. Chateau de chillon
    b. Chapel Bridge
    c. Jungfraujoch
    d. Matterhorn

Answer

1.a 2.b 3.a 4.b 5. d

10.10 REFERENCES

- Hall, CM and Page, SJ. (2014). The Geography of Tourism and Recreation.UK and New York: Routledge publishers.
- Sinha, P.C. (2005). Tourism Geography, New Delhi: Anmol Publication.
- International Atlas, Penguin Publication and DK Publication
- Boniface B. and Cooper C. (1987) The Geography of Travel and Tourism. London and England: Heinemann Professional Publisher.
- Rohinson H.|A.A. (1976). Geography of Tourism. London: Macdonaled and Evans.
- Gopal Singh. (2010). A Geography of India. Delhi: Atma Ram & Sons

- Christophe Clivaz, Tourisme d'hiver, le défi climatique [literally, "Winter tourism, the climate challenge"], Presses polytechniques et universitaires romandes, collection "Le Savoir suisse", 144 pages, 2015 (ISBN 9782889151516).
- Tourism in German, French and Italian in the online Historical Dictionary of Switzerland.
- Costa, P (1991). "Managing tourism carrying capacity of art cities". The Tourist Review. 46 (4): 8–11. doi:10.1108/eb058076.
- Garlick, S (2002). "Revealing the unseen: Tourism, art and photography". Cultural Studies. 16 (2): 289–305. doi:10.1080/09502380110107599. S2CID 143902911.

- Worldwide Destinations: The geography of travel and tourismbooks.google.co.in › books: Brian Boniface, ‎ Robyn Cooper, ‎ Chris Cooper · 2016
- World Geography of Travel and Tourism: A Regional Approachbooks.google.co.in › books: Alan A. Lew, ‎ Colin Michael Hall, ‎ Dallen J. Timothy · 2008

UNIT 11: TOURISM GEOGRAPHY (WORLD) – III

Structure

11.0 LEARNING OBJECTIVE

After studying this unit, you will be able to:

- Explain about Tourism of Malaysia & New Zealand
- State about Major attractions in these destinations
- Explain about the cultural aspects of Countries

11.1 INTRODUCTION

Tourism has turned out to be an economic booster contributing to the economic development of many countries over the last few decades. People see holidays as a necessity, and not as luxury in the present scenario. Tourism calls for coordination and cooperation between travel agents, tour operators, and tourists. Tourism has a few major elements − destinations, attractions, sites, accommodation, and all ancillary services.

Tourism Management is a complex sector involving a wide range of economic operations. Tourism supply is one of the operations. It is highly reliable on the natural, artificial or man-made, operating, as well as the regulatory components involved in creating the tourism product. The supply elements are geographically confined to a fixed place hence, the stake holding businesses need to provide products and services by putting costs and anticipating promotion of their individual products and revenue.

It influences an entire tour right from starting the tour up to ending it gracefully and satisfactorily. Let us see what it is and what makes it a bundle of tourists' satisfaction.

11.2 MALAYSIA

Figure 11.1 Malaysia

Malaysia, country of Southeast Asia, lying just north of the Equator, that is composed of two noncontiguous regions: Peninsular Malaysia (Semenanjung Malaysia), also called West Malaysia (Malaysia Barat), which is on the Malay Peninsula, and East Malaysia (Malaysia Timur), which is on the island of Borneo. The Malaysian capital, Kuala Lumpur, lies in the western part of the peninsula, about 25 miles (40 km) from the coast; the administrative centre, Putrajaya, is located about 16 miles (25 km) south of the capital.

Malaysia, a member of the Commonwealth, represents the political marriage of territories that were formerly under British rule. When it was established on September 16, 1963, Malaysia comprised the territories of Malaya (now Peninsular Malaysia), the island of Singapore, and the colonies of Sarawak and Sabah in northern Borneo. In August 1965 Singapore seceded from the federation and became an independent republic.

People

The people of Malaysia are unevenly distributed between Peninsular and East Malaysia, with the vast majority living in Peninsular Malaysia. The population shows great ethnic, linguistic, cultural, and religious diversity. Within this diversity, a significant distinction is made for administrative purposes between indigenous peoples (including Malays), collectively called bumiputra, and immigrant populations (primarily Chinese and South Asians), called non-bumiputra.

