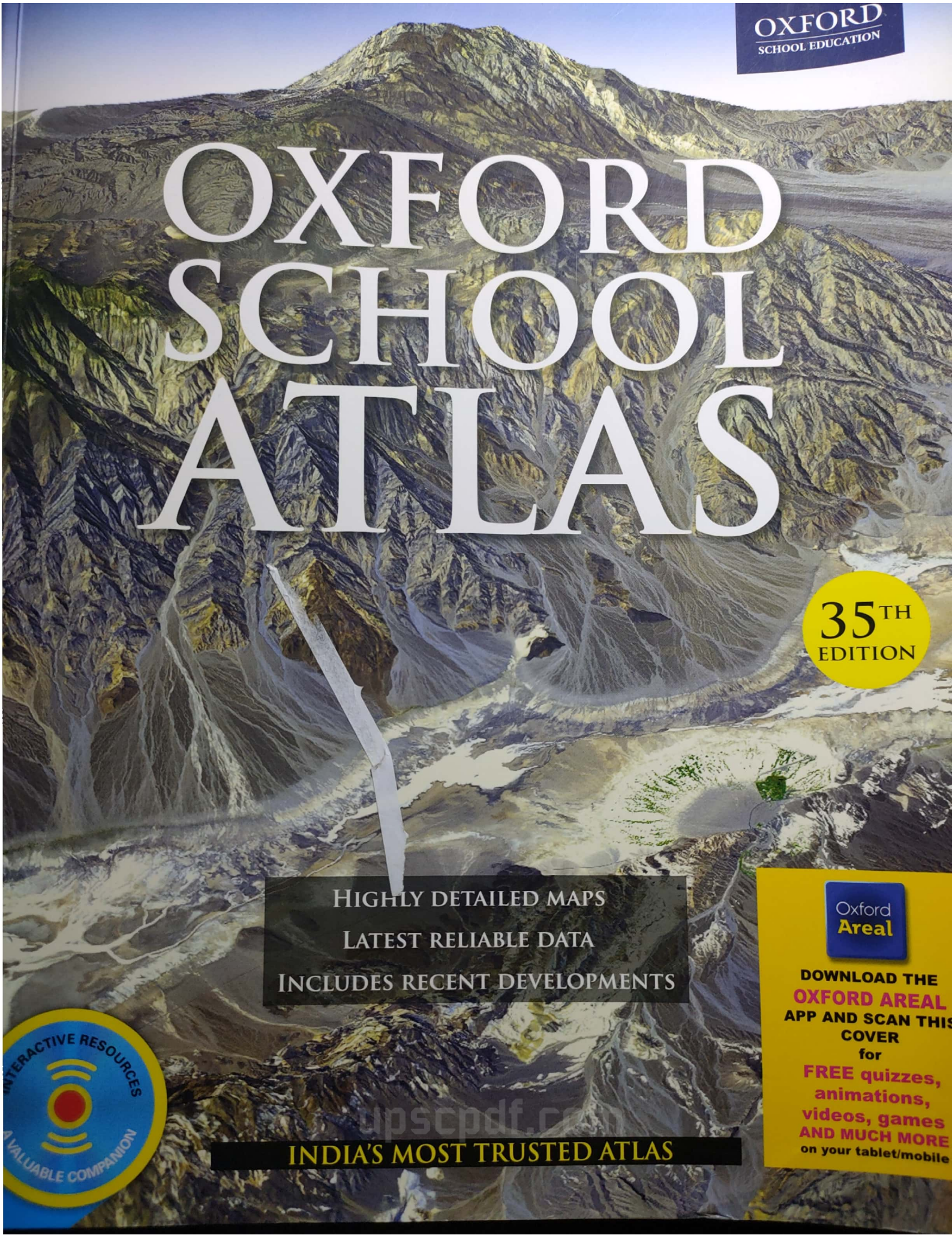
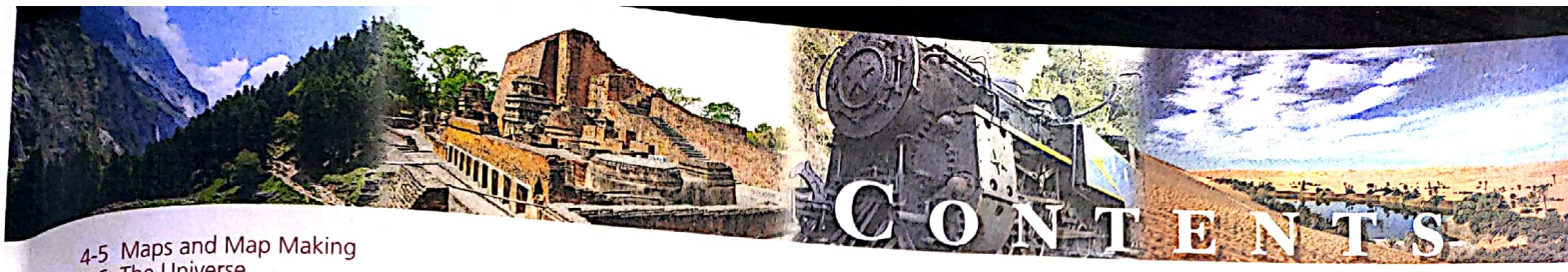




CONTENTS

History of Cartography

The history of cartography is not older than 5,000 years. The earliest maps of which we have knowledge were made by the Babylonians on clay tablets, dating around 2300 BC (Fig.1). Early attempts at maps were severely limited by lack of knowledge of anything other than very local features. Of course what constitutes a map is hard to say, especially when one goes back to the very earliest times. In around 6200 BC in **Catal Hyük** in Anatolia a wall painting was made depicting the positions of the streets and houses of the town together with surrounding features such as the volcano close to the town. Whether it is a map or a stylised painting is a matter of debate. Early world maps also reflect the religious beliefs of the form of the world.

Fig. 1: A clay tablet showing land holdings of Babylon

The earliest ancient Greek who is said to have constructed a map of the world is **Anaximander**, who was born in 610 BC in Miletus (now in Turkey) and died in 546 BC. Sadly, no details of his map have survived. Notable Greek philosophers and mathematicians such as Pythagoras, Aristotle, Eratosthenes and Hipparchus made notable contributions to the study of ancient cartography.

The final ancient Greek contribution to cartography, considered the most important, was written by a noted mathematician. In about AD 140 **Ptolemy** wrote his major work, *Guide to Geography*, in eight books, which attempted to map the known world giving coordinates of the major places in terms of what are essentially latitude and longitude (Fig. 2). Given the way that he gathered the data it is not surprising that the maps were inaccurate but they did represent a considerable advance on all previous maps and it would be many centuries before more accurate world maps would be drawn.

Fig. 2: Compilation of a world map by Claudius Ptolemy

In 1569, **Gerardus Mercator** of Flanders, Belgium, the leading cartographer of the 16th century developed a map projection and drew a world map (Fig.3). Mercator made many new maps and globes, but his greatest contribution to cartography was what is now known as the Mercator projection.

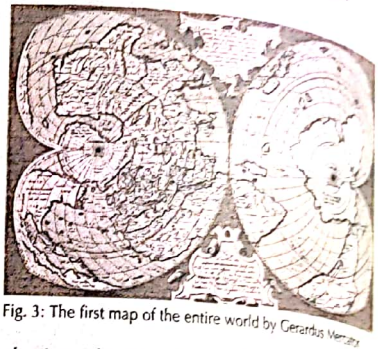


Fig. 3: The first map of the entire world by Gerardus Mercator

Since then, several leading cartographers from Europe and Asia developed cartographic techniques, giving a boost to map production and the invention of different scientific surveying techniques, instruments and projections. In addition to these developments, the broadening of knowledge with the introduction of new fields of studies such as astronomy, geology, meteorology, biology, and the social sciences gave rise to thematic cartography.

As the world advances, as the unknown is revealed and surveyed, as humans alter the face of the earth with their new settlements, new states, railways, canals, land reclamation and cultivation, these changes are reflected in the maps of the times.

The Age of Modern Cartography: Remote Sensing and GIS

In the 20th century, the invention of the airplane followed by satellite remote sensing technology added a new dimension to mapping and widened its scope through the method of remote sensing. This provided a bird´s-eye view of the earth and saved time and money required for conventional surveying of ground realities.

In the broadest sense, remote sensing is the measurement or acquisition of information of an object or phenomenon, by a recording device that is not in physical or intimate contact with the object. It is the utilization at a distance (as from aircraft, spacecraft, satellite, or ship) of any device for gathering information about the environment. The technique can make use of devices such as a camera, laser, radar, sonar, seismograph or a gravimeter. Modern remote sensing normally includes digital processes but can be done as well with non-digital methods.

Fig. 4: An aerial photograph of islands and Atolls of Maldives

Aerial photography is the original form of remote sensing. An aerial photograph can be defined as a photograph taken from an aircraft with a camera specially designed for aircraft use (Fig.4). The occurrence of the two world wars led to a demand for aerial photography for military purposes. In India, aerial photographs have been in use since 1920 for aerial surveys and for interpretation of specific fields such as topographical mapping, geology, engineering, environmental studies, and exploration of oil and minerals.

With the development of satellite technology between 1970 and 1980, remote sensing through satellites received more attention from researchers, cartographers and general users. An image taken from space using a spacecraft as the platform and scanners or specially designed cameras as sensors to detect the given area of the earth´s surface is termed **satellite imagery** (Fig. 5).

Fig. 5: A satellite image showing Ganges and India and Bangladesh

The remote sensor system makes use of the emitted or reflected electromagnetic radiation of the examined object and measures a larger area of the earth. Satellite imagery can be widely applied and is extensively used by scientists, researchers, and planners in map-making urban and regional planning, agriculture, forestry, ecology and environment, soil survey, natural resource mapping, oil and mineral exploration, and so on.

In traditional cartography, the map represented both the database and the display of geographic information whereas in **GIS** (Geographical Information Systems), the database, analysis, and display are physically and conceptually separate aspects. Geographic information systems include several elements such as computer hardware, software, digital data, people, and institutions for collecting, storing, retrieving, analysing, and displaying georeferenced data or information about the Earth. Modern map-making relies much more on GIS, which provides flexible computer-aided database and maps.

Scale

A scale is essential for reading a map accurately. It is defined as the ratio between two points on the ground and their corresponding distance on a piece of paper (the map). A scale can be expressed as:

1. Representative Fraction (R.F.)

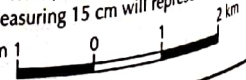
The units of measurement of distances are the same both on the ground and on paper. It is always expressed as a ratio, e.g. 1:100,000, where 1 cm on the map represents 100,000 cm or 1 inch =100,000 inches.

2. Written statement

The system of measurement is clearly stated, e.g. 1 cm = 1 km or 1 inch = 1 mile.

3. Graphical method

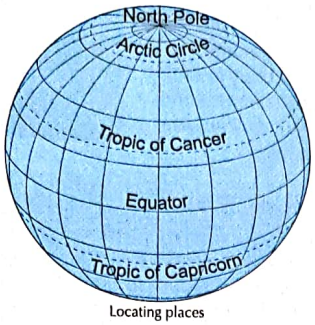
A diagram of a ruler is drawn to show the given scale, e.g. 1 cm = 1 km or 1:100,000. A segment of a ruler measuring 15 cm will represent 15 km.



INTRODUCTION

Maps and Globes

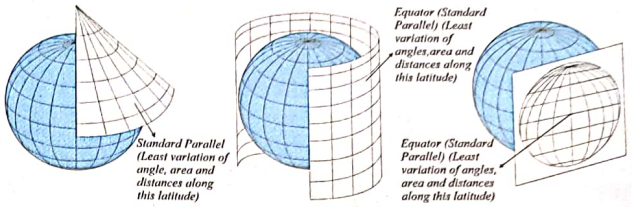
A map is a graphic representation of the round earth or the real world on a flat piece of paper. Maps show us what the earth would look like if we could see it from above. The main purpose of preparing a map is to show the things as they appear in their true location, in terms of latitudes and longitudes, either in isolation or in relation to some other feature. On the other hand, a globe represents the whole surface in the form of a sphere on which all its continents and features are shown at the same scale and with their correct shapes and areas.



Locating places

Map Projections

A map projection is a systematic and orderly drawing of a grid of parallels of latitude and meridians of longitude used to represent the spherical surface of the earth, or a part of it, on a reduced scale on a flat piece of paper. It is not possible to make a map (of the world or of any part of it) that is accurate in area, shape, distance and direction. Every map is distorted in at least one of these aspects.

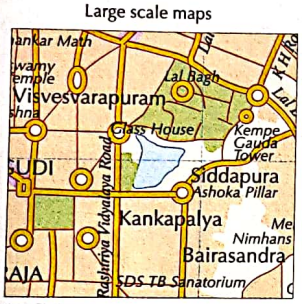


Conical Projection | Cylindrical Projection | Azimuthal Projection

Types of Maps

On the basis of scale

Large scale maps



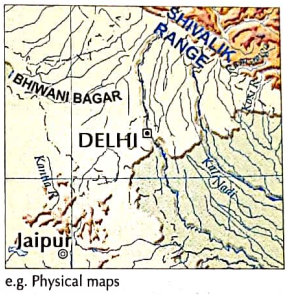
e.g. City maps

Small scale maps

e.g. Wall maps

On the basis of details in the map

General purpose maps



e.g. Physical maps

Thematic maps


e.g. Climatic Regions

Physical Relief: Representation of the Earth's Surface

One of the challenges of map-making is to adequately represent the physical relief of any region i.e., the delineation of hills and plains, the distinguishing of high ground and low ground. The two methods generally used to represent physical relief are *hill-shading and contour lines*, each of which may be treated in a variety of ways and are sometimes combined. Figure A shows a mountainous island with the hill slopes indicated by a method of hill–shading called `hachures' (lines indicating the direction of the slope). Figure B shows the same island with the hills indicated by contour lines. The principle of showing elevation by contour lines can be seen by comparing Figure C with the profile section in Figure B.

Fig. A: Map of Island showing Elevation by Hill-shading

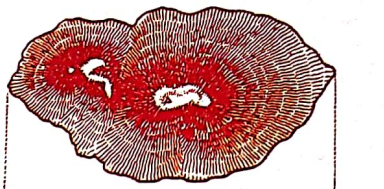


Fig. B: Profile Section of Island

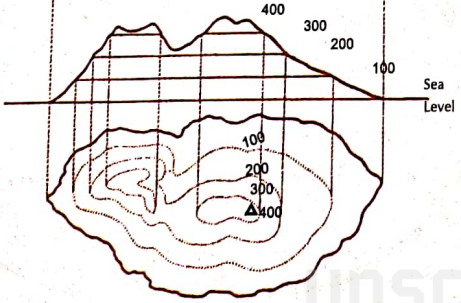


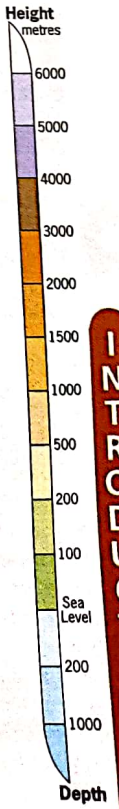
Fig. C: Map of Island showing Elevation by Contour Lines

Symbols and Shades

Maps cannot show everything nor can the features of the landscape be contained in a limited area. Therefore, symbols, often termed as conventional symbols, have been developed to represent the features on a map. Some symbols are like pictures while others are initial letters such as `PO´ for post office. Colours are also used as symbols such as green for forests or woodlands and blue for water. Shades ranging from deepest to lightest can represent the range of occurrences of any phenomenon, such as altitude.

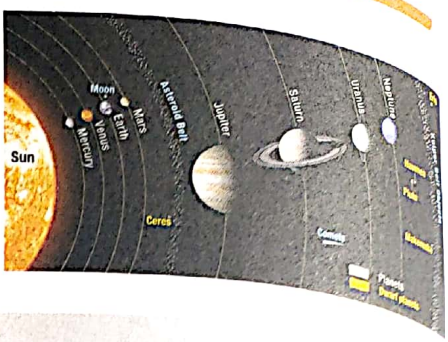
Conventional symbols can be found on a topographical sheet, a weather chart, or on physical or thematic maps. It is always important to refer to the key or legend of a map to find out what the symbols mean. Symbols are designed to be easy to remember.

- International Boundary
- State Boundary
- Golden Quadrilateral
- North-South & East-West Corridors
- National Highway
- Railway
- Road
- Country capital
- State / UT capital
- District Headquarters
- Other towns
- 20 National Highway number
- International airport/Major airport
- Domestic airport
- Major port
- Salt pan / Dry lake
- Marsh / Swamp
- 3415 Peak height
- -154 Depression
- -7725 Ocean depth / Trench
- Oasis
- Dam
- River
- Canal
- Lake / Reservoir
- Rift valley



The Solar System

The solar system was formed about 4,600 million years ago. It is located in the Orion arm of the Milky Way galaxy, around two-thirds away from the central bulge, about 27,000 light-years from the centre of the galaxy. It takes the solar system about 220 million years to orbit the galaxy once.



The solar planets can be divided into an inner system of four small, solid planets made up of materials similar to that of the Earth. The outer system of four larger planets, known as the `gas giants´, has rings and lots of moons. The gas giants are made up mostly of hydrogen, helium, frozen water, ammonia, methane, and carbon monoxide. Pluto does not belong to any group but is a tiny rocky body at the edge of the solar system. Some people think it is a giant comet rather than a planet. Its composition is similar to a comet (ice and rock) but its orbit is different from the other comets and planets. Between these two planetary systems is a belt of asteroids containing pieces of rock of varying size.

Planet Profile

Planet	Mean distance from Sun (million km)	Orbital period	Diameter (km)	No. of known satellites
Mercury	57.9	88.0 days	4,879	0
Venus	108.2	224.7 days	12,104	0
Earth	149.6	365.25 days	12,756	1
Mars	227.9	687.0 days	6,792	2
Jupiter	778.6	11.86 years	142,984	69
Saturn	1433.5	29.44 years	120,536	61
Uranus	2872.5	83.80 years	51,118	27
Neptune	4495.1	163.83 years	49,528	14

Dwarf Planets and Plutoids

Pluto, which was considered to be a planet since its discovery in 1930, was reclassified as a 'dwarf planet' on 24 August 2006 by the International Astronomical Union.

According to the IAU, a dwarf planet fulfils the following criteria:

- It is in orbit around the Sun.
- It has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape.
- It has not `cleared the neighbourhood´ around its orbit.
- It is not a satellite of a planet, or other non-stellar body.

Two years after coining the term `dwarf planets´, the IAU has decided to call trans-neptunian dwarf planets similar to Pluto, `plutoids´. While all plutoids are dwarf planets, all dwarf planets are not plutoids. Currently, there are five celestial bodies that have been redefined by the IAU as dwarf planets, of which four belong to the subset plutoids. Eris, Pluto, and most recently, MakeMake and Haumea have been classified as plutoids and dwarf planets, while Ceres remains in the category dwarf planet.

Sun

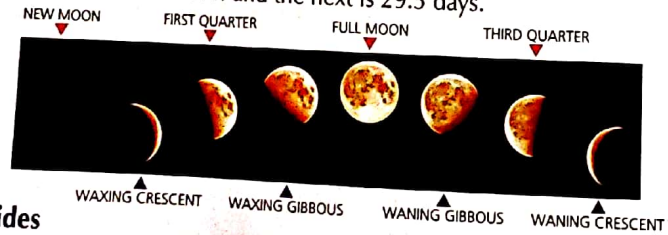
The Sun is a giant ball of hot gas, 150 million kilometers from the Earth. The surface of this burning ball of gas is 5500°C, with the core reaching an unimaginable 15.6 million°C. The Sun is so large that you could fit over one million Earths inside it. The Sun's internal structure includes the core, radiation zone, convection zone, and photosphere.

The turbulence in the photosphere is visible from the earth in the form of sunspots, solar flares, prominences and small patches of gas called granules. The Sun consumes four million tonnes of hydrogen every second. Even so, it is so vast that our star has enough fuel to keep it shining for another five billion years.

The corona is the outermost part of the Sun's atmosphere, visible during a solar eclipse only.

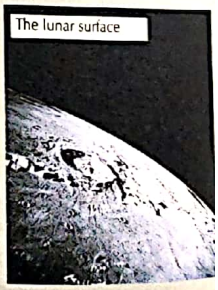
Phases of the Moon

The moon seems to have different shapes at different times of the month because of its changing position in relation to the Earth. These different shapes are known as the phases of the Moon. The interval between one full Moon and the next is 29.5 days.