Ethnic groups and languages

The Malay Peninsula and the northern coast of Borneo, both situated at the nexus of one of the major maritime trade routes of the world, have long been the meeting place of peoples from other parts of Asia. As a result, the population of Malaysia, like that of Southeast Asia as a whole, shows great ethnographic complexity. Helping to unite this diversity of peoples is the national language, a standardized form of Malay, officially called Bahasa Malaysia (formerly Bahasa Melayu). It is spoken to some degree by most communities, and it is the main medium of instruction in public primary and secondary schools.

Peninsular Malaysia

In general, peninsular Malaysians can be divided into four groups. In the order of their appearance in the region, these include the various Orang Asli ("Original People") aboriginal peoples, the Malays, the Chinese, and the South Asians. In addition, there are small numbers of Europeans, Americans, Eurasians, Arabs, and Thai. The Orang Asli constitute the smallest group and can be classified ethnically into the Jakun, who speak a dialect of Malay, and the Semang and Senoi, who speak languages of the Mon-Khmer language family.

Cultural milieu

Malaysia is a point of convergence of several major cultural traditions that stem from archipelagic Southeast Asia as well as from China, South Asia, the Middle East, and the West. Malay culture, the Orang Asli cultures of Peninsular Malaysia, and many of the cultures of East Malaysia are indigenous to the area. In the first one and a half millennia CE, indigenous Malay culture in the Malay Peninsula and in other parts of Southeast Asia was strongly marked by pre-Islamic Indian and early Islamic influences. Indian contact with the Malay Peninsula, which extended from about the 2nd or 3rd century to the late 14th century, exerted a profound influence on religion (through Hinduism and Buddhism), art, and literature. Islam, introduced to Malacca (now Melaka) in the 15th century, soon became the dominant religion of the Malays. Western cultural influences, especially since the 19th century, also have affected many aspects of Malay life, particularly in the realms of technology, law, social organization, and economics. Contemporary Malay culture is thus multifaceted, consisting of many strands—indigenous, early Hindu, early and modern Islamic, and, especially in the cities, Western—interwoven to yield a pattern that is distinct from other cultures yet recognizably Malay.

The early Chinese traders who settled in Malacca and on the island of Penang were partially assimilated (at least to the extent of adopting the Malay language). By contrast, the Chinese who emigrated in large numbers to the Malay Peninsula in the late 19th and early 20th centuries were both a more heterogeneous group and a largely transient population that tended to establish self-contained communities. Chinese cultural influence in this region, then, has been less pronounced.

Most of the Indians and Pakistanis originally came as labourers to work in the coffee and rubber plantations from the mid-19th to the early 20th centuries. Like the Chinese, they also were mainly transients (until World War II), living in closed communities and remaining relatively unassimilated.

The communities of Malaysia have been affected profoundly by British colonial rule and Western cultural influences, especially in education and institutional forms. The rural areas—particularly in eastern Peninsular Malaysia and in the interior of East Malaysia—have been least affected, while the cities have been the focus of the most-rapid cultural changes. However, extraordinary economic growth and development since the mid-20th century increasingly has allowed a cosmopolitan outlook, carried largely from the urban Centre's by

an expanding middle class, to penetrate smaller towns and even newer rural settlements.

Daily life and social customs

Malaysia has a rich cultural life, much of which revolves around the traditional festivities of its diverse population. The major Muslim holidays are Hari Raya Puasa ("Holiday of Fasting"), or Aidilfitri (ʿ Īd al-Fiṭ r), to celebrate the end of the fasting month of Ramadan, and Hari Raya Haji ("Holiday of the Pilgrimage"), or Aidiladha (ʿ Īd al-Aḍ ḥ ā), to celebrate the culmination of the season of pilgrimage to Mecca. Buddhists honour the life of the Buddha on Hari Wesak ("Wesak Day"), and Chinese Malaysians celebrate Chinese New Year. Deepavali (Diwali), a Hindu festival of lights spanning several days, is observed by many Indian Malaysians, while Christmas is the principal holiday of the Christian community. On most of these holidays, it is customary to host an "open house," where guests are treated to Malaysian delicacies and hospitality. A holiday that spans all ethnic groups and religions is Hari Kebangsaan (National Day), a celebration of Malaysia's independence on August 31.

The states have their own holidays. Sarawak, for instance, celebrates Gawai Dayak ("Dayak Festival"). Rooted in the harvest rituals and festivities (gawai) of the Iban and Bidayuh peoples, this holiday broadly honours the state's non-Malay indigenous heritage.

Beyond the official holidays and other religious festivities, important life events such as birth, circumcision (for young Muslim men), and marriage are usually celebrated by a feast, known in Malay as kenduri. The wedding ceremony is generally the most important and elaborate of such events among both Malay and non-Malay peoples. In rural areas the kenduri is normally held at the house of the host family, while in urban areas the feast often takes place in a large hall or hotel.

Malaysian cuisines reflect the mixture of ethnic groups in the country's population. The three most prominent cuisines are Chinese, Indian, and Malay. Popular Chinese foods include sweet-and-sour Cantonese dishes and a milder favourite, Hainanese chicken rice. Indian cuisine ranges from the hot vegetarian dishes of southern Indian cooking to the more subtly spiced Muslim Indian food to the yogurt-marinated meats of tandoori cookery from northern India. All these foods, while recognizably Chinese or Indian, have developed a distinctly Malaysian character.

Traditional Malay cuisine consists of white rice served with various curries and fried dishes. Sate, small skewers of chicken or beef dipped in a spicy peanut sauce, nasi goreng ("fried rice"), and nasi lemak ("fatty rice"), which is coconut rice served with fried anchovies, peanuts, and a curry dish, are among the most common Malay foods. Noodles, cooked and served in various styles, are also local favourites.

Non-Muslim indigenous peoples of Peninsular and East Malaysia typically eat a staple food such as rice, tapioca, or sago served with locally grown or gathered vegetables (e.g., ferns and tapioca leaves) and fish, wild boar, venison, or other game. The food is generally not spicy or only mildly so.

Cultural institutions

The history and cultural life of Malaysia are exhibited primarily in various museums in Kuala Lumpur and several state capitals throughout the country. Built in a Malay architectural style in 1963, the National Museum in Kuala Lumpur houses a diverse archaeological and ethnographic collection that documents Malaysia's social, cultural, artistic, and economic history. The Perak Museum in Taiping is the oldest museum in Peninsular Malaysia and contains collections of the natural history and material culture of the region. The Penang Museum and Art Gallery highlights Penang Island's immigrant and colonial history. In East Malaysia, the Sabah Museum in Kota Kinabalu and the Sarawak Museum in Kuching, both established in the late 19th century, chronicle the unique prehistory and history of these states and their peoples.

In addition to the broadly ethnographic or historical museums, there also are numerous institutions dedicated to the documentation of particular Malaysian phenomena. The Islamic Arts Museum in Kuala Lumpur, for instance, traces the advent and growth of the art and culture of Islam in Malaysia from the 7th century to contemporary times. Other such topical museums include a numismatic museum, a museum of telecommunications, and an armed forces museum, all located in the capital city.

Malaysia is home to many art galleries and theatres for the performing arts as well. The National Art Gallery has permanent exhibitions of modern paintings by Malaysian artists and rotating exhibitions of art from around the world. Plays, dances, and musical productions by Malaysian and international performers are staged regularly at the grand national theatre, called the Istana Budaya ("Palace of Cultures and Arts"), in Kuala Lumpur.

Sports and recreation

Sports in Malaysia are a mixture of traditional and Western games. From the mid-19th century, British expatriates introduced football (soccer), cricket, track and field events, and rugby to the peninsula; they formed a number of clubs and organized competitions. The Malaysia Cup (formerly the H.M.S. Malaya Cup), first contested in 1921, is the country's premier football competition.

Traditional sports also enjoy local popularity. Top-spinning (main gasing) competitions are seriously contested, with winning tops often spinning for well over an hour. In some areas, top spinning is not merely a random pastime but is associated with the agricultural cycle. Kite flying also is a favourite activity, as are bird-singing contests, which may feature hundreds of birds, all with unique songs. Sepak takraw ("kick ball") is a uniquely Southeast Asian game (now played in other regions) that is similar to volleyball but is played with a woven rattan ball and without using the hands. The sport is internationally competitive, and Malaysia has fronted winning teams.

Malaysia made its debut at the Summer Olympic Games in Melbourne in 1956. At the 1992 and 1996 Summer Games the country took medals in men's badminton. Malaysia was one of the founders of the biennial Southeast Asian Games and has hosted the event several times since its inception in 1957.

11.3 MAJOR ATTRACTION IN MALAYSIA

Malaysia is a multicultural country with much to offer visitors—regardless of their budget or what their idea of fun might be. Kuala Lumpur, the country's capital, is a cosmopolitan city with amazing shopping and stunning architecture—within blocks, you'll find both the ultramodern Petronas Towers and a number of colonial palaces and buildings.

Just a short drive away from the capital, there are islands, mountains, and record-breaking caves, as well as countless temples and a unique chance to explore the fauna-rich jungle of Borneo.