Facts about the Moon

- The only natural satellite of the planet Earth
- Distance from Earth– 384,400 km
- Diameter– 3,476 km
- Mass– 0.0123 of the Earth's
- Surface gravity– 0.165 of the Earth's
- Time taken to orbit Earth (interval between one full moon and the next) – 29.53 days or 709 hours
- Surface temperature– 120 °C maximum to –163 °C at night



Tides

At new Moon and full Moon, when the Moon and the Sun are in line with the Earth, tides are at their highest and are called **spring tides.**

At quarter and three-quarter Moon, the Sun and Moon are at right angles, so that the gravitational pull of the Moon is partly cancelled out by the gravitational pull of the Sun, the tides are at their lowest and are called **neap tides.**

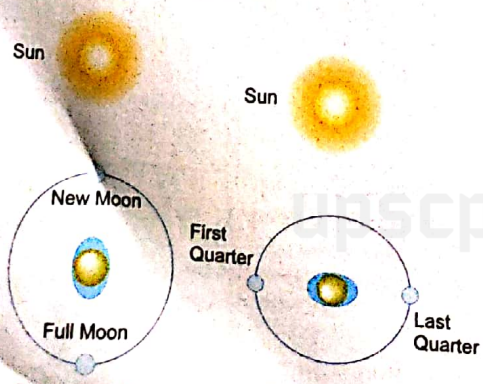
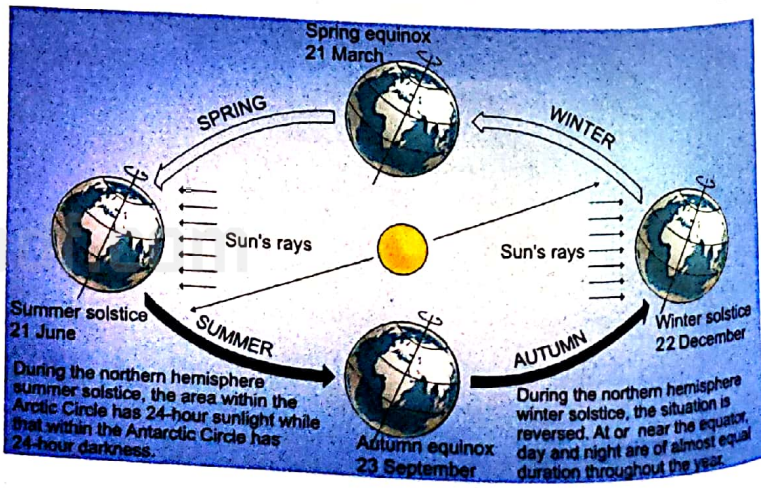


Fig. 2: Spring tides Fig. 1: Neap tides

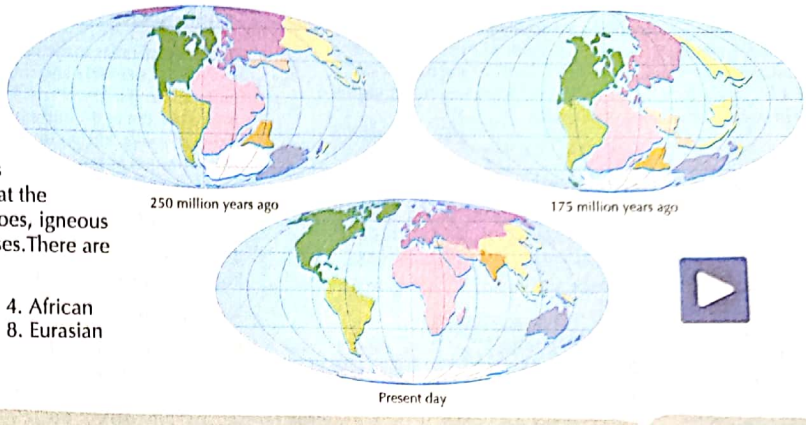
The Seasons, Equinoxes and Solstices (in the Northern Hemisphere



Continental Drift

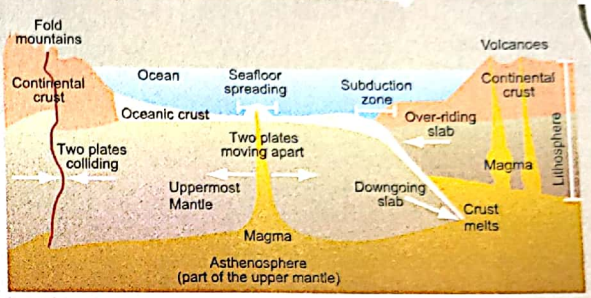
The Earth's crust is not a single continuous layer. It is made up of a number of gigantic pieces like a huge jigsaw puzzle. Each piece is called a crustal plate. Currents of molten rock rise up through the mantle like boiling water in a saucepan. These form convection cells that drive the movement of the plates so that they are continuously moving away or towards each other. Geologically, the most important things happen at the plate boundaries, including most of the earthquakes, volcanoes, igneous rocks, major metamorphism, and mountain building processes.There are 10 crustal plates:

1. Pacific
2. Antarctic
3. Indian
4. African
5. South American
6. Nazca
7. North American
8. Eurasian
9. Cocos
10. Australian



The Giant Jigsaw Puzzle

Alfred Wegener (1880-1930), a German meteorologist and geologist, was the first person to propose the theory of continental drift. In his book, **Origin of Continents and Oceans**, he calculated that 200 million years ago the continents were originally joined together, forming a large supercontinent. He named this supercontinent Pangaea, meaning `All-earth´. Pangaea split into plates to form Eurasia in the north and Gondwanaland in the south. Further splitting over millions of years formed the continents as we know them today. Wegener's concept was originally based on the apparent `jigsaw´ fit. The continents look as if they were pieces of a giant jigsaw puzzle that could fit together to make one giant super-continent. The bulge of Africa fits the shape of the coast of North America while Brazil fits along the coast of Africa beneath the bulge. There are three kinds of plate boundaries:



Movement in the Earth's crust

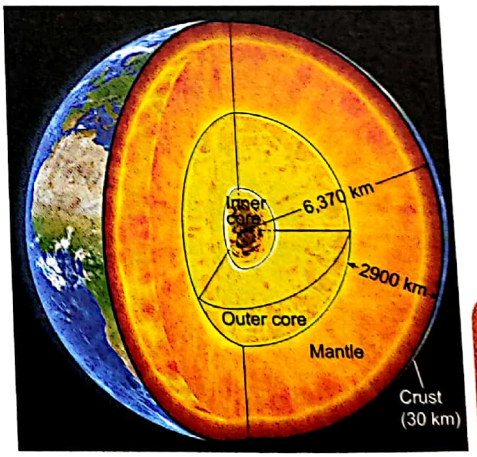
Divergent boundaries are where plates separate from each other, and magma oozes up from the mantle into the crack (a fissure volcano) making the ocean basin wider. This is known as sea floor spreading.

Convergent boundaries are where plates come together, but to do so one of the plates must dive below the surface into the mantle along a subduction zone. These often result in deep-sea trenches. Convergent boundaries also produce mountain chains and very large, explosive volcanoes.

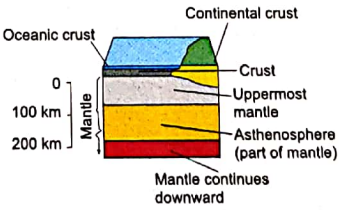
Plates slide past each other where transform boundaries occur, ideally with little or no vertical movement. Most transform boundaries are below sea level and therefore not easy to see. The San Andreas fault in California is a transform boundary. It has been estimated that these plates are moving at a speed of 1 to 10 cm per year.

Inside the Earth

The Earth is made up of four main layers–the **inner core**, **outer core**, the **mantle**, and the **crust** (Fig.23). We live on the outer part of the Earth, which is called the crust. This layer consists of the upper 30-100 km. The crust mostly consists of igneous rocks; the rest consists of sedimentary and metamorphic rocks. The layer from 0-20 km is called the **sial** as the two main constituents are **silicon** and **aluminium**. It is 2.7 times denser than water. The next layer is known as **sima** as a large quantity of **silicon** and **magnesium** is found in this layer. The average density of this layer is 3.4 times that of water.



The next layer called the **mantle** is 100-2,900 km thick. The upper part of the mantle is a plastic layer over which the crust floats. The mantle is composed of silicate material, but it is chemically distinct from the crust.



The Earth's **outer core** (2,900-5,100 km) is composed of liquid metallic material (primarily iron and nickel). The solid **inner core** (5,100-6,370 km) of the Earth is made up of iron. It has been discovered that the inner core is rotating and is the cause of Earth's magnetic field.

Rocks and Minerals

Rocks are the substances that make up the Earth. They include loose and unconsolidated deposits, as well as the hard, solid parts that make up the Earth's lithosphere. Rocks can be classified into three main groups on the basis of their origin—igneous, sedimentary and metamorphic. Minerals are the building materials of rocks. Rocks may be composed of only one mineral, while others contain many of them.

Igneous (or primary) rocks are the first rocks to be formed from magma or molten rock beneath the earth's crust, e.g. granite and basalt.

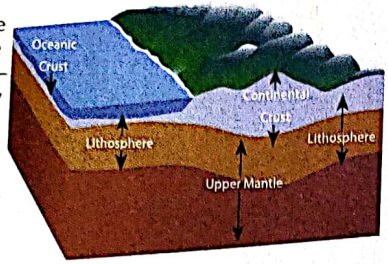
Sedimentary (stratified or layered) rocks are formed by the collection of sediments over a long span of time, e.g. sandstone and shale.

Metamorphic rocks are formed when the nature of any rock is altered by subjecting it to intense heat and/or pressure, e.g. graphite (from coal) and quartzite (from sandstone).

The lithosphere (geosphere), atmosphere and hydrosphere comprise the three realms of the Earth. We can define the biosphere (the fourth realm of the Earth) as the parts of the Earth's lithosphere (land), hydrosphere (water) and atmosphere (air) occupied by living organisms.

Lithosphere or Geosphere

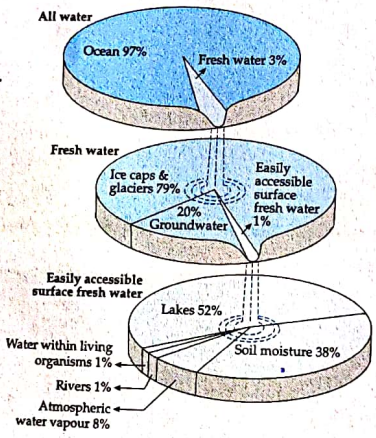
The lithosphere or geosphere is the solid, rocky crust covering the entire planet. This crust is inorganic and is composed of rocks, minerals and elements. It covers the entire surface of the Earth from the top of Mount Everest to the bottom of the Mariana Trench. On the surface of the Earth, the lithosphere is composed of three main types of rocks—igneous, sedimentary and metamorphic. The land area constitutes about 29 per cent of the total surface area of the Earth.



Structure of the lithosphere

Hydrosphere

The hydrosphere is the combined mass of water found on, under and over the surface of the Earth. About 71 per cent of the Earth's surface is covered by water in the form of oceans, seas, bays, gulfs, lakes, rivers, etc. The oceans contain most of the Earth's surface water. Most fresh water is frozen into glaciers. Most available fresh water is stored underground as groundwater.



Atmosphere

The atmosphere is made up of gases such as nitrogen (78 per cent), oxygen (21 per cent) and small amounts of carbon dioxide, argon, ammonia and a few others. Water vapour (1 per cent approximately) is also present in the atmosphere. The atmosphere has several different layers. Higher up, the air gets thinner and colder, and there is less oxygen to breathe. In the very highest layers there is hardly any air at all.

Structure of the Atmosphere

The layers of the atmosphere are not of uniform thickness or density. They also vary in other aspects.

Troposphere

It is the lowest layer of the atmosphere. It contains 75 per cent of the gases in the atmosphere. All weather phenomena that we experience on the Earth occur in this sphere.

Stratosphere

The stratosphere has a layer of ozone which protects life on Earth from the harmful ultraviolet light of the Sun.

Mesosphere

The temperature in the mesosphere decreases with height, reaching about –100°C in the upper mesosphere. This is the coldest region of the atmosphere.

Thermosphere

The temperature in the thermosphere increases with height. The thermosphere is also known as the heat sphere of the atmosphere.

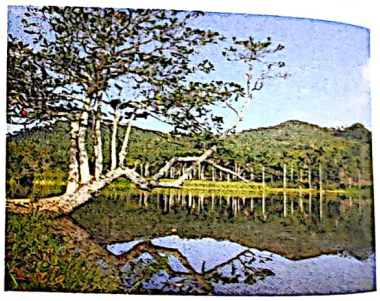
Exosphere

It is the outermost layer of the atmosphere. This layer has the lightest gases like hydrogen and helium in extremely low densities. Most of the Earth's satellites orbit here.

Structure of the atmosphere

Biosphere

The biosphere is made up of all living organisms of the Earth, as well as the physical environment in which they live and with which they interact. Most living organisms actually live within a small area in the biosphere, from about 500 m below the ocean's surface to about 6 km above sea level.



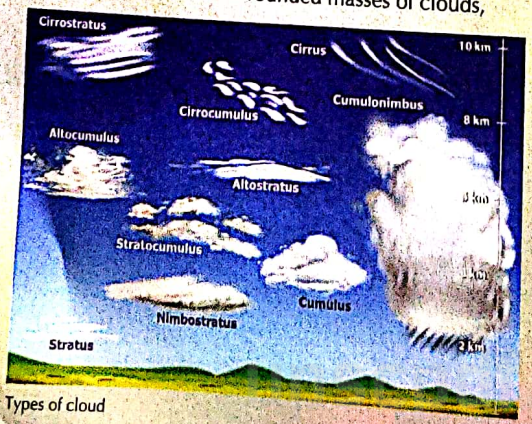
Atmospheric Clouds

High-level clouds such as cirrus, cirrostratus and cirrocumulus are usually thin and white in appearance.

Mid-level clouds are the altocumulus and altostratus clouds.

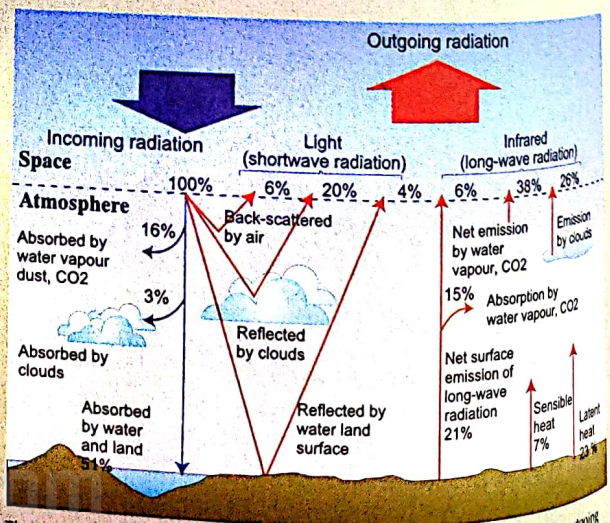
While altocumulus may appear as parallel bands or rounded masses of clouds, altostratus clouds are generally uniform grey sheet or layered clouds.

Low clouds are the cumulus, stratus, nimbostratus and stratocumulus clouds. Cumulus clouds are 'puffy' clouds; stratus clouds are flat, featureless clouds; and nimbostratus and stratocumulus clouds are large, dark clouds.



Types of cloud

Heat Budget of the Earth



The process through which the incoming solar radiation on Earth is balanced by its outgoing terrestrial radiation is called heat balance. It is essential for the maintenance of the correct temperature of the planet to prevent it from getting hotter or cooler.

INTRODUCTION

Contours and Landforms—One of the challenges of map-making is to adequately represent the physical relief of any region, i.e., the delineation of hills and plains, the distinguishing of high ground and low ground. The main method of showing relief features on a flat sheet of paper is by using contours. A contour is a line on a map joining all points which are of the same height above sea level. Contour lines are used to show the height and shapes of landforms in lowland and highland areas. Some of the relief features or landforms are shown below using certain contour patterns.

CONICAL HILL

A hill has fairly regular slopes like a cone. It is shown by closed contours almost circular in shape.

PLATEAU

A plateau is like a table top. It is an area of highland with an almost flat top and steep sides.

SPUR AND VALLEY

Spur - Spurs are projections of high land above a lower area. A spur is usually found projecting between two valleys. It is shown by V-shaped contour patterns.
Valley- Valleys are areas of low ground which penetrate into highlands

CLIFF

A cliff is a rock face either on land or on the sea coast which is vertical or nearly vertical. A cliff is shown when a number of contour lines meet at the same point.

CONCAVE SLOPE

The contours are widespread in the lower part of the slope and more closely spaced in the upper part.

COL AND PASS

Col or Saddle - A col or saddle is a shallow depression between two hills or peaks.
Pass or Gap - A pass or gap is a deep depression in a mountain range. It is generally used as a route for roads and railways.

GORGE

Rivers which rise in mountains often flow through very narrow valleys with steep banks on either side. Where the steep sided valley narrows, it becomes a gorge.

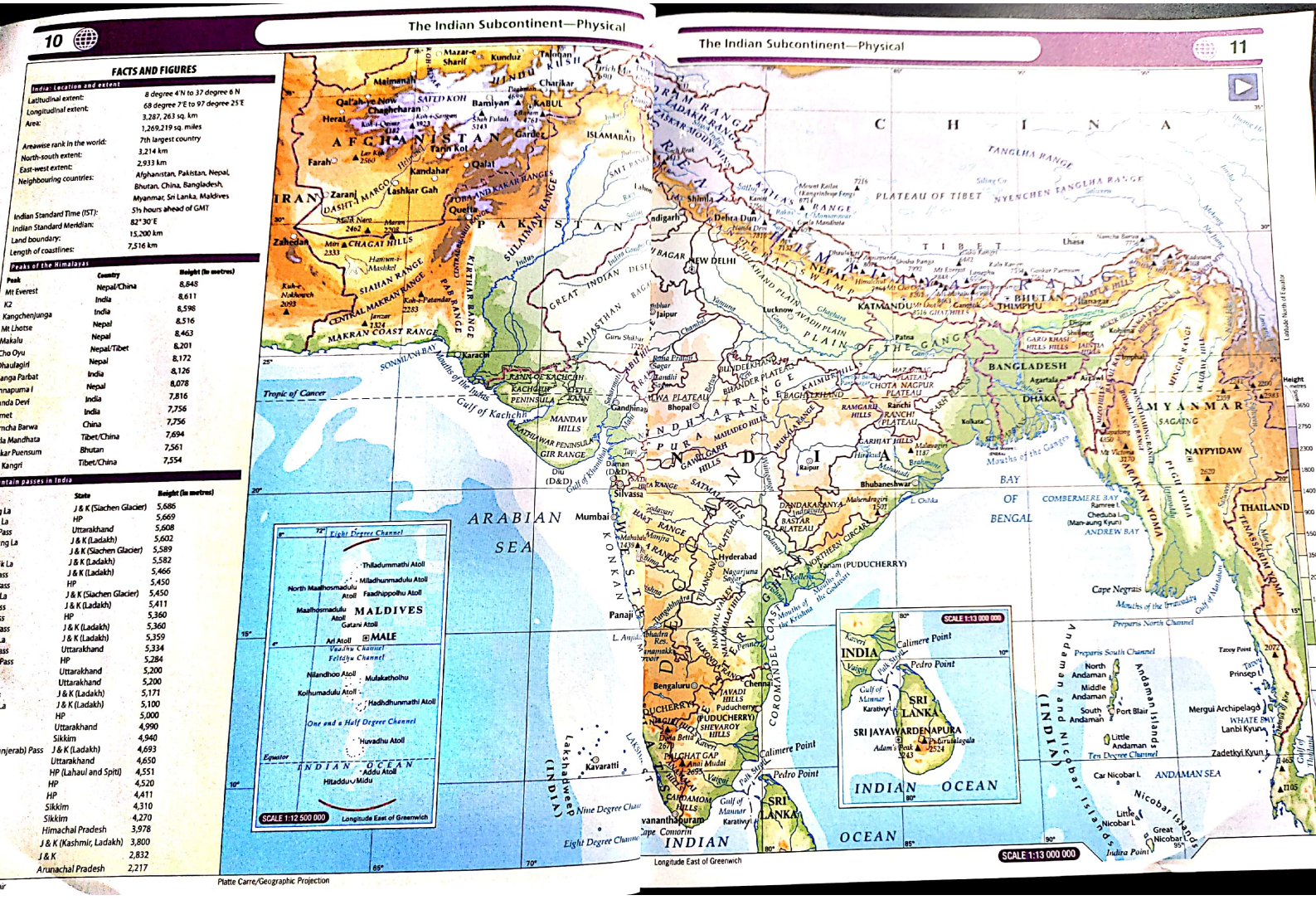
CONVEX SLOPE

The contours are closely spaced in the lower part of the slope and more widely spaced in the upper part.

KNOLL

A knoll is an isolated hill. It is shown by small, roughly circular contours. Knolls are found in the areas of gentle relief.