Malaysia is also a popular destination for snorkeling and scuba diving, with beautiful coral reefs and soft sandy beaches that regularly make top destinations lists.

For more ideas on how to spend your time, see our list of top tourist attractions in Malaysia.

Petronas Twin Towers, Kuala Lumpur

The tallest twin towers in the world, the Petronas reach an impressive 452 meters high up into the clouds. The towers are 88 floors tall and have an impressive total of 76 elevators.

Built using reinforced concrete, steel, and glass, the two towers are connected to each other by a double skybridge on the 41st and 42nd floors. Visitors can make their way up here for stunning views of KL and the 6.9-hectare KLCC Park below—the views are particularly impressive at night.

While most of the floors on the towers are rented to companies—IBM, Microsoft, and Huawei Technologies all have offices here—the bottom floors of the towers are reserved for Suria KLCC, one of the largest shopping centers in Malaysia. With over 300 stores, an art gallery, and even space for a Philharmonic Hall, this retail and entertainment space will keep visitors occupied for hours.

Batu Caves, Selangor

Located less than an hour outside Kuala Lumpur, the Batu Caves complex consists of three main caves plus a series of smaller ones, most of them containing statues and 100-year-old shrines dedicated to Hindu gods.

The main cave, known as Cathedral Cave, is at the top of a massive colorful staircase—make it all the way up the 272 steps, and you'll find a space decorated with statues, altars, and lights. At the bottom of the stairs, a 43-meter-tall gold statue of Lord Murugan welcomes visitors.

Visitors are allowed to explore the caves on their own or can join a guided tour to learn more about the caves. During the Hindu festival of Thaipusam in January, thousands of people flock to the cave for the celebrations.

Mount Kinabalu, Sabah

At just over 4,000 meters high, Mount Kinabalu is the tallest mountain in Malaysia. The mountain is part of Kinabalu Park, one of the oldest national parks in Malaysia and a UNESCO World Heritage Site. Because of its unique ecosystem mixing alpine meadows, grasslands, and shrublands, Kinabalu is home to an impressive range of both plant and animal

species, including the threatened orangutans.

Mount Kinabalu is a major destination for climbers—but summiting here can be tricky. Only 185 climb permits are issued daily by the park, and visitors must make accommodation reservations and hire a mountain guide in advance in order to be allowed to hit the trails. Although people under 16 are allowed to join climbing groups, there are restrictions in place.

Climbers should plan a stay at the Kinabalu National Park before attempting the climb—since the park itself is already at an altitude of over 1,800 meters, this will allow for acclimatization before attempting to reach the peak.

Perhentian Islands

Once a stopping point used by traders traveling around Southeast Asia, this group of small islands is part of a marine park and has become a major tourist destination in northeastern Malaysia. Most of the islands can be accessed by either ferry or small motorized boats, although only the two larger islands offer accommodations, shops, and amenities—of these two, Pulau Perhentian Besar has more of a backpacking scene, while Pulau Perhentian Kecil is a little more upscale and family-oriented.

While you can hop on a water taxi to move from one beach to the next here, it's also possible to follow the island's walking trails instead—a much-recommended option as you get to trek through jungle paths and get open stunning views of the water along the way.

Scuba diving, snorkeling, and kayaking are popular activities here, but visitors can also volunteer in turtle conservation programs and get unique access to the areas where turtles come to lay eggs.

Sipadan Island

Sipadan Island and its surrounding ocean waters are part of the world's richest marine habitat, home to endangered hawksbill turtles, whale sharks, monitor lizards, and hundreds of coral species. The island is also considered one of the best diving destinations in the world and is fiercely protected—visiting requires a permit in advance and only 120 permits are given out per day.

Reaching the island requires an hour-long ride on a speed boat. Once here, the island can be easily explored on foot, with different beaches and reef sites within minutes of each other.

Since it's no longer possible to stay on the island because of environmental protection laws (the nearby Mabul Island offers accommodations), visitors usually come here early in the morning as part of snorkeling and diving tours. All visitors must leave the island by 3pm.

Gunung Mulu National Park, Sarawak

This UNESCO World Heritage Site might be more famous for its impressive karst limestone pinnacles that resemble people standing in large formations, but the park's massive caves are just as stunning.

Thick rain forest covers most of the park and makes some areas difficult to access—one of the reasons some of the caves here weren't really explored until the 1970s. Another reason is how massive the cave systems are: both the largest passage and the largest underground

chamber in the world are located in caves here.

Deer Cave is particularly beautiful, with ceilings over 122 meters tall, waterfalls cascading through the rocks, and an opening over a sinkhole that's over one kilometer wide. Visitors to the park can also trek up to the Sarawak Chamber and Paku Waterfall or try a climb up on The Pinnacles Summit Trek, which takes three days and involves ropes, ladders, and an arduous walk through the jungle.

Penang Hill

The top of Penang Hill can be reached via the Penang Hill Railway, an air-conditioned funicular that makes the 2,007-meter-long climb up in five to 10 minutes. Although there are mid-stops between the base station and the highest point, these are done only on request and mostly used by residents who live at those stops.

The top of Penang Hill offers beautiful green views over the city and is home to the Habitat Penang Hill, with a 1.6-kilometer nature trail cutting through the rain forest and a number of tropical gardens; a canopy walks 40 meters up in the sky; ziplines; and the Skyway, which offers three viewing decks and a 360-degree view of the bay and islands.

Sepilok Orangutan Rehabilitation Centre, Sandakan

The Sepilok Orangutan Rehabilitation Center was founded in 1964 to help orphaned orangutan babies rescued from the pet trade or saved from illegal hunting. The center's main goal is to help these orangutans learn how to survive in the wild (in fact, replacing what they would usually learn from their mothers), so they can be eventually released into the Kabili-Sepilok Forest Reserve, which is covered in virgin forest and extends for 4,300 hectares around the rescue center. Over 80 orangutans currently live free in the reserve.

While visitors cannot interact with the animals or approach them, they can come to the center to learn more about orangutans and the challenges they face today, see the nursery and the climbing area through a glass window, and attend feeding times (seen from a platform) twice a day.

The boardwalk that cuts through the center offers plenty of opportunities to explore and see the orangutans playing and jumping around on the trees nearby.

Kek Lok Si Temple, George Town

Malaysia's largest Buddhist temple sits on a hill, at the bottom of Air Itam mountain. As Asian temples go, Kek Lok Si is relatively new, as construction began in 1890—but the massive seven-story Pagoda surrounded by 10,000 Buddha statues make this a striking destination that can't be missed.

Surrounded by gardens, fish ponds, prayer halls, and a number of stalls selling both religious and secular souvenirs, the pagoda is also home to a 36-meter-tall statue of Kwan Yin, the Buddhist goddess of mercy.

The temple attracts many visitors from all around Southeast Asia who come here to "make merits" but also to see one of the most important pilgrimage sites in the area. Chinese New Year celebrations are particularly beautiful at the temple, as the entire space is decorated with

thousands of lanterns.

Langkawi SkyCab, Kedah

The Langkawi cable car makes a 2.2-kilometer trip between the Base Station and the top of Gunung Machinchang mountain, where a number of attractions—including a pedestrian skybridge—are located. There's also a middle station, where travelers can get off to access a viewing platform.

The journey to the top, in glass-bottom gondolas, takes about 15 minutes and offers sweeping views of the bay, the Telaga Tujuh waterfall, and the turquoise waters surrounding Langkawi Island.

In addition to the skybridge, the top station also offers a number of amenities, two additional viewing platforms, and a trail that descends all the way to the middle station through the evergreen jungle.

11.4 NEW ZEALAND

Figure 10.2 New Zealand

Owing to their remoteness, the islands of New Zealand were the last large habitable lands to be settled by humans. Between about 1280 and 1350, Polynesians began to settle in the islands, and then developed a distinctive Māori culture. In 1642, Dutch explorer Abel Tasman became the first European to sight New Zealand. In 1840, representatives of the United Kingdom and Māori chiefs signed the Treaty of Waitangi, which declared British sovereignty over the islands. In 1841, New Zealand became a colony within the British Empire and in 1907 it became a dominion; it gained full statutory independence in 1947 and the British monarch remained the head of state. Today, the majority of New Zealand's population of 5

million is of European descent; the indigenous Māori are the largest minority, followed by Asians and Pacific Islanders. Reflecting this, New Zealand's culture is mainly derived from Māori and early British settlers, with recent broadening arising from increased immigration. The official languages are English, Māori, and New Zealand Sign Language, with English being very dominant.