Heights given are in metres



INDIA—STATES AND DISTRICTS

State/Union Territory	Capital	Area (sq. km)	Total Population (2011)	No. of District
INDIA	New Delhi	3,287,263	1,210,569,573	720
States				
Andhra Pradesh	Hyderabad	160,205	49,378,776	13
Arunachal Pradesh	Itanagar	83,743	1,382,611	22
Assam	Dispur	78,438	31,169,272	34
Bihar	Patna	94,163	103,804,637	38
Chhattisgarh	Raipur	135,191	25,540,196	27
Goa	Panaji	3,702	1,457,723	02
Gujarat	Gandhinagar	196,024	60,383,628	33
Haryana	Chandigarh	44,212	25,353,081	22
Himachal Pradesh	Shimla	55,673	6,856,509	12
Jammu & Kashmir	Srinagar	222,236	12,548,926	22
Jharkhand	Ranchi	79,714	32,966,238	24
Karnataka	Bengaluru	191,791	61,130,704	30
Kerala	Thiruvananthapuram	38,863	33,387,677	14
Madhya Pradesh	Bhopal	308,245	72,597,565	51
Maharashtra	Mumbai	307,713	112,372,972	36
Manipur	Imphal	22,327	2,721,756	16
Meghalaya	Shillong	22,429	2,964,007	11
Mizoram	Aizawl	21,081	1,091,014	08
Nagaland	Kohima	16,579	1,980,602	11
Odisha	Bhubaneshwar	155,707	41,947,358	30
Punjab	Chandigarh	50,362	27,704,236	22
Rajasthan	Jaipur	342,239	68,621,012	33
Sikkim	Gangtok	7,096	607,688	04
Tamil Nadu	Chennai	130,058	72,138,958	32
Telangana	Hyderabad	114,840	35,286,757	31
Tripura	Agartala	10,486	3,671,032	08
Uttar Pradesh	Lucknow	240,928	199,581,477	75
Uttarakhand	Dehra Dun	53,483	10,116,752	13
West Bengal	Kolkata	88,752	91,347,736	23
Union Territories				
Andaman & Nicobar Is	Port Blair	8,249	379,944	03
Chandigarh	Chandigarh	114	1,054,686	01
Dadra & Nagar Haveli	Silvassa	491	342,853	01
Daman & Diu	Daman	112	242,911	02
Delhi	Delhi	1,483	16,753,235	11
Lakshadweep	Kavaratti	32	64,429	01
Puducherry	Puducherry	479	1,244,464	04

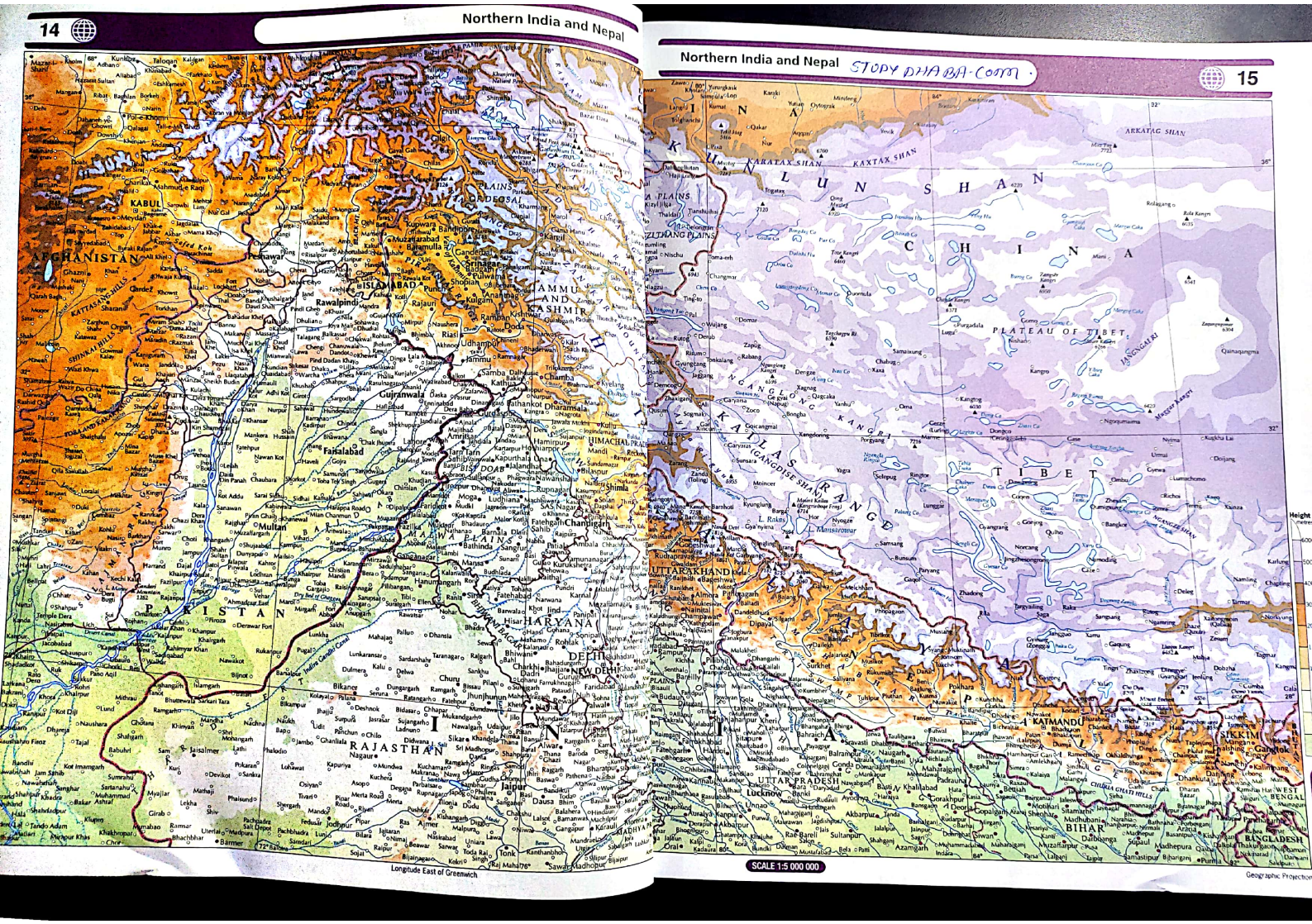
Notes:

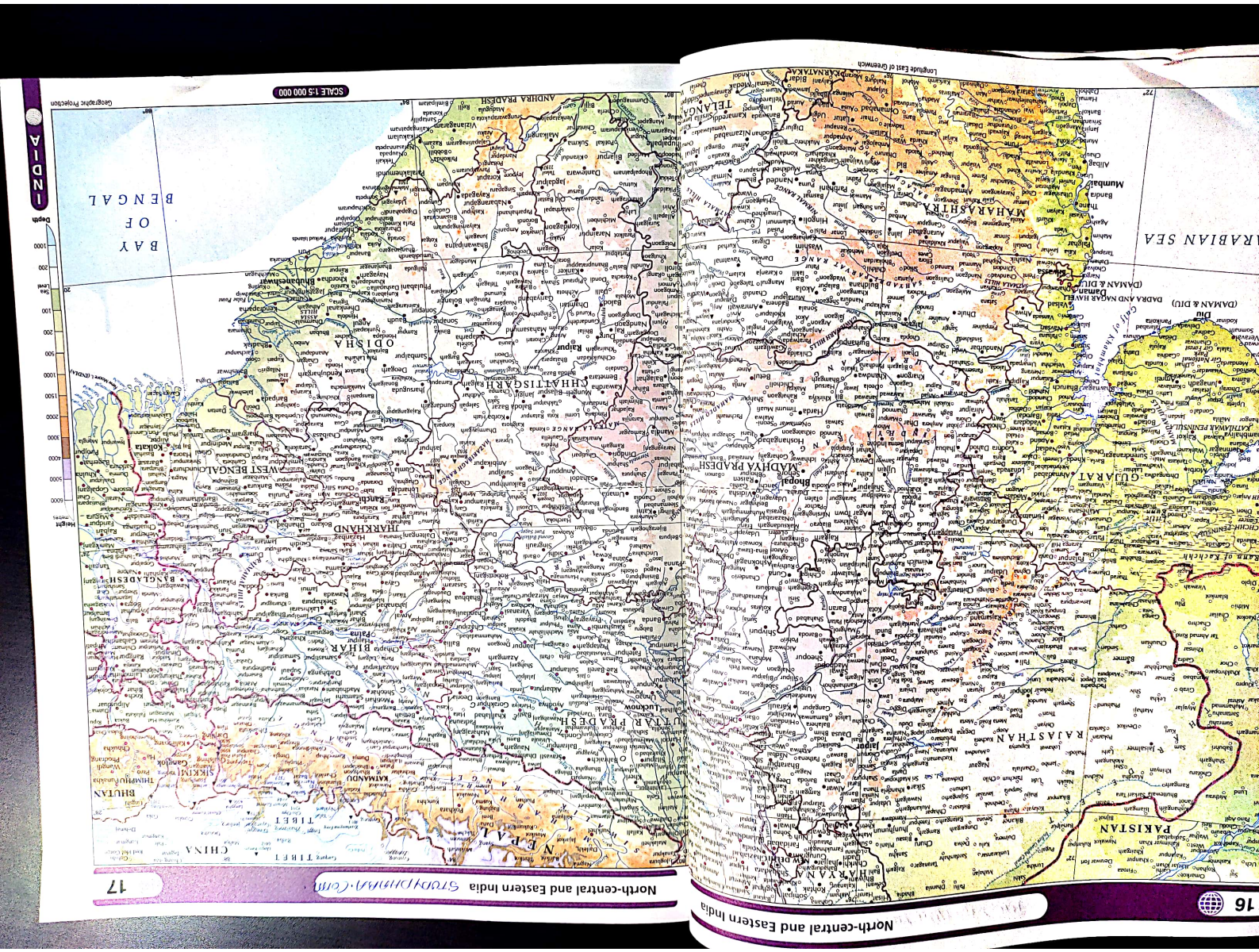
1. The following area figures do not add up to the total area of India because:
   (i) The shortfall of 7 sq. km area of Madhya Pradesh and 3 sq. km area of Chhattisgarh is yet to be resolved by the Survey of India.
   (ii) Disputed area of 13 sq. km between Puducherry and Andhra Pradesh is not included in either Puducherry or Andhra Pradesh.
   (iii) Area figures include the area under unlawful occupation of Pakistan and China. The area includes 78,114 sq. km under illegal occupation of Pakistan, 5,180 sq. km illegally handed over by Pakistan to China and 37,555 sq. km under illegal occupation of China in Ladakh district.
2. The population figures exclude population of the area under unlawful occupation of Pakistan and China where census could not be taken.
   The population figures of India and Manipur include the estimated population of Senapati district of Manipur State.

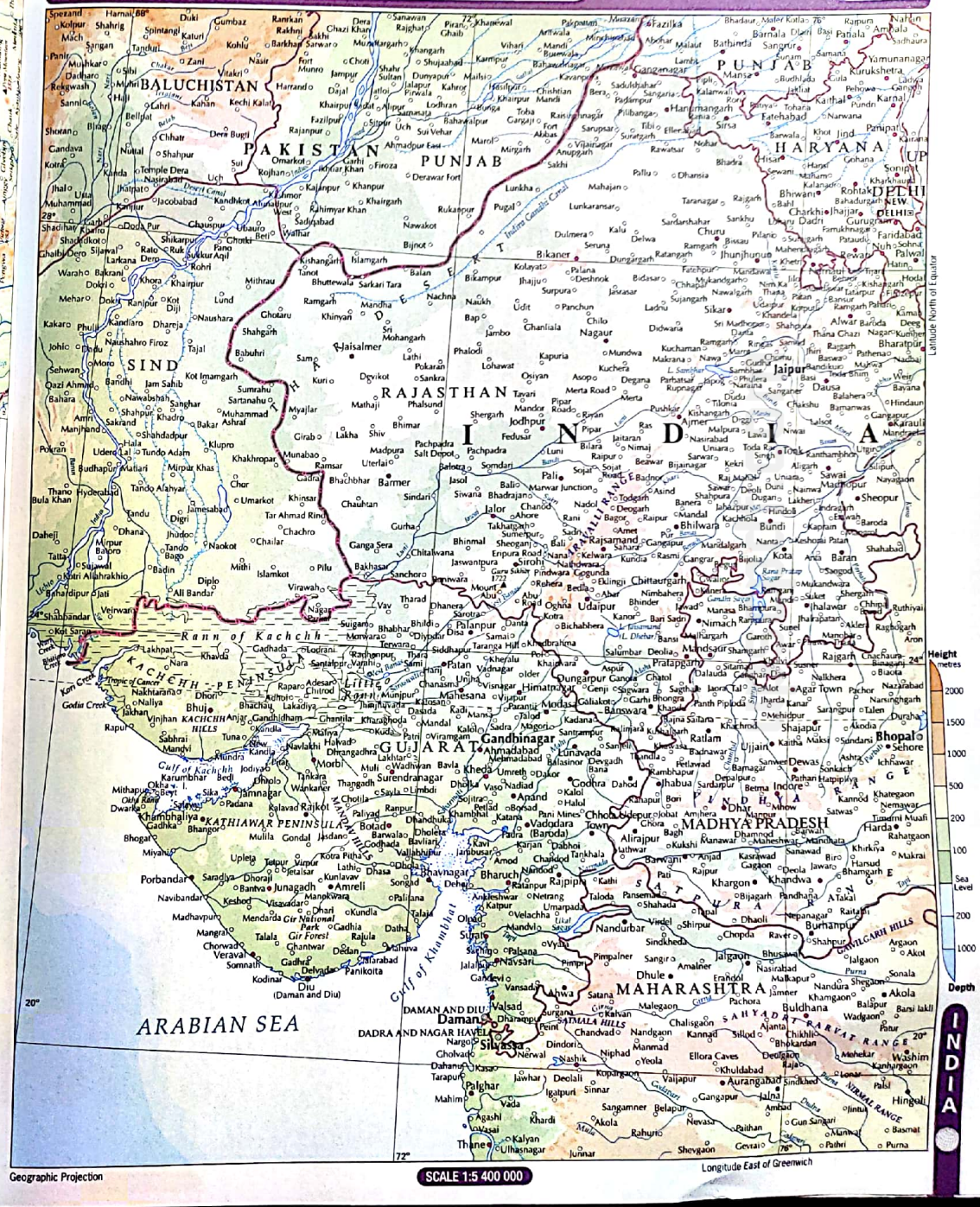
INDIA AND ITS NEIGHBOURS

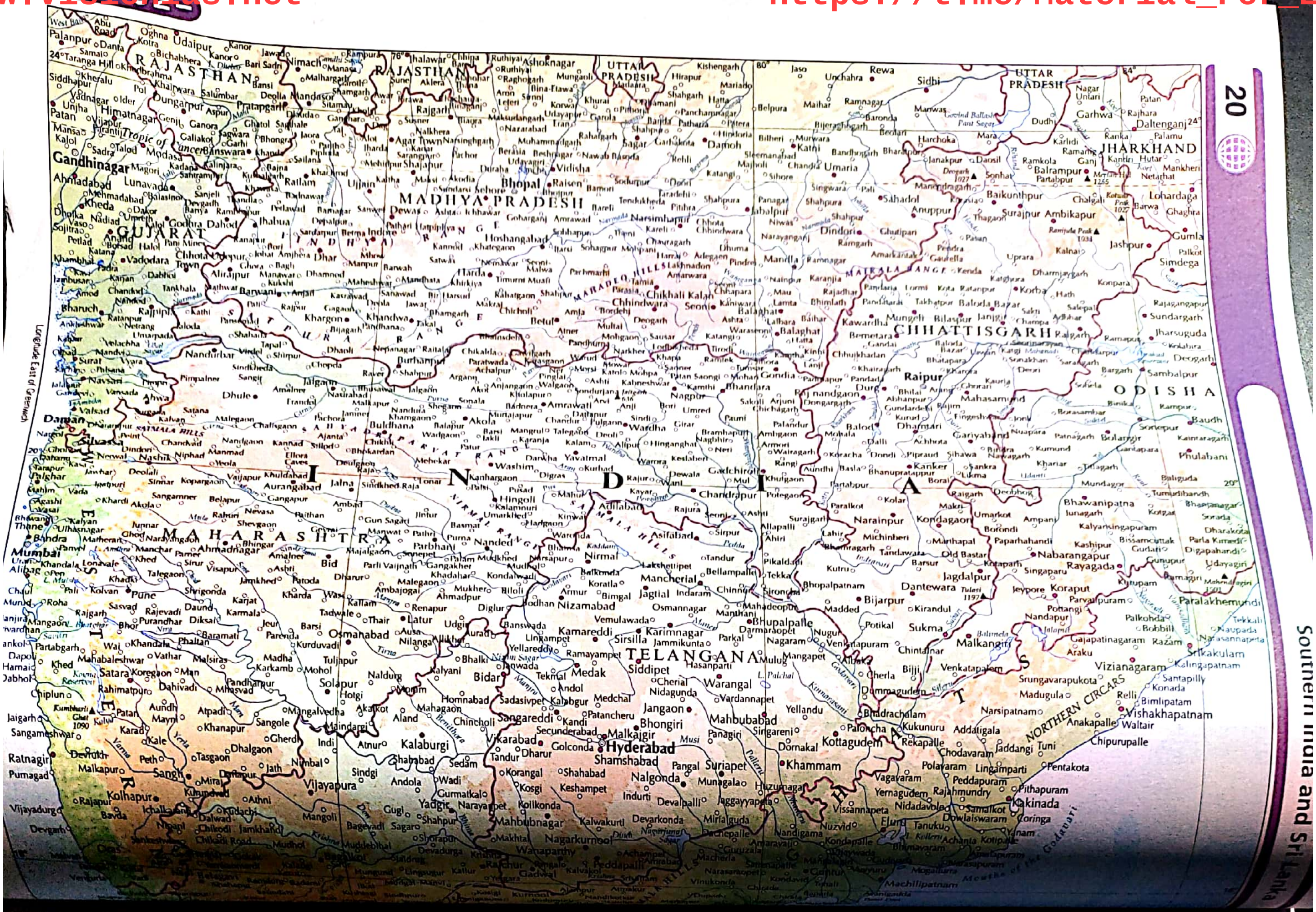
Country	Capital	Area (sq. km)	*Population – 2015 (million)	*Density – 2015 (persons per sq. km)	Average annual population growth – 2000-2015 (in per cent)
Afghanistan	Kabul	652,225	32.5	50	3.3
Bangladesh	Dhaka	143,998	161.0	1,237	1.4
Bhutan	Thimphu	38,394	0.8	20	2.1
*India	New Delhi	3,287,240	1,210.2	382	1.5
Maldives	Male	298	0.3	1,364	2.4
Myanmar	Nayypyidaw	676,577	53.9	83	0.8
Nepal	Kathmandu	147,181	26.5	199	1.2
Pakistan	Islamabad	803 940	180.0	245	2.1
Sri Lanka	Sri Jayawardenapura	65 610	21.2	334	0.8