A developed country, New Zealand ranks highly in international comparisons of national performance, such as quality of life, education, protection of civil liberties, government transparency, and economic freedom. New Zealand underwent major economic changes during the 1980s, which transformed it from a protectionist to a liberalized free-trade economy. The service sector dominates the national economy, followed by the industrial sector, and agriculture; international tourism is a significant source of revenue. Nationally, legislative authority is vested in an elected, unicameral Parliament, while executive political power is exercised by the Cabinet, led by the prime minister, currently Jacinda Ardern. Queen Elizabeth II is the country's monarch and is represented by a governor-general, currently Dame Patsy Reddy. In addition, New Zealand is organized into 11 regional councils and 67 territorial authorities for local government purposes. The Realm of New Zealand also includes Tokelau (a dependent territory); the Cook Islands and Niue (self-governing states in free association with New Zealand); and the Ross Dependency, which is New Zealand's territorial claim in Antarctica.

New Zealand is a member of the United Nations, Commonwealth of Nations, ANZUS, Organization for Economic Co-operation and Development, ASEAN Plus Six, Asia-Pacific Economic Cooperation, the Pacific Community and the Pacific Islands Forum.

Tourism in New Zealand comprises an important sector of the national economy – it directly contributed NZ$16.2 billion (or 5.8%) of the country's GDP in the year ended March 2019. In 2016 tourism supported 188,000 full-time-equivalent jobs (nearly 7.5% of New Zealand's workforce). The flow-on effects of tourism indirectly contribute a further 4.3% of GDP (or NZ$9.8 billion). Despite the country's geographical isolation, spending by international tourists accounted for 17.1% of New Zealand's export earnings (nearly NZ$12 billion). International and domestic tourism contributed, in total, NZ$34 billion to New Zealand's economy every year as of 2017.

New Zealand markets itself abroad as a "clean, green" adventure-playground (Tourism New Zealand's main marketing slogan, "100% Pure New Zealand", reflects this) with typical tourist destinations being nature areas such as Milford Sound, Abel Tasman National Park and the Tongariro Alpine Crossing; while activities such as bungee jumping or whale watching exemplify typical tourist attractions, often marketed primarily to individual and small-group travelers. By far the highest number of New Zealand's tourists (about 45%) come from Australia due to close proximity and traditional good relations.

The vast majority of international tourist arrivals to New Zealand come through Auckland Airport, which handled nearly fifteen million passengers in 2013. Two percent of visitors

arrived by sea as of 2009. Many international tourists spend time in Auckland, Christchurch, Queenstown, Rotorua, and Wellington. Other high-profile destinations include the Bay of Islands, the Waitomo Caves, Aoraki / Mount Cook, and Milford Sound. Many tourists travel considerable distances through the country during their stays, typically using coach lines or hired cars. Though some destinations have seasonal specialties (for winter sports, for example), New Zealand's southern-hemisphere location offers attractions for off-peak northern-hemisphere tourists chasing or avoiding certain seasons.

Domestic tourism is also important, though expenditure and trip numbers have declined or stagnated in the face of fast-growing international tourism. Domestic tourist spending of NZ$20.2 billion a year exceeds that of international visitors (NZ$11.8 billion). In June 2018 the New Zealand government announced the imposition of a "tourist tax" of around NZ$25 to NZ$35 for international visitors, excluding Australians, many Pacific islanders, and young children. It planned to implement this taxation in 2019 through a newly proposed electronic travel-registration process.

In November 2012 readers of the UK newspaper The Telegraph voted New Zealand the best country in the world to go to on holiday

New Zealand is located near the centre of the water hemisphere and is made up of two main islands and a number of smaller islands. The two main islands (the North Island, or Te Ika-a-Māui, and the South Island, or Te Waipounamu) are separated by Cook Strait, 22 kilometers (14 mi) wide at its narrowest point.[143] Besides the North and South Islands, the five largest inhabited islands are Stewart Island (across the Foveaux Strait), Chatham Island, Great Barrier Island (in the Hauraki Gulf),[144] D'Urville Island (in the Marlborough Sounds)[145] and Waiheke Island (about 22 km (14 mi) from central Auckland).[146]

New Zealand is long and narrow—over 1,600 kilometers (990 mi) along its north-north-east axis with a maximum width of 400 kilometers (250 mi) [147]—with about 15,000 km (9,300 mi) of coastline [148] and a total land area of 268,000 square kilometers (103,500 sq mi). Because of its far-flung outlying islands and long coastline, the country has extensive marine resources. Its exclusive economic zone is one of the largest in the world, covering more than 15 times its land area.

The South Island is the largest landmass of New Zealand. It is divided along its length by the Southern Alps. There are 18 peaks over 3,000 metres (9,800 ft), the highest of which is Aoraki / Mount Cook at 3,724 metres (12,218 ft). Fiordland's steep mountains and deep fiords record the extensive ice age glaciation of this southwestern corner of the South Island.[153] The North Island is less mountainous but is marked by volcanism. The highly active Taupo Volcanic Zone has formed a large volcanic plateau, punctuated by the North Island's highest mountain, Mount Ruapehu (2,797 metres (9,177 ft)). The plateau also hosts the country's largest lake, Lake Taupo, nestled in the caldera of one of the world's most active super volcanoes.

The country owes its varied topography, and perhaps even its emergence above the waves, to

the dynamic boundary it straddles between the Pacific and Indo-Australian Plates. New Zealand is part of Zealandia, a microcontinent nearly half the size of Australia that gradually submerged after breaking away from the Gondwanan supercontinent. About 25 million years ago, a shift in plate tectonic movements began to contort and crumple the region. This is now most evident in the Southern Alps, formed by compression of the crust beside the Alpine Fault. Elsewhere the plate boundary involves the subduction of one plate under the other, producing the Puysegur Trench to the south, the Hikurangi Trench east of the North Island, and the Kermadec and Tonga Trenches[160] further north.

New Zealand is part of a region known as Australasia, together with Australia. It also forms the southwestern extremity of the geographic and ethnographic region called Polynesia. The term Oceania is often used to denote the wider region encompassing the Australian continent, New Zealand and various islands in the Pacific Ocean that are not included in the seven-continent model

11.5 MAJOR ATTRACTION OF NEW ZEALAND

New Zealand is an otherworldly, photogenic and friendly country offering visitors unbeatable changes for adventure and exploration. The rugged islands are home to dense native forests, mountains, beaches, glaciers, thermal regions and fiords that have been well-preserved by the environmentally-conscious government and culture. New Zealand is a place where traditional Maori culture mixes with modernity in cosmopolitan cities, charming villages and vast expanses of untouched wilderness. Pristine and heavenly, the island nation has something for everyone, including the following top tourist attractions in New Zealand.

Franz Josef Glacier

This glacier, located within Westland National Park in the southwest, is one of the world's most accessible. Visitors can walk right up to the foot of the massive glacier or take a helicopter ride over the dazzling Ice Age remnant. Together with Fox Glacier it is one of South Westland's major drawcards for tourists.

Wai-o-tapu

Just outside of Rotorua, on the North Island, is the incredible destination of Wai-o-tapu. This park is filled with geothermal activity, and you can hike through volcanic landscapes that look more like outer space than the rest of New Zealand. At Wai-o-tapu, one of the highlights is the Lady Knox Geyser, which erupts daily with a show-stopping display straight up into the air. Nearby, geothermal spas give you the perfect place to unwind after a day of hiking along Wai-o-tapu's volcanic trekking paths.

Tongariro Alpine Crossing

In the Tongariro National Park, located in the center of the North Island, is the Tongariro Alpine Crossing. This crossing is a day-long hike that covers Mount Tongariro itself and passes along the base of Mount Ngauruhoe. The crossing might be recognizable to film buffs, because scenes from the Lord of the Rings Trilogy were filmed there. The Blue and Emerald

Lakes are major scenic attractions along the way, and both have historic significance to the local Maori people and should therefore be treated with the utmost respect.

Bay of Islands

The Bay of Islands is one of the most popular holiday destinations in New Zealand. The picturesque area contains 144 islands, many secluded bays and some great sandy beaches. This beautiful bay has an abundance of marine life including whales, penguins, dolphins and the big marlin. Not surprisingly, it is a popular tourist spot for sailing yachts on world cruises and international sport fishermen.

Milford Sound

Milford Sound is among the most famous tourist attractions in New Zealand. Lying at the most northern and accessible end of Fiordland National Park, Milford Sound offers some of the world's most staggering coastal scenery with its dramatic peaks and dark blue waters. The area's frequent downpours only enhance this South Island beauty, sending numerous waterfalls cascading down the cliffs.

11.6 SUMMARY

- Popular tourist activities in New Zealand include sightseeing, adventure tourism, tramping (hiking) and camping. To support active travel, New Zealand has numerous walking and hiking paths (often created and maintained by the DOC), some of which, like the Milford Track, have huge international recognition. There is also a walking route the length of the country (Te Araroa Trail) and a proposed New Zealand Cycle way.

- Malaysia was once ranked 9th in the world for tourist arrivals. The Travel and Tourism Competitiveness Report 2017 ranks Malaysia 25th out of 141 countries overall.