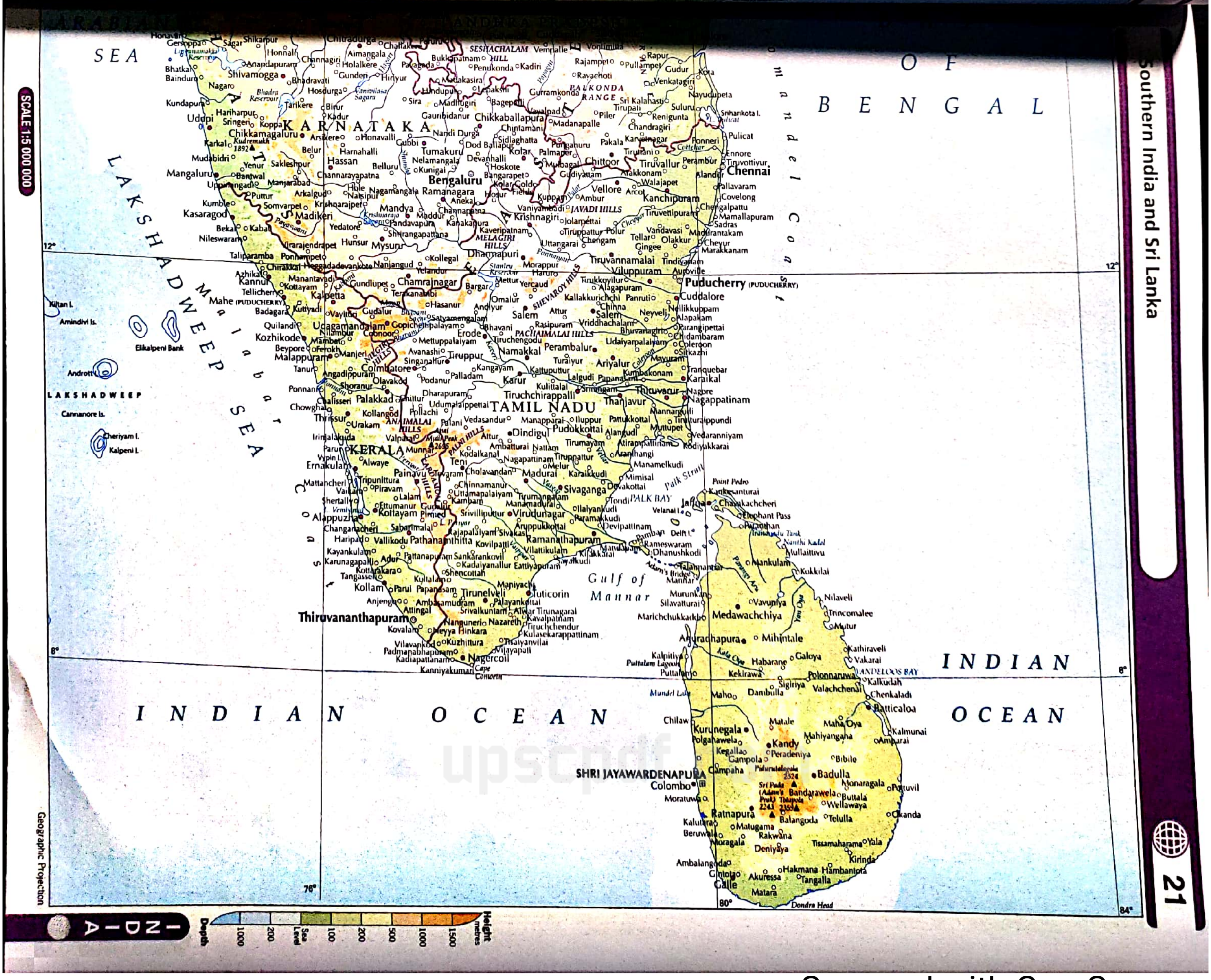
Notes: *Data source: The World Bank 2015
**Data source for population and density: Census of India, 2011











State	Area (sq. km)	Population (2011)	Historical & Archaeological Sites
Jammu & Kashmir	222,236	12,548,926	Srinagar, Leh, Jammu
Himachal Pradesh	55,673	6,856,509	Kangra, Naggar
Punjab	50,362	27,704,236	Amritsar, Rupnagar
Haryana	44,212	25,353,081	Kurukshetra, Panipat, Gharaunda, Surajkund
Delhi	1,483	16,753,235	Delhi
Chandigarh	114	1,054,686	——

State	Area (sq. km)	Population (2011)	Historical & Archaeological Sites
Rajasthan	342,239	68,621,012	Jaipur, Sanganer, Ranthambhor, Chittaurgarh, Jaisalmer, Ajmer, Bundi, Osiyan
Gujarat	196,024	60,383,628	Ahmadabad, Vadodara, Lothal, Rajkot, Porbandar, Siddhapur
Daman & Diu	112	242,911	
Dadra & Nagar Haveli	491	342,853	

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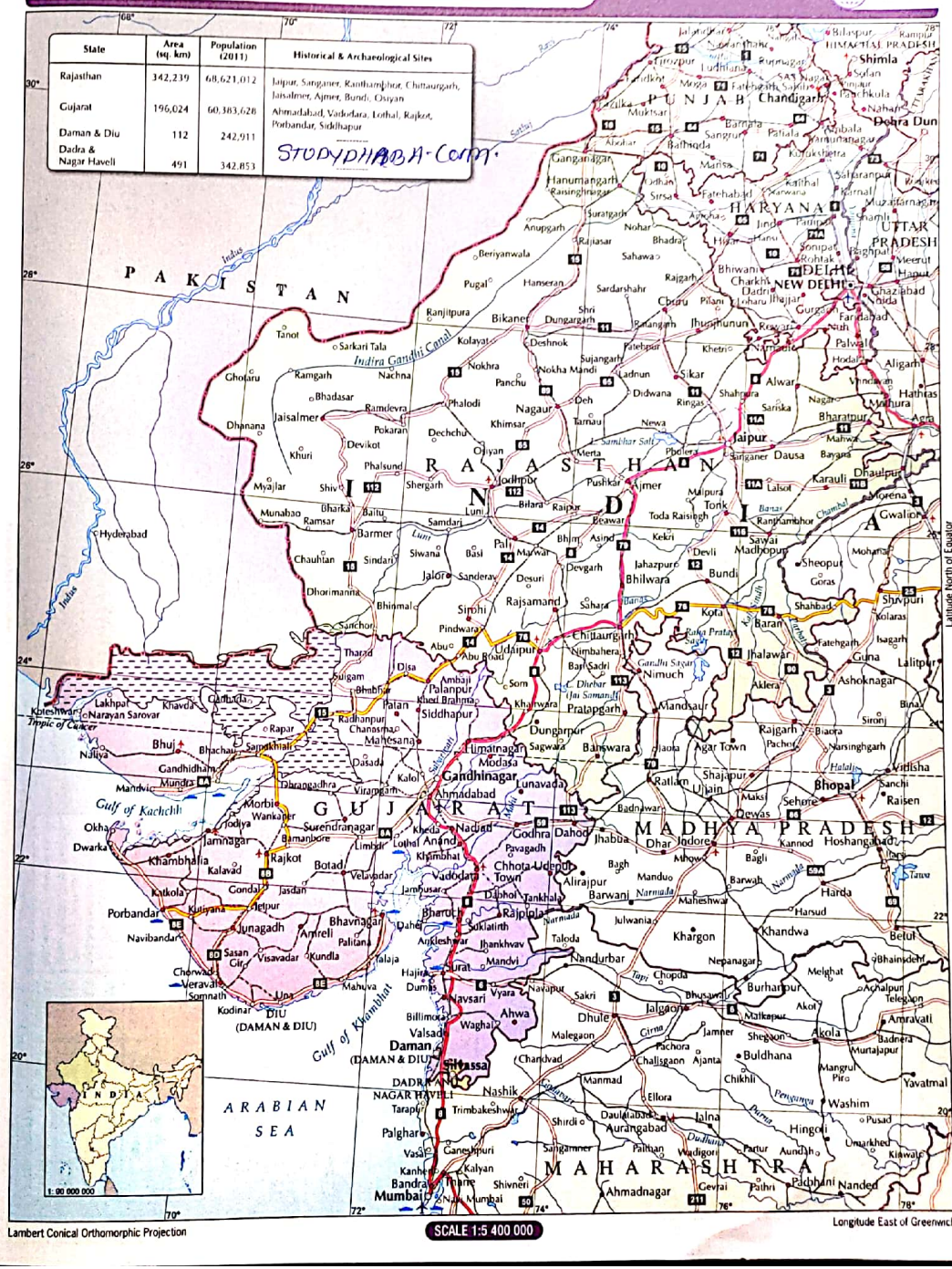
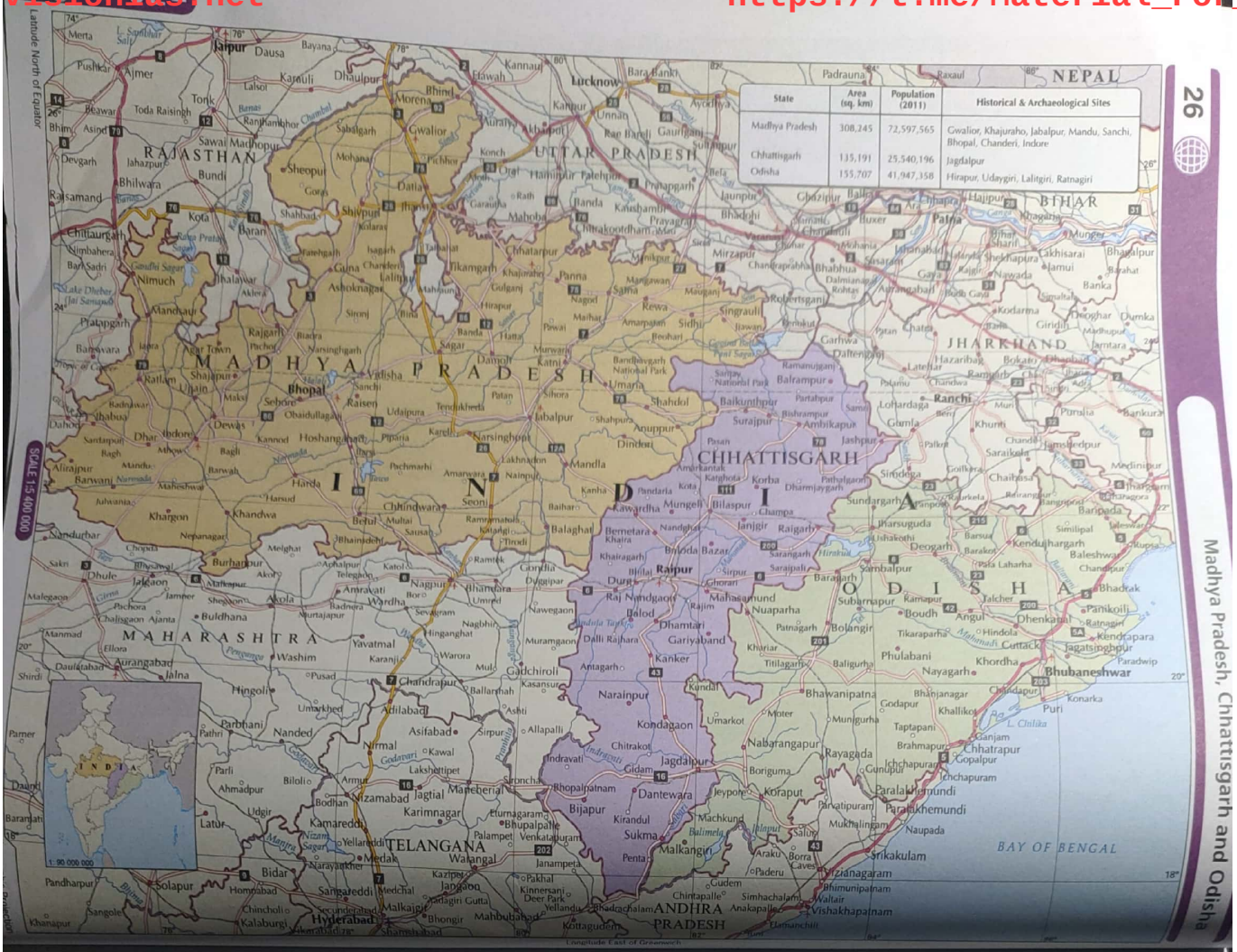
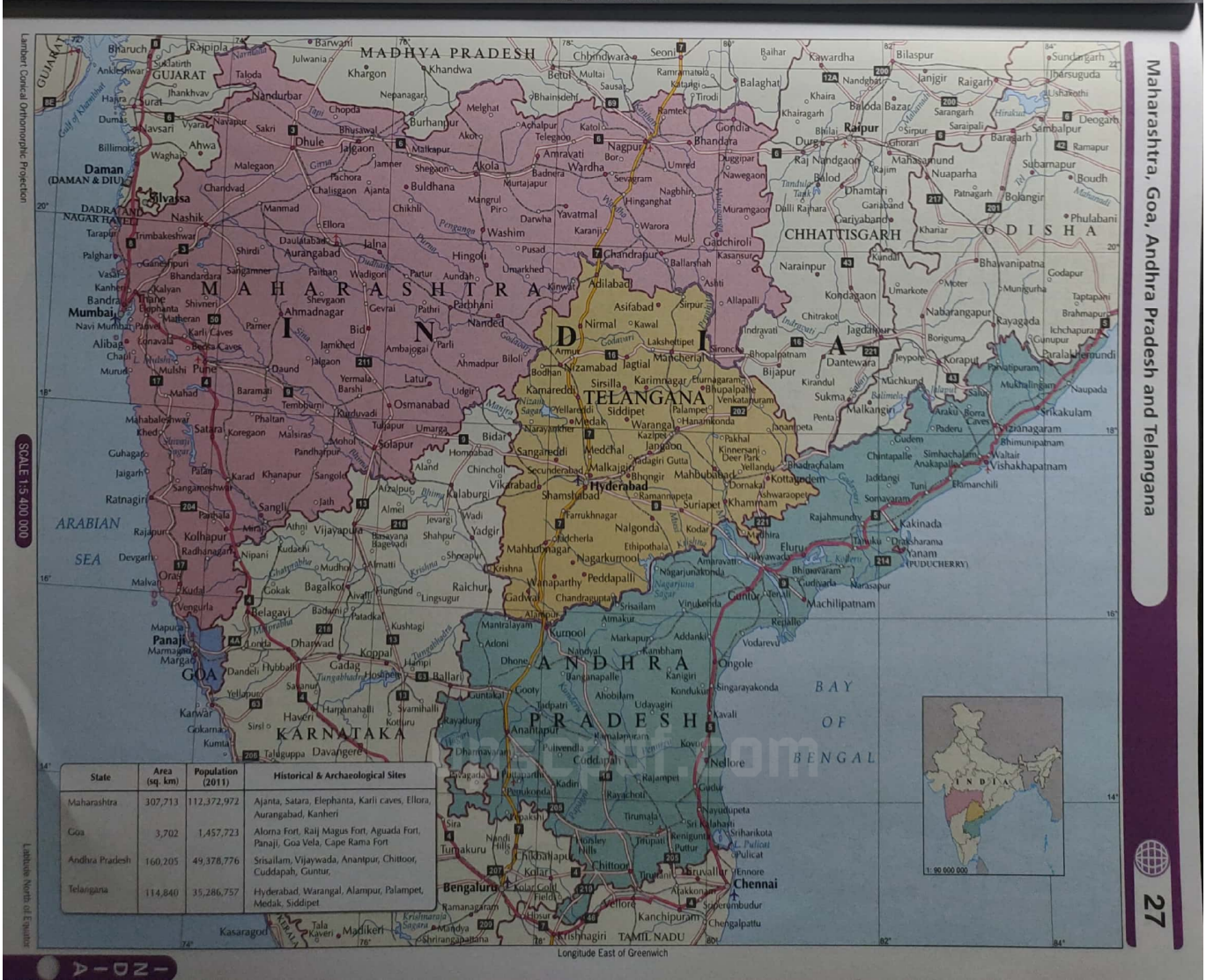


State	Area (sq. km)	Population (2011)	Historical & Archaeological Sites
Uttarakhand	53,483	10,116,752	Champawat
Uttar Pradesh	240,928	199,581,477	Agra, Fatehpur Sikri, Lucknow, Sarnath, Chunar
Bihar	94,163	103,804,637	Rajgir, Munger, Patna, Nalanda
Jharkhand	79,714	32,966,238	Rajmahal

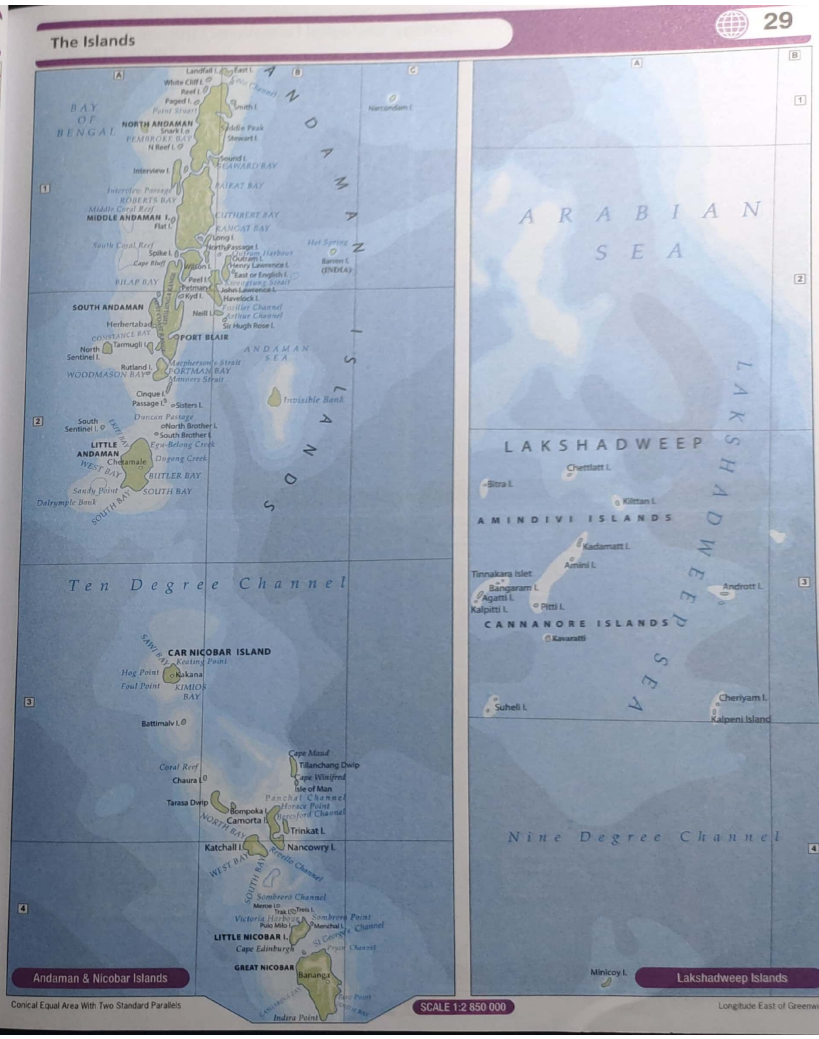
State	Area (sq. km)	Population (2011)	Historical & Archaeological Sites
Sikkim	7,096	607,688	Gangtok, Tashiding
West Bengal	88,752	91,347,736	Kolkata, Bankura, Murshidabad, Vishnupur, Bardhaman
Assam	78,438	31,169,272	Madan - Kamdev (Guwahati)
Arunachal Pradesh	83,743	1,382,611	Bhismaknagar
Meghalaya	22,429	2,964,007	------
Manipur	22,327	2,721,756	Imphal
Mizoram	21,081	1,091,014	------
Nagaland	16,579	1,980,602	------
Tripura	10,486	3,671,032	Agartala, Udaipur

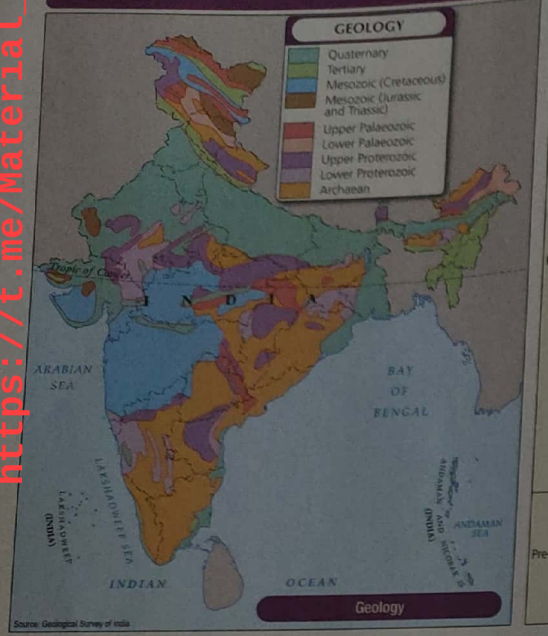


State	Area (sq. km)	Population (2011)	Historical & Archaeological Sites
Madhya Pradesh	308,245	72,597,565	Gwalior, Khajuraho, Jabalpur, Mandu, Sanchi, Bhopal, Chanderi, Indore
Chhattisgarh	135,191	25,540,196	Jagdalpur
Odisha	155,707	41,947,358	Hirapur, Udaygiri, Lalitgiri, Ratnagiri



State	Area (sq. km)	Population (2011)	Historical & Archaeological Sites
Maharashtra	307,713	112,372,972	Ajanta, Satara, Elephanta, Karli caves, Ellora, Aurangabad, Kanheri
Goa	3,702	1,457,723	Aloma Fort, Raij Magus Fort, Aguada Fort, Panaji, Goa Vela, Cape Rama Fort
Andhra Pradesh	160,205	49,378,776	Srisailam, Vijayawada, Anantpur, Chittoor, Cuddapah, Guntur,
Telangana	114,840	35,286,757	Hyderabad, Warangal, Alampur, Palampet, Medak, Siddipet