- In an effort to diversify the economy and make Malaysia's economy less dependent on exports, the government pushed to increase tourism in Malaysia. As a result, tourism has become Malaysia's third largest source of foreign exchange income, and accounted for 7% of Malaysia's economy as of 2005
- Spectacular glaciers, picturesque fiords, rugged mountains, vast plains, rolling hillsides, subtropical forest, volcanic plateau, miles of coastline with gorgeous sandy beaches - it's all here. No wonder New Zealand is becoming so popular as a location for movies.
- Lying in the south-west Pacific, New Zealand consists of two main islands - the North Island and the South Island. Stewart Island and many smaller islands lie offshore.
- The North Island of New Zealand has a 'spine' of mountain ranges running through the middle, with gentle rolling farmland on both sides. The central North Island is

dominated by the Volcanic Plateau, an active volcanic and thermal area. The massive Southern Alps form the backbone of the South Island. To the east of the Southern Alps is the rolling farmland of Otago and Southland, and the vast, flat Canterbury Plains.

11.7 KEYWORDS

- **Medical tourism:** refers to people traveling abroad to obtain medical treatment.
- **Adat:** is the generic term derived from Arabic language for describing a variety of local customary practices and tradition as observed by Muslim communities in North Caucasus, Central Asia and Southeast Asia.
- **Puncak or Puncak Pass**: is a mountain pass in West Java, Indonesia. The area is a common weekend destination for residents of Jakarta, including for those who are longing for clean air and natural scenery
- **Travel:** The act of moving outside one's home community for business or pleasure but not for commuting or traveling to or from usual places.

11.8 LEARNING ACTIVITY

1. List out the various cities in New Zealand and Malaysia, which are famous for tourism and check their visitors fall every year.

_____

_____

2. Discuss about capital tourism in both the countries relations

_____

_____

11.9 UNIT END QUESTIONS

A. Descriptive Type Questions

1. Discuss ethnic group of people in New Zealand?
2. Discuss the number of languages spoken in New Zealand?
3. Define the cultural life of Malaysia.
4. Explain the significance of Batu caves?
5. Define the cultural life of New Zealand?

B. Multiple Choice Questions

1. It is a stretch of land, especially with regard to its physical features.

a. Terrain
b. Land
c. River
d. Mountains

2. This glacier, located within Westland National Park in the southwest, is one of the world's most accessible.

a. Tongariro Alpine Crossing
b. Franz Josef Glacier
   Bay of Islands
c. Milford Sound

3. The picturesque area contains _____ islands, many secluded bays and some great sandy beaches

a. 144
b. 140
c. 130
d. 170

4. ……. is among the most famous tourist attractions in New Zealand.

a. Mount kinabalu
b. Sipandan island
c. Milford Sound
d. None of these

5. ……., a member of the Commonwealth, represents the political marriage of territories that were formerly under British rule.

a. Malaysia
b. India
c. Switzerland
d. New Zealand

Answer

1.a 2.b 3.a 4. c 5.a

11.10 REFERENCES

- Hall, CM and Page, SJ. (2014). The Geography of Tourism and Recreation.UK and New York: Routledge publishers.
- Sinha, P.C. (2005). Tourism Geography, New Delhi: Anmol Publication.

- International Atlas, Penguin Publication and DK Publication
- Boniface B. and Cooper C. (1987) The Geography of Travel and Tourism. London and England: Heinemann Professional Publisher.
- Rohinson H.|A.A. (1976). Geography of Tourism. London: Macdonaled and Evans.
- Gopal Singh. (2010). A Geography of India. Delhi: Atma Ram & Sons

- Bateman, David, ed. (2005). Bateman New Zealand Encyclopedia (6th ed.). ISBN 1-86953-601-0.
- Sinclair, Keith; revised by Dalziel, Raewyn (2000). A History of New Zealand. ISBN 978-0-14-029875-8.
- Statistics New Zealand. New Zealand Official Yearbook (annual). ISBN 1-86953-776-9 (2010).
- Costa, P (1991). "Managing tourism carrying capacity of art cities". The Tourist Review. 46 (4): 8–11. doi:10.1108/eb058076.
- Garlick, S (2002). "Revealing the unseen: Tourism, art and photography". Cultural Studies. 16 (2): 289–305. doi:10.1080/09502380110107599. S2CID 143902911.

- Worldwide Destinations: The geography of travel and tourismbooks.google.co.in › books: Brian Boniface, ‎ Robyn Cooper, ‎ Chris Cooper · 2016
- World Geography of Travel and Tourism: A Regional Approachbooks.google.co.in › books: Alan A. Lew, ‎ Colin Michael Hall, ‎ Dallen J. Timothy · 2008