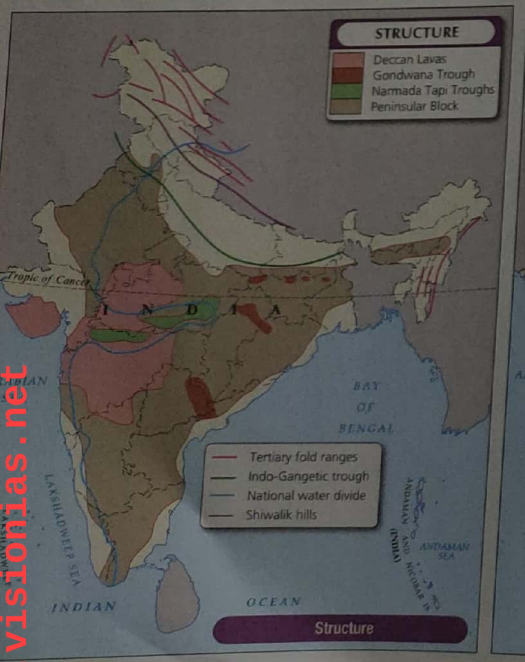


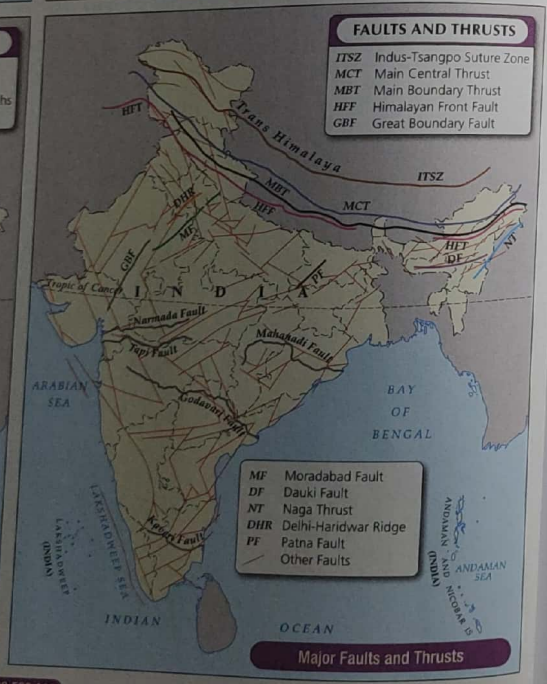


Source: Geological Survey of India

MAJOR GEOLOGICAL FORMATIONS OF INDIA

Era / Group	Period / System	Major Formations
Phanerozoic	Quaternary — Recent	Recent Alluvia, Coral reef, Sand dunes, Soils
	Quaternary — Pleistocene	Older Alluvia, Karewas of Kashmir, and Pleistocene river terraces
	Tertiary or Kainozoic — Mio-Pliocene	Shiwalik, Irrawaddy and Manchhar Systems, Cuddalore, Warkalli and Rajamahendri sandstones
	Tertiary or Kainozoic — Oligo-Miocene	Murree and Pegu Systems, Nari and Gaj series, Kasauli and Dagshai beds
	Tertiary or Kainozoic — Eocene	Ranikot-Laki-Kirthar-Chharat series, Eocene of Burma, Jaintia and Disang series, Subathu beds
	Secondary or Mesozoic — Cretaceous	Deccan Traps and Inter-trappeans, Giumal and Chikkim Series, Umia beds
	Secondary or Mesozoic — Jurassic	Kioto limestone and Spiti shales, Kota-Rajmahal and Jabalpur series
	Secondary or Mesozoic — Triassic	Lilang system including Kioto limestone, Mahadeva and Panchet series
	Primary or Palaeozoic — Upper — Permian	Kulling system, Damuda system
	Primary or Palaeozoic — Upper — Carboniferous	Lipak and Po series, Talchir series
	Primary or Palaeozoic — Upper — Devonian	Muth Quartzite
	Primary or Palaeozoic — Lower — Silurian	Silurian of Burma and Himalayas
	Primary or Palaeozoic — Lower — Ordovician	Ordovician of Burma and Himalayas
	Primary or Palaeozoic — Lower — Cambrian	Haimanta series, Garbyang series
Pre-Cambrian	Pre-Cambrian or Proterozoic — Upper	Vindhyan systems, Darjiling series, Daling series, Dogra and Simla slates,
	Pre-Cambrian or Proterozoic — Lower	Cuddapah systems, Delhi systems, Shillong series, Martoli series
	Archaean or Azoic — Archaean	Dharwar and Aravalli systems, Salkhala, Jutogh and Chail series, Gniesses etc.





Lambert Conical Orthomorphic Projection
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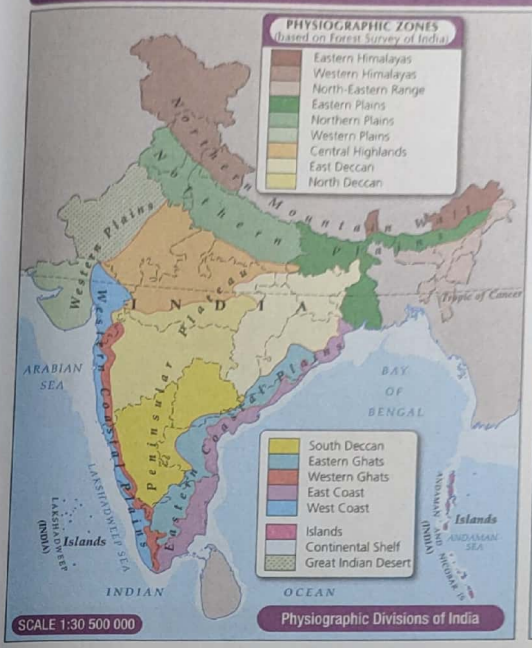

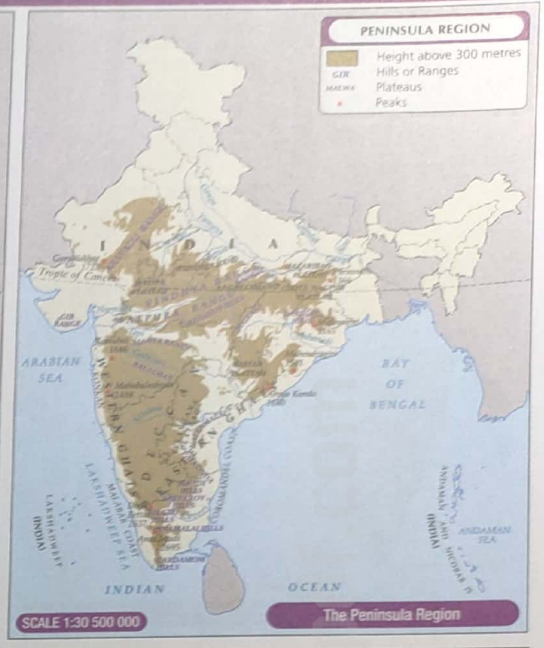

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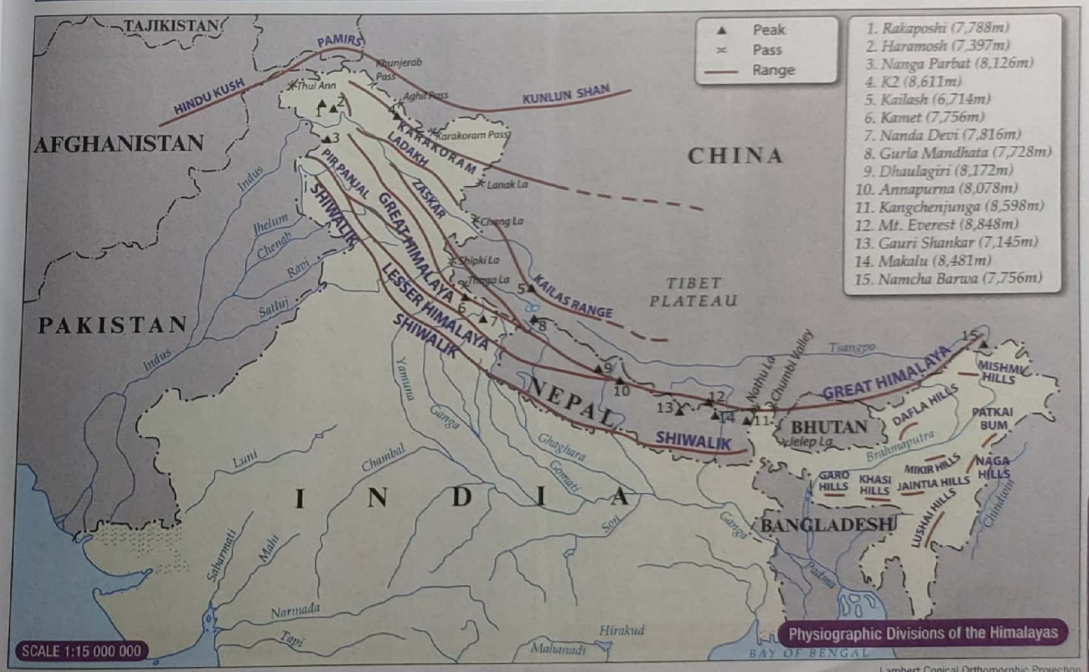

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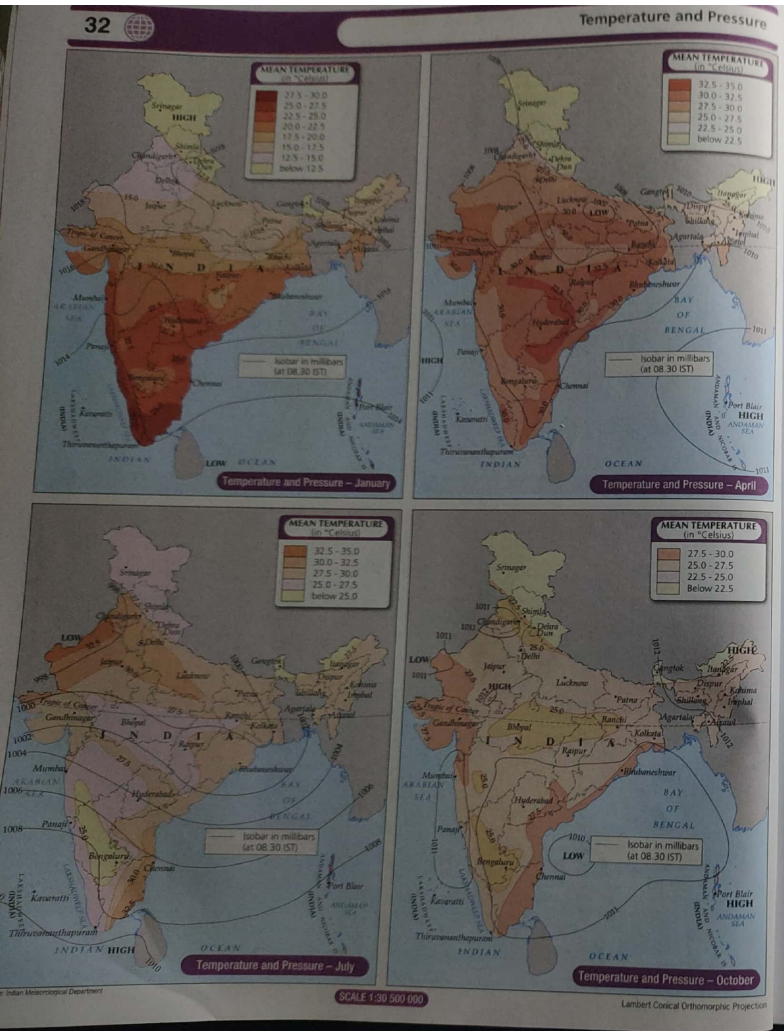
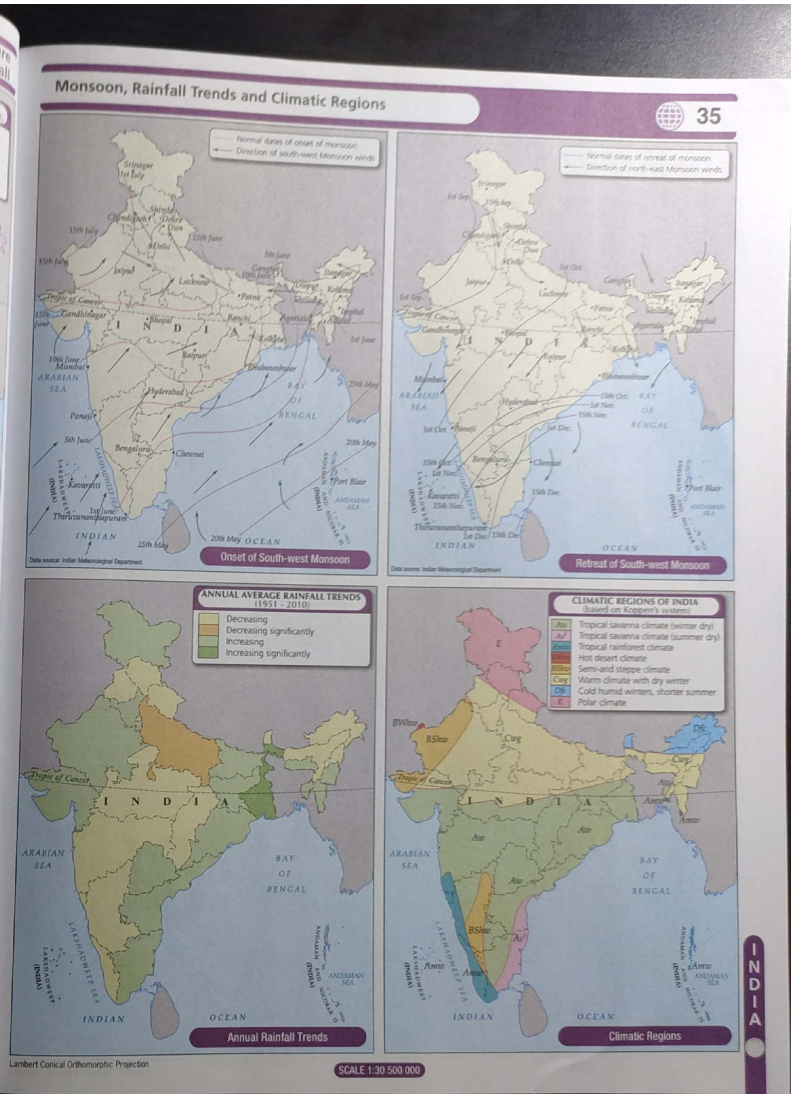
Lambert Conical Orthomorphic Projection

INDIA





Drainage Basins and East & West Flowing Rivers

MAJOR RIVER BASINS OF THE COUNTRY (Figures within brackets indicate total length of rivers and basin area)

Sl. No.	Name of the River	Origin	Length (km)	Catchment Area (sq. km)
	East flowing rivers			
1	Baitarani	Keonjhar (Odisha)	365	12,789
2	Brahmani	Ranchi (Jharkhand)	799	39,033
3	Brahmaputra	Kailash Range (Tibet)	916 (2,900)	194,413 (580,000)
4	Ganga	Gangotri (Uttarakhand)	2,525	861,452 (1,186,000)
5	Godavari	Nasik (Maharashtra)	1,465	312,812
6	Kaveri	Coorg (Karnataka)	800	81,155
7	Krishna	Mahabaleshwar (Maharashtra)	1,401	258,948
8	Mahanadi	Nazri Town (Madhya Pradesh)	851	141,589
9	Palar (including tributary Cheyyar)	Kolar (Karnataka)	348	17,871
10	Penneru	Kolar (Karnataka)	597	55,213
11	Ponnaiyar	Kolar (Karnataka)	396	14,130
12	Subarnarekha	Nagri/Ranchi (Jharkhand)	395	19,296
13	Vamsadhara	Kalahandi (Odisha)	221	10,830
	West flowing rivers			
14	Indus	Mansarovar (Tibet)	1,114 (2,880)	321,289 (1,165,500)
15	Mahi	Dhar (Madhya Pradesh)	583	34,842
16	Narmada	Amarkantak (Madhya Pradesh)	1,312	98,796
17	Sabarmati	Aravalli Hills (Rajasthan)	371	21,674
18	Tapi	Betul (Madhya Pradesh)	724	65,145
		Total		2,403,000

OTHER MINOR EAST AND WEST FLOWING RIVERS

East flowing rivers		West flowing rivers	
Name of the river	Name of the river	Name of the river	Name of the river
Burhabalang	Swarnamukhi	Ozat	Sastri
Rushikulya	Kandleru	Shetrunji	Washishthi
Bahuda	Kortalaiyar	Bhadar	Mandvi
Nagavali	Varahandi	Aji	Kalinadi
Sarda	Vellar	Dhadhar	Gangavati or Bedti
Vellar	Vaigai	Purna	Sharavati
Eleru	Pambar	Ambika	Netravati
Vegavagu	Gundar	Vaitarna	Chaliar or Baypore
Gundlakamma	Vaipar	Damanganga	Ponnani
Musi	Tambaparni	Ulhas	Periyar
Pleru		Savitri	Pumba

SCALE 1:24 000 000

Lambert Conical Orthomorphic Projection

LAND USE – 2012-13
(Out of total reporting area available for land utilization)

Data source: Statistical Year Book India, 2016

DISTRIBUTION OF THE SOILS IN INDIA
(Out of total land available for agriculture, forestry and related purposes)

Total geographical area	328 million hectares
Reported land utilization	306 million hectares
Land available for agriculture, forestry and related purposes	264 million hectares

Data source: National Bureau of Soil Survey and Landuse Planning

TYPES OF SOIL

Zonal soils, formed under conditions of good soil drainage through the prolonged action of climate and vegetation.

Intrazonal soils are simply those formed under conditions of very poor drainage.

Azonal soils have no well-developed profile characteristics, either because they have had insufficient time to develop or because they are on slopes too steep to allow profile development.

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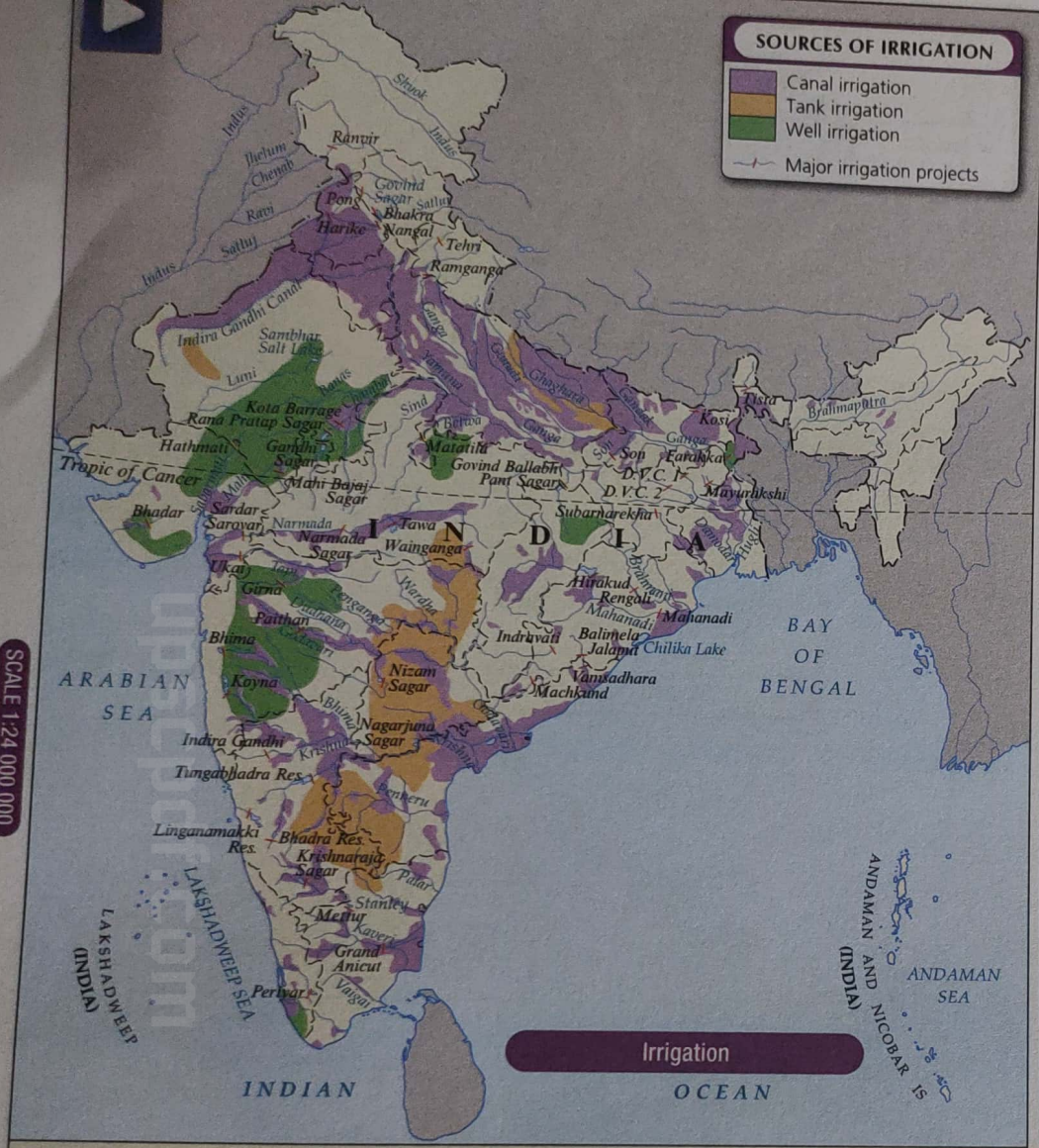
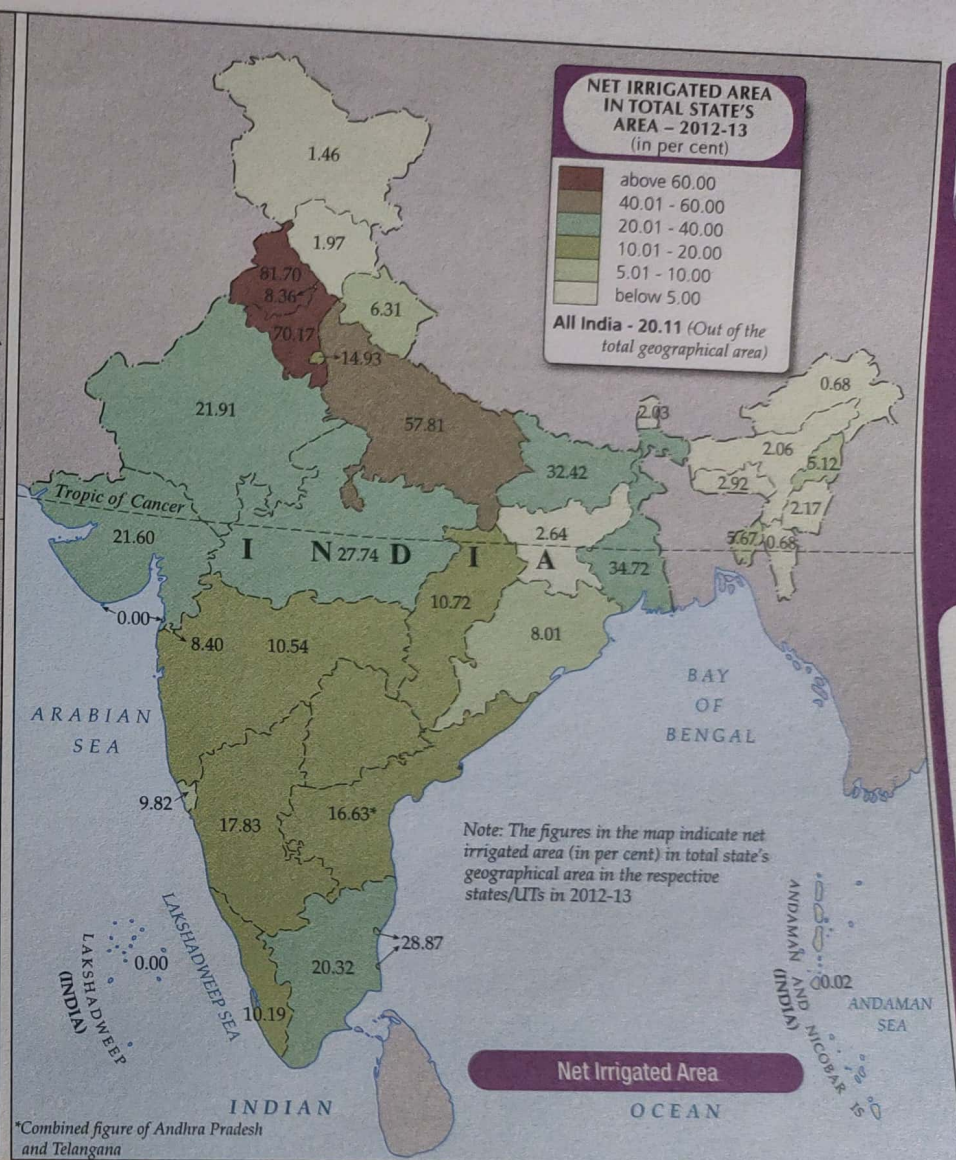
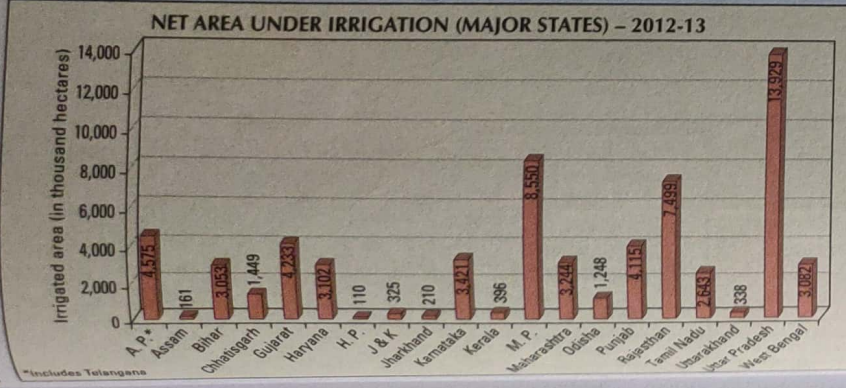
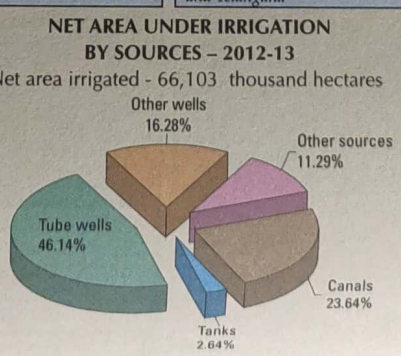
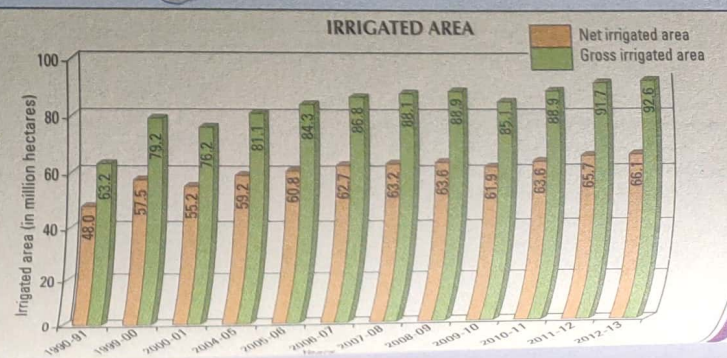




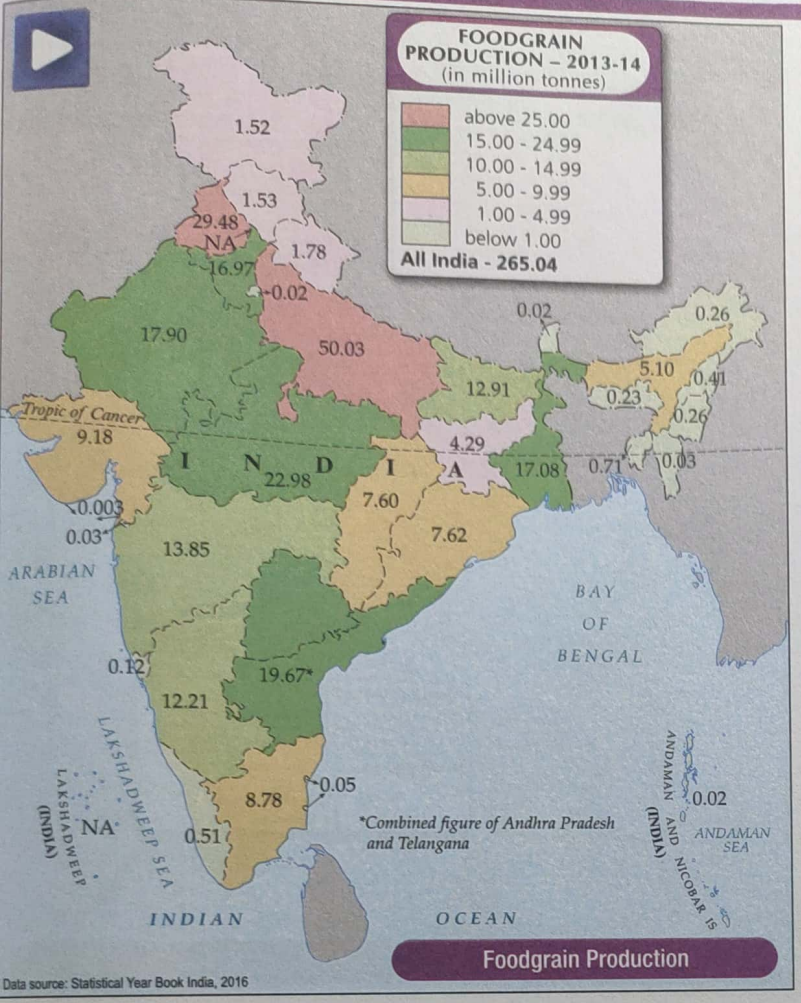


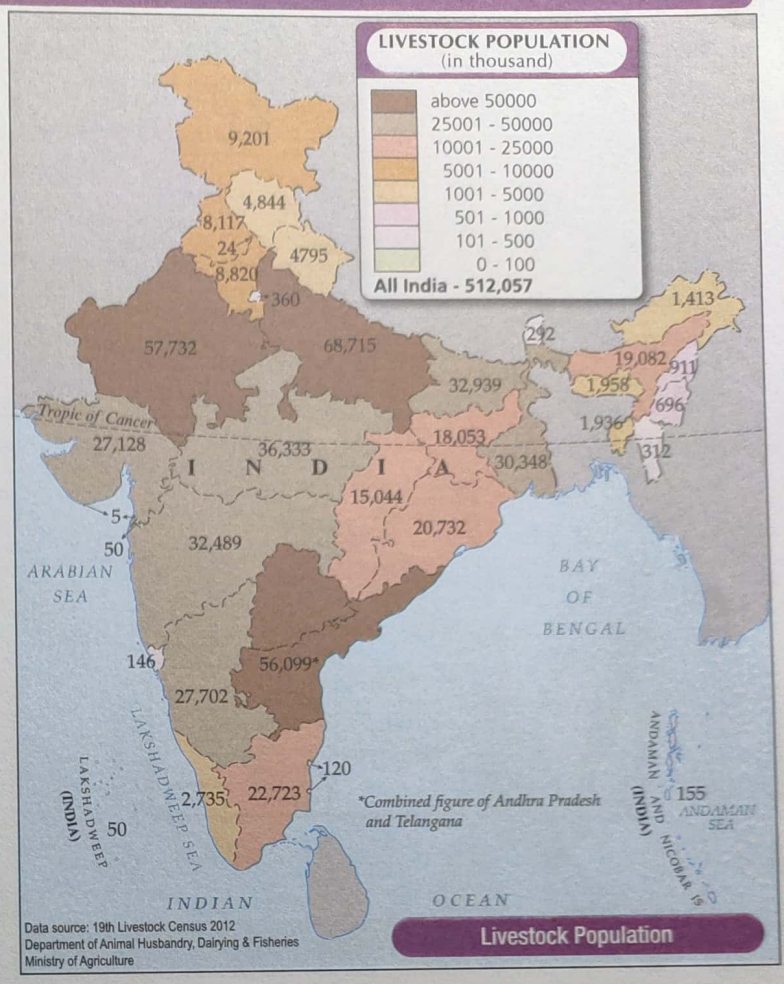


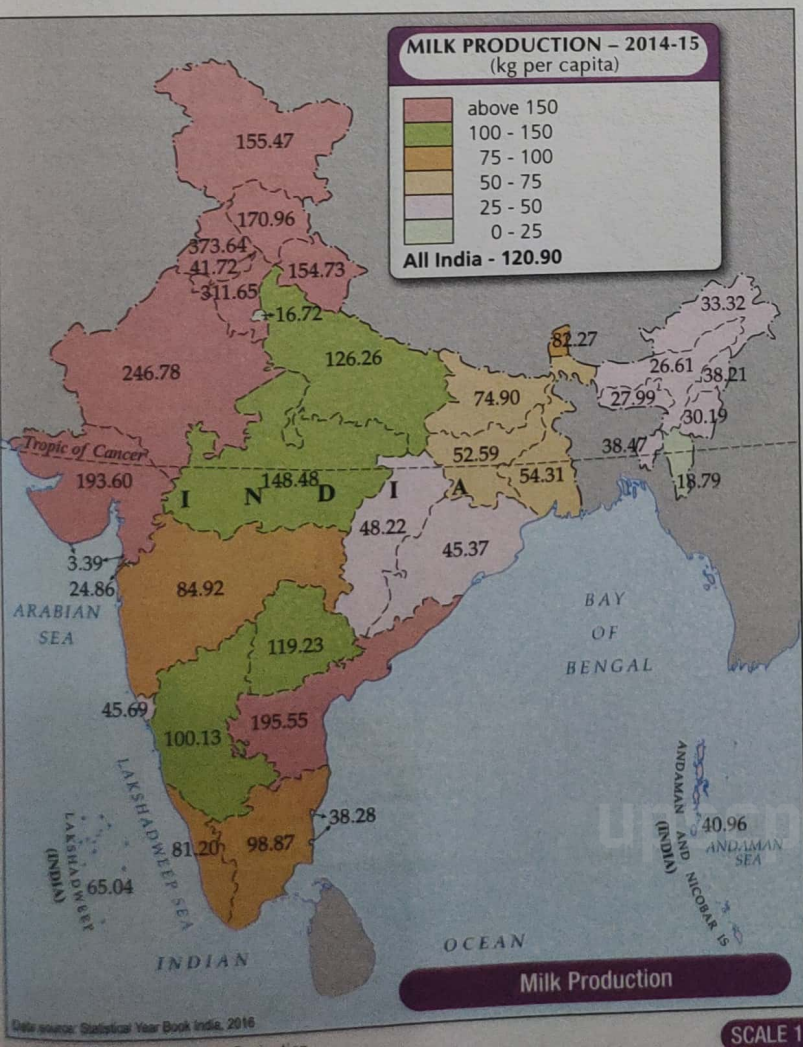


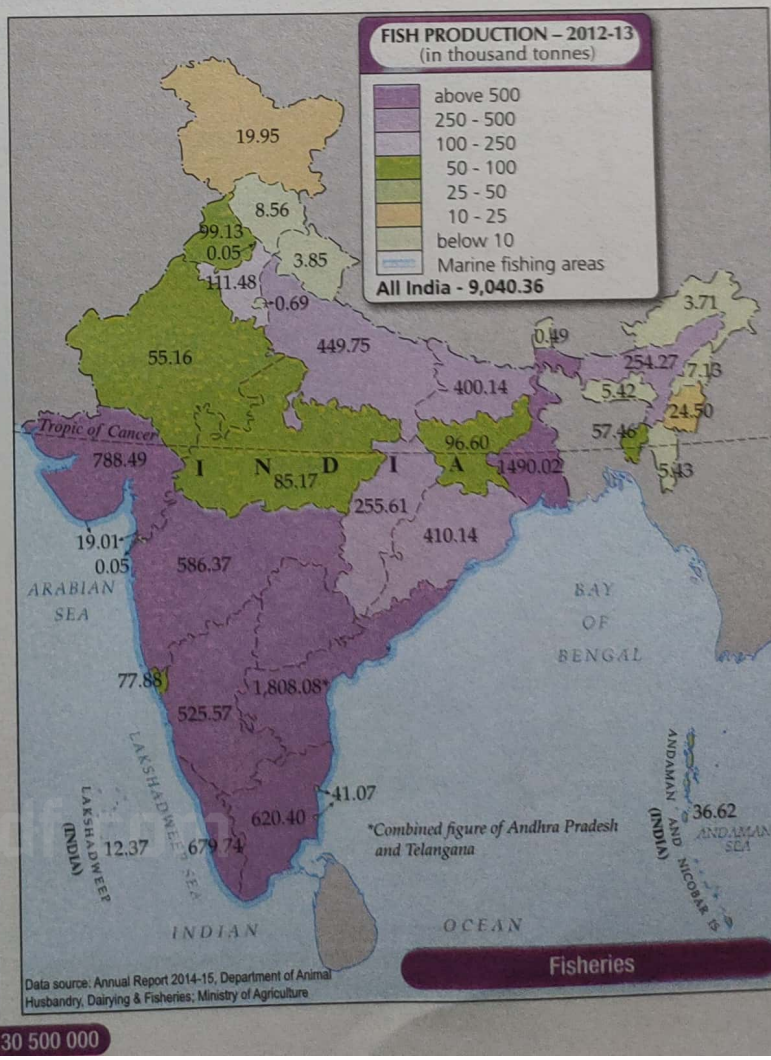
Irrigation and Net Irrigated Area

Lambert Conical Orthomorphic Projection









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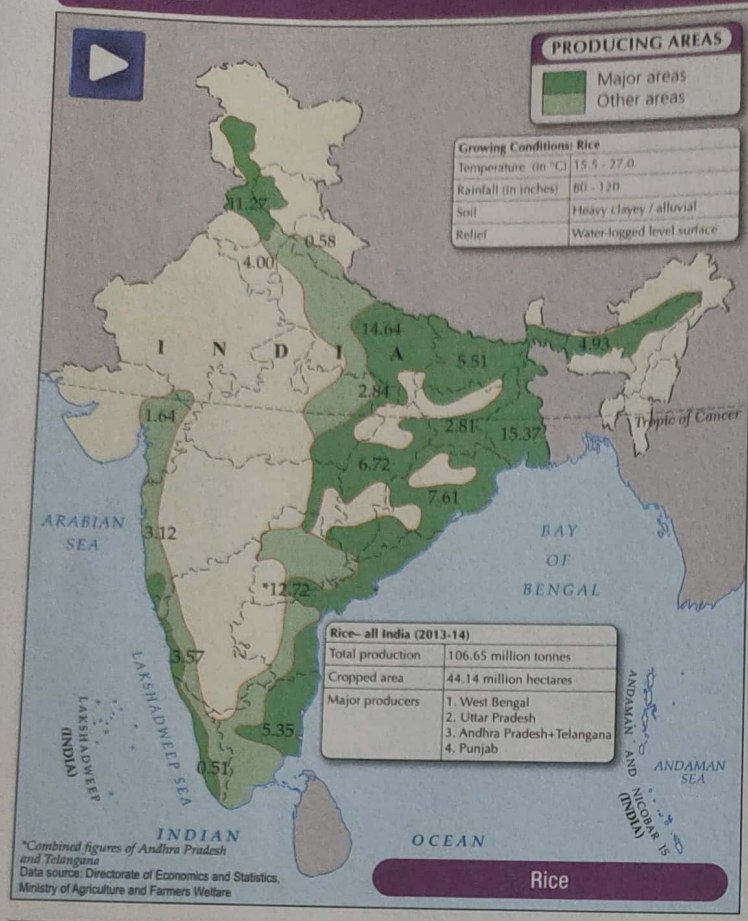
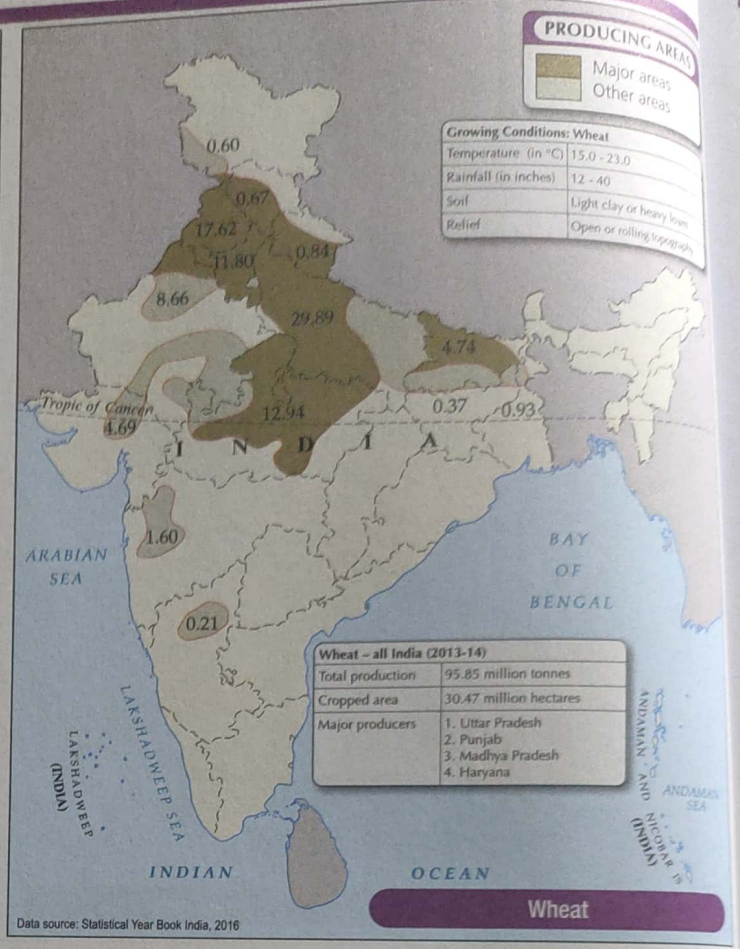
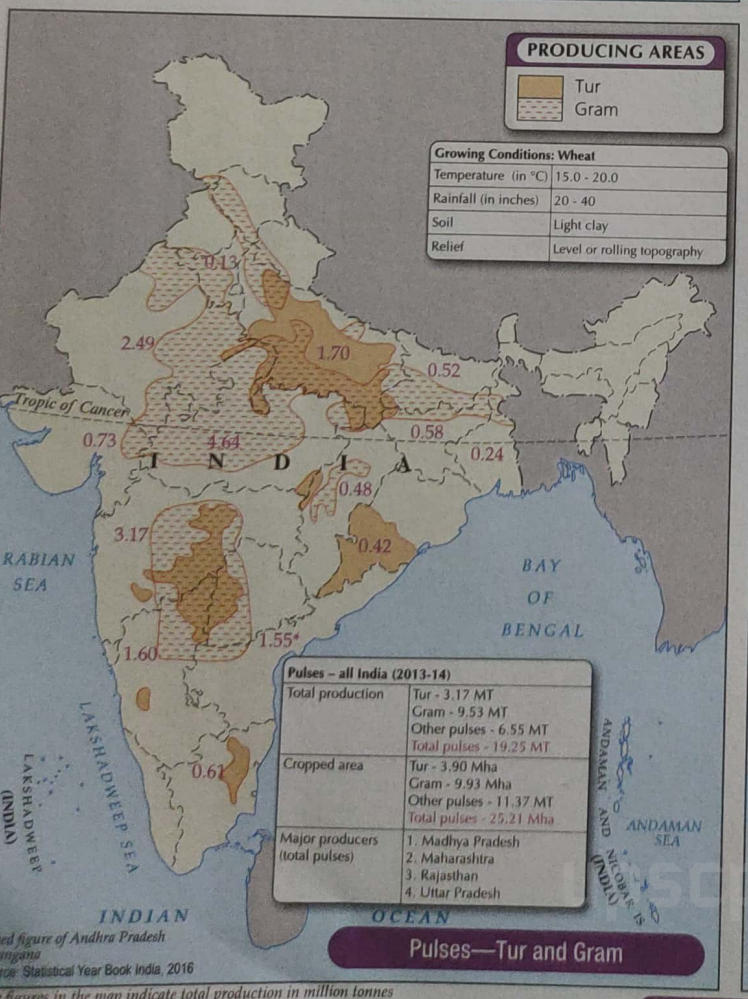
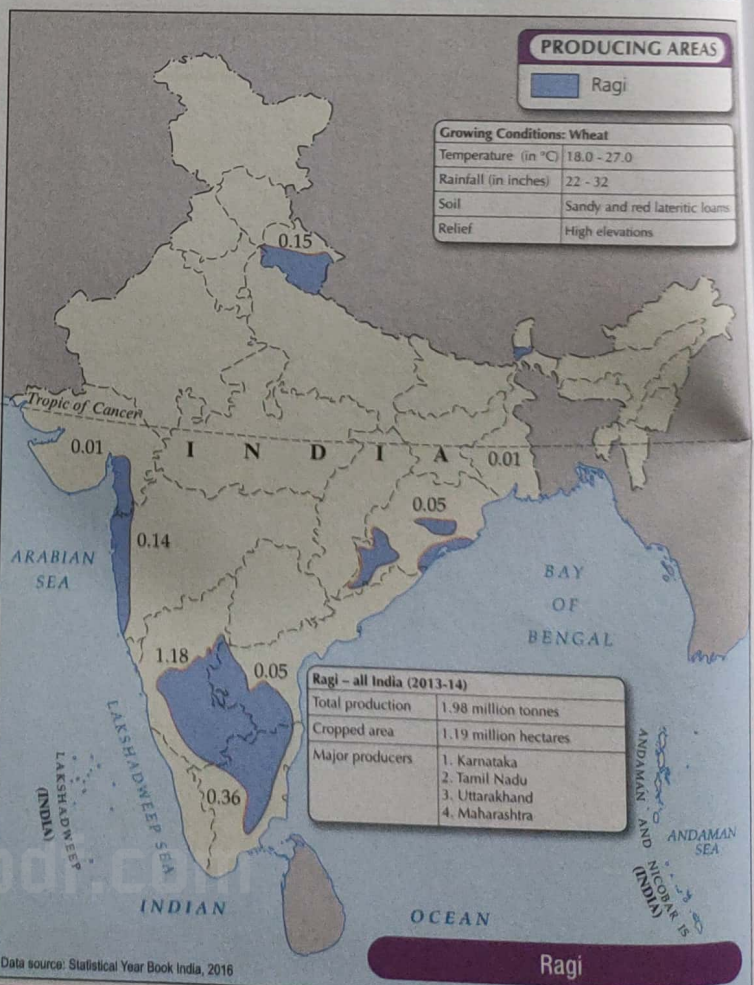




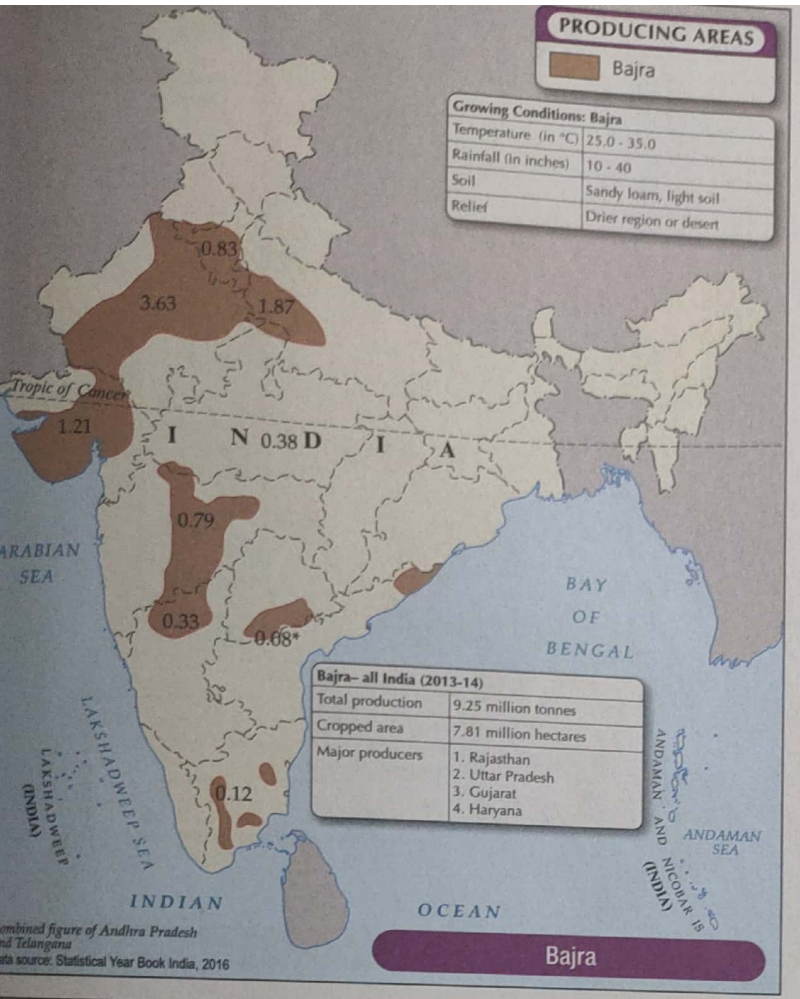


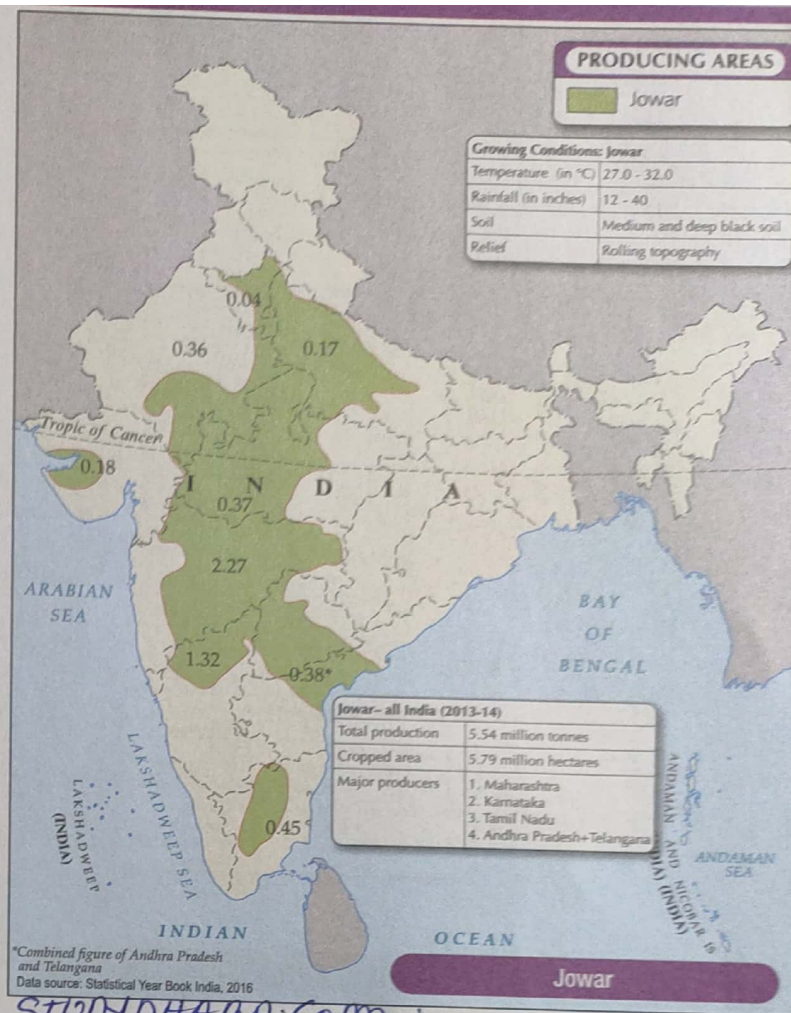


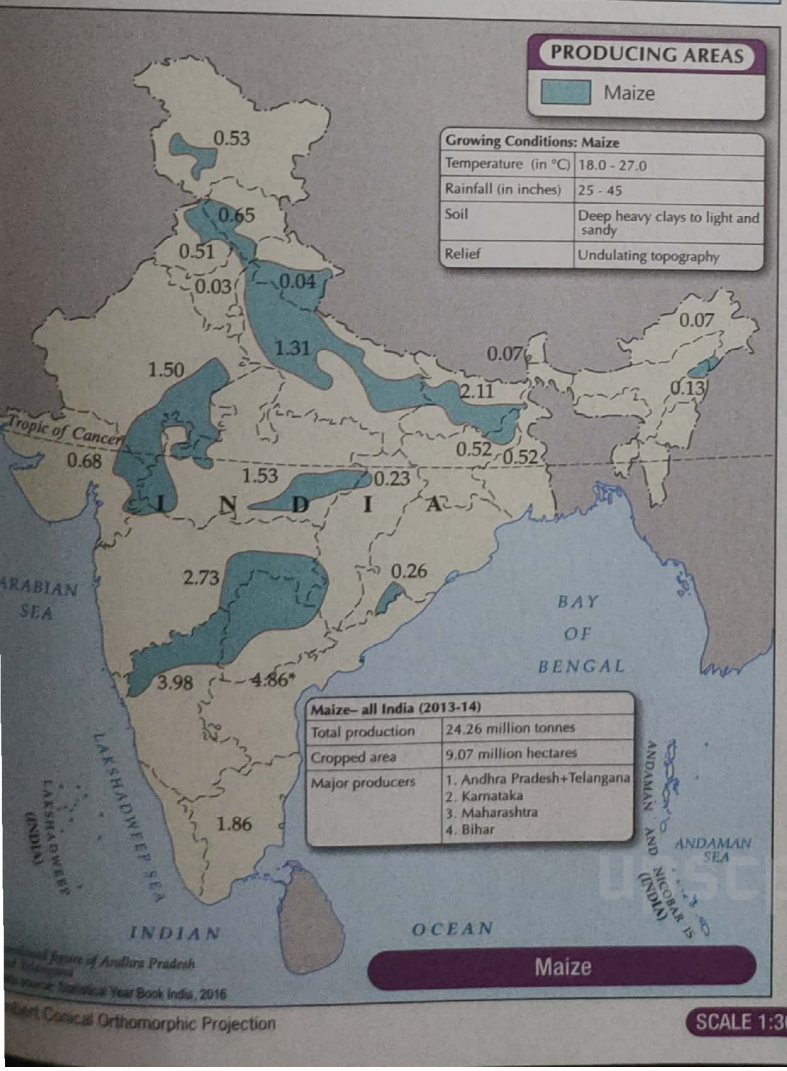
The figures in the map indicate total production in million tonnes in the respective state/union territory in 2013-14.

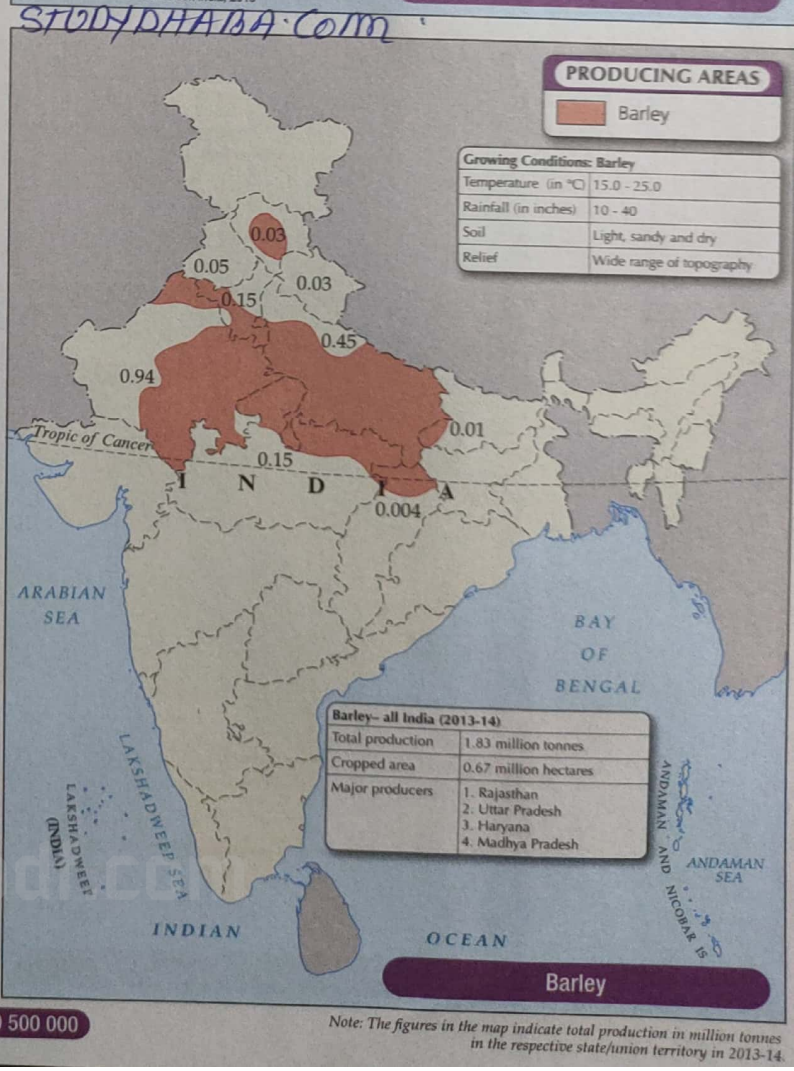
SCALE 1:30 500 000

Lambert Conical Orthomorphic Projection

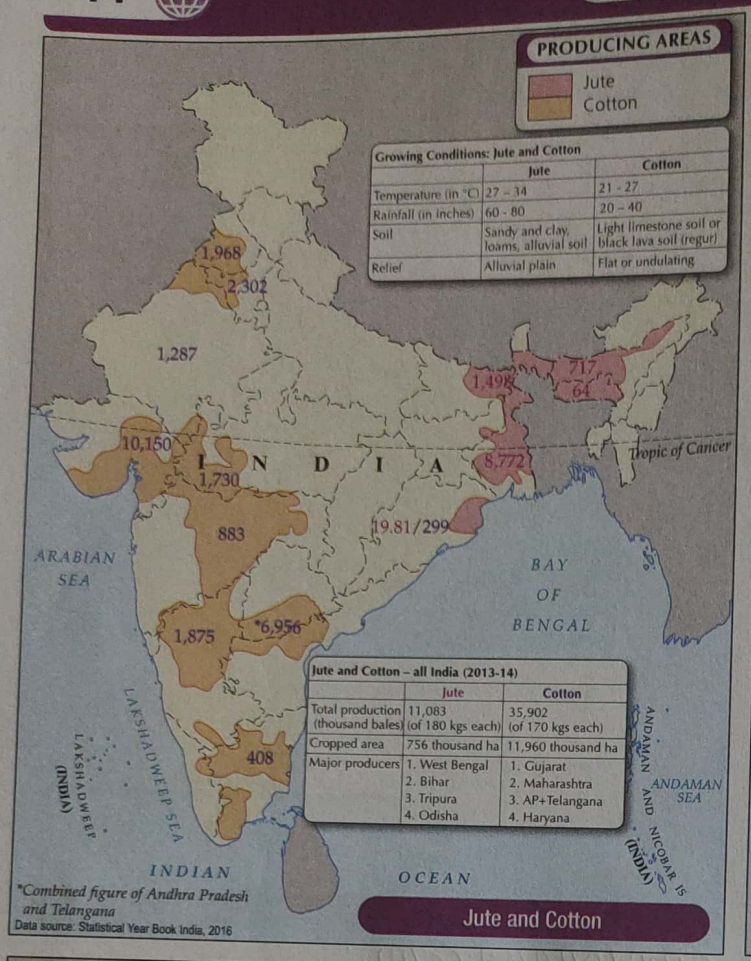






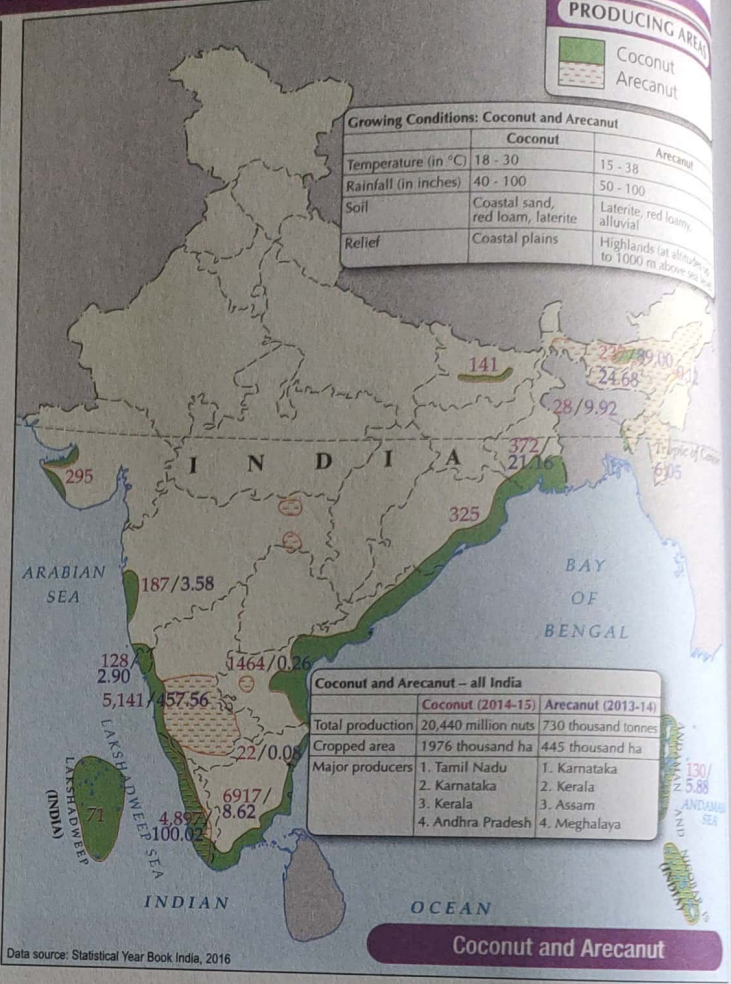


Data source: Statistical Year Book India, 2016
Albert Conical Orthomorphic Projection
SCALE 1:30 500 000
Note: The figures in the map indicate total production in million tonnes in the respective state/union territory in 2013-14.



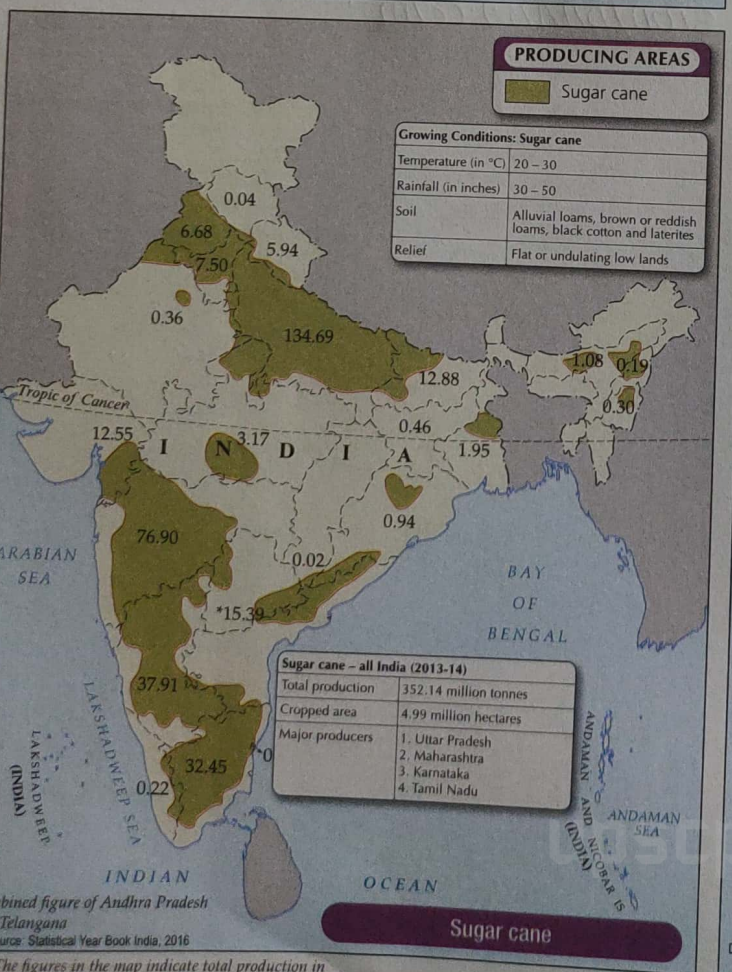
Growing Conditions: Jute and Cotton	Jute	Cotton
Temperature (in °C)	27 – 34	21 – 27
Rainfall (in inches)	60 - 80	20 – 40
Soil	Sandy and clay, loams, alluvial soil	Light limestone soil or black lava soil (regur)
Relief	Alluvial plain	Flat or undulating

Jute and Cotton – all India (2013-14)	Jute	Cotton
Total production	11,083 (thousand bales) (of 180 kgs each)	35,902 (of 170 kgs each)
Cropped area	756 thousand ha	11,960 thousand ha
Major producers	1. West Bengal 2. Bihar 3. Tripura 4. Odisha	1. Gujarat 2. Maharashtra 3. AP+Telangana 4. Haryana



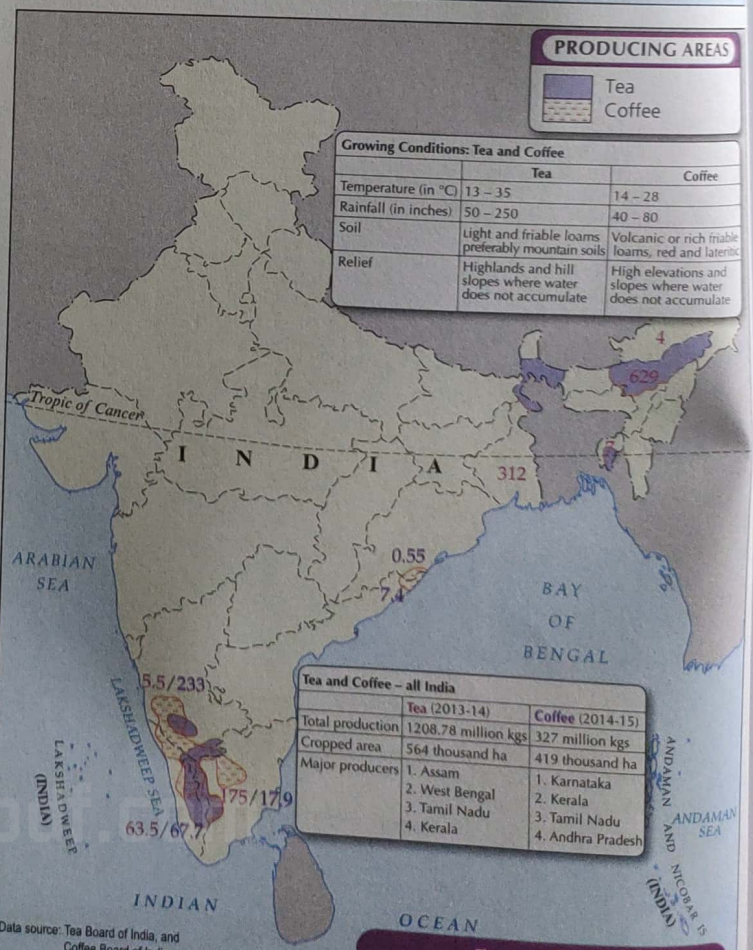
Growing Conditions: Coconut and Arecanut	Coconut	Arecanut
Temperature (in °C)	18 - 30	15 - 38
Rainfall (in inches)	40 - 100	50 - 100
Soil	Coastal sand, red loam, laterite	Laterite, red loamy, alluvial
Relief	Coastal plains	Highlands (at altitudes up to 1000 m above sea level)

Coconut and Arecanut – all India	Coconut (2014-15)	Arecanut (2013-14)
Total production	20,440 million nuts	730 thousand tonnes
Cropped area	1976 thousand ha	445 thousand ha
Major producers	1. Tamil Nadu 2. Karnataka 3. Kerala 4. Andhra Pradesh	1. Karnataka 2. Kerala 3. Assam 4. Meghalaya



Growing Conditions: Sugar cane	
Temperature (in °C)	20 – 30
Rainfall (in inches)	30 – 50
Soil	Alluvial loams, brown or reddish loams, black cotton and laterites
Relief	Flat or undulating low lands

Sugar cane – all India (2013-14)	
Total production	352.14 million tonnes
Cropped area	4.99 million hectares
Major producers	1. Uttar Pradesh 2. Maharashtra 3. Karnataka 4. Tamil Nadu



Growing Conditions: Tea and Coffee	Tea	Coffee
Temperature (in °C)	13 – 35	14 – 28
Rainfall (in inches)	50 – 250	40 – 80
Soil	Light and friable loams preferably mountain soils	Volcanic or rich friable loams, red and lateritic
Relief	Highlands and hill slopes where water does not accumulate	High elevations and slopes where water does not accumulate

Tea and Coffee – all India	Tea (2013-14)	Coffee (2014-15)
Total production	1208.78 million kgs	327 million kgs
Cropped area	564 thousand ha	419 thousand ha
Major producers	1. Assam 2. West Bengal 3. Tamil Nadu 4. Kerala	1. Karnataka 2. Kerala 3. Tamil Nadu 4. Andhra Pradesh

Note: The figures in the map indicate total production in the respective state/union territory.

SCALE 1:30 500 000

Lambert Conical Orthomorphic Projection

Oilseeds and Spices

Growing Conditions: Oilseeds		
	Rapeseed and Mustard	Other Oilseeds
Temperature (in °C)	10.0 - 20.0	18.0 - 28.0
Rainfall (in inches)	12 - 20	18 - 40
Soil	Alluvial	Light and sandy loams, clayey, black, alluvial
Relief	Open and level surface	Level or rolling

Major Producers (total oilseeds) 2013-14
1. Gujarat, 2. Madhya Pradesh, 3. Rajasthan, 4. Maharashtra

Total production: All India (2013-14)
Total oilseeds* - 32.75 million tonnes
All spices - 5,908 thousand tonnes
*(includes groundnuts, sesamum, rapeseed and mustard, linseed and castor seed)

PRODUCING AREAS
- Oilseeds
- Pepper
- Cardamom (small)
- Cardamom (large)
- Chilli
- Ginger
- Turmeric

Cropped area (2013-14)
Oilseeds - 28.05 million hectares
All spices - 3,163 thousand ha

*Combined figure of Andhra Pradesh and Telangana
Data source: Statistical Year Book India, 2016

Tobacco

PRODUCING AREAS
- Tobacco

Growing Conditions: Tobacco	
Temperature (in °C)	18 – 25
Rainfall (in inches)	20 – 40
Soil	Friable and sandy loams
Relief	Uplands

Tobacco – all India (2013-14)	
Total production	778.39 thousand tonnes
Cropped area	431.41 thousand hectares
Major producers	1. AP+Telangana 2. Gujarat 3. Uttar Pradesh 4. Karnataka

*Combined figure of Andhra Pradesh and Telangana
Data source: Statistical Year Book India, 2016

Banana

PRODUCING AREAS
- Banana

Growing Conditions: Banana	
Temperature (in °C)	Above 11
Rainfall (in inches)	Above 60
Soil	Deep, well-drained soils, alluvial soils
Relief	Flat or undulating low lands

Banana – all India (2013-14)	
Total production	29.72 million tonnes
Cropped area	802.57 thousand hectares
Major producers	1. Tamil Nadu 2. Maharashtra 3. Gujarat 4. AP+Telangana

*Combined figure of Andhra Pradesh and Telangana
Data source: Statistical Year Book India, 2016

Potato

PRODUCING AREAS
- Potato

Growing Conditions: Potatoes	
Temperature (in °C)	15 – 25
Rainfall (in inches)	30 – 80
Soil	Well-fertilized, sunny land with sufficient moisture in soil, alluvial soils
Relief	Alluvial plains

Potatoes – all India (2013-14)	
Total production	41.56 million tonnes
Cropped area	1,973 thousand hectares
Major producers	1. Uttar Pradesh 2. West Bengal 3. Bihar 4. Madhya Pradesh

*Combined figure of Andhra Pradesh and Telangana
Data source: Statistical Year Book India, 2016

SCALE 1:30 500 000

Lambert Conical Orthomorphic Projection

Note: The figures in the map indicate total production in the respective state/union territory in 2013-1

Important Mineral Belts and Number of Reported Mines

IMPORTANT MINERAL BELTS OF INDIA

No.	Belt	Stretch	Important Deposits
1.	The North-eastern Peninsular Belt	Chota Nagpur and Odisha Plateaus in the states of Jharkhand, Chhattisgarh, Odisha, Bihar and West Bengal	Coal, iron ore, manganese, mica, bauxite, copper, kyanite, chromite, beryl, apatite, uranium phosphate, dolomite, china clay, limestone, fire clay and asbestos
2.	The Central Belt	Parts of Chhattisgarh, Madhya Pradesh, Andhra Pradesh and Maharashtra	Manganese ore, bauxite, limestone, copper, marble, lignite, coal, gems, mica, iron ore and graphite
3.	The Southern Belt	Stretches over the states of Andhra Pradesh, Karnataka and Tamil Nadu	Rich in ferrous minerals and others such as bauxite, lignite, gold, iron ore, chromite, mica, manganese, gypsum, asbestos, dolomite, china clay, limestone, etc
4.	The Western Belt	Rajasthan, Gujarat and Maharashtra	Rich in non-ferrous metals such as copper, lead, zinc, uranium, mica, salt, manganese, asbestos, precious stones, mineral oil and natural gas
5.	The South-Western Belt	Goa, Karnataka and Kerala	Iron ore, garnet, clay, ilmenite, bauxite, mica, limestone, zircon, monazite sands, etc.
6.	The Himalayan Belt	The Himalayas	Copper, lead, nickel, bauxite, silver, gypsum, limestone, dolomite, tungsten, cobalt, etc.
7.	The Continental Shelf	Continental shelf of Arabian Sea and the Bay of Bengal	Mineral oil, natural gas, silicon, iron, magnetite, chromium, monazite, aluminium, barium, etc.

PRODUCTION OF METALLIC MINERALS
Major producing states

PRODUCTION OF NON-METALLIC MINERALS
Major producing states

Tropic of Cancer
ARABIAN SEA
BAY OF BENGAL
INDIAN OCEAN
LAKSHADWEEP SEA
LAKSHADWEEP (INDIA)
ANDAMAN AND NICOBAR IS (INDIA)
ANDAMAN SEA
I N D I A

Note: The figures in the map indicate value of total production of metallic minerals (in billion rupees) in the respective states in 2013-14.
All India - 426.52 billion rupees

Production—Metallic Minerals

Note: The figures in the map indicate value of total production of non-metallic minerals (in billion rupees) in the respective states in 2013-14.
All India - 73.56 billion rupees

Production—Non-Metallic Minerals

*Combined figure of Andhra Pradesh and Telangana

METALLIC MINERALS PRODUCTION – 2013-14
(All India - 426.52 billion rupees)

SHARE OF STATES IN VALUE OF MINERAL PRODUCTION – 2013-14
(Metallic and Non-metallic combined)

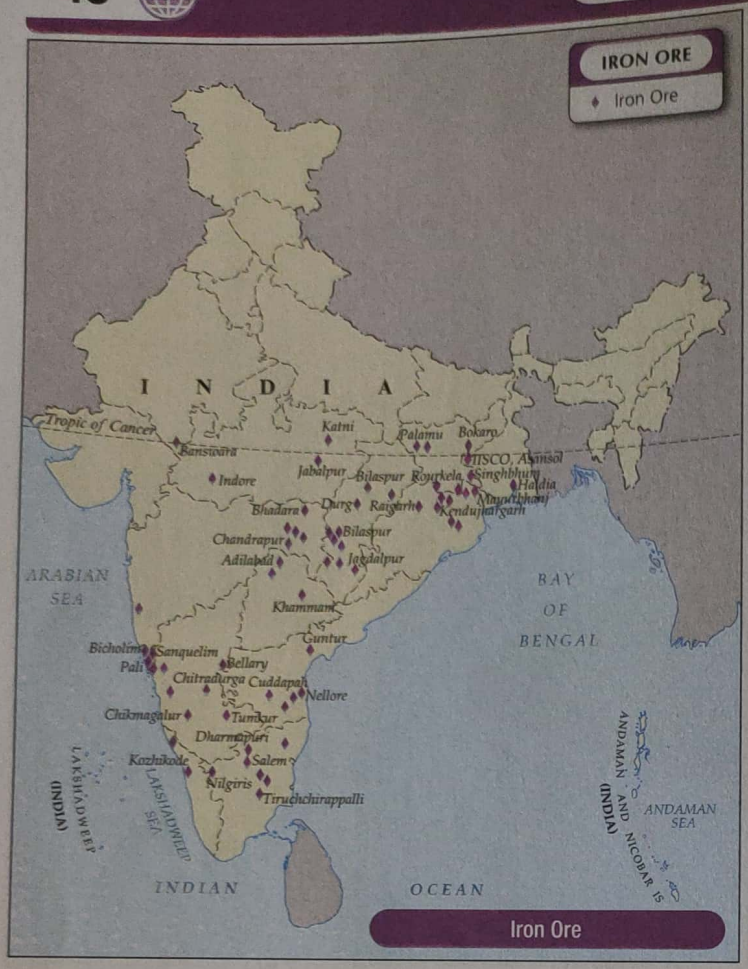
NON-METALLIC MINERALS PRODUCTION – 2013-14
(All India - 73.56 billion rupees)

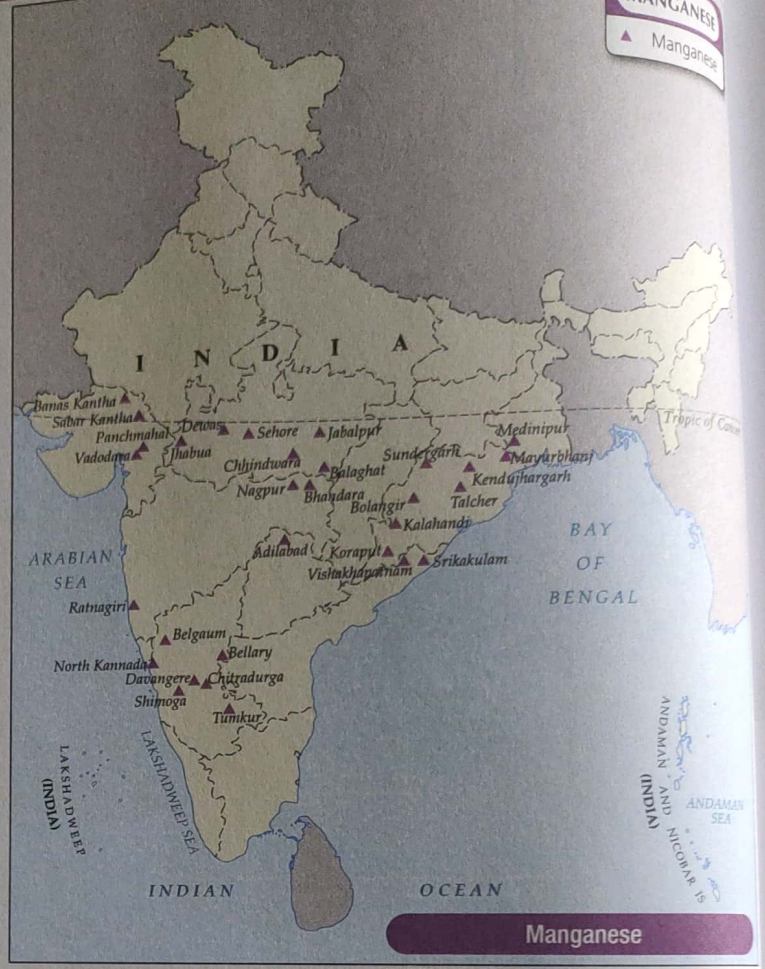
SCALE 1:24 000 000

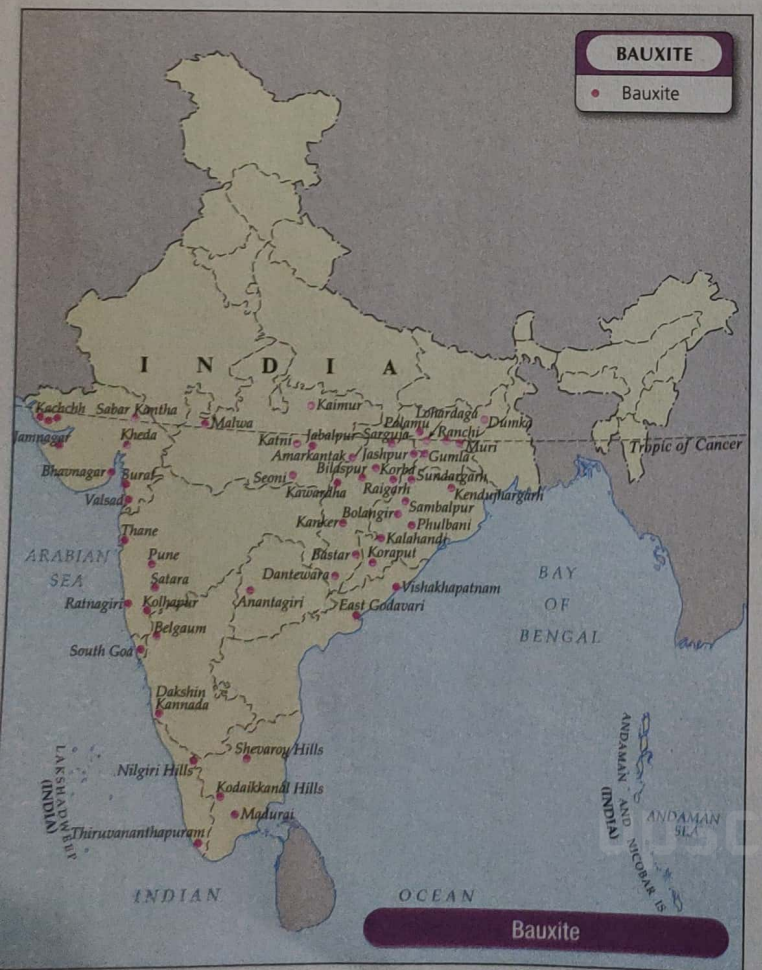
Conical Orthomorphic Projection

Data source: Statistical Year Book India, 2016 and Annual Report 2014-15, Ministry of Mines

INDIA







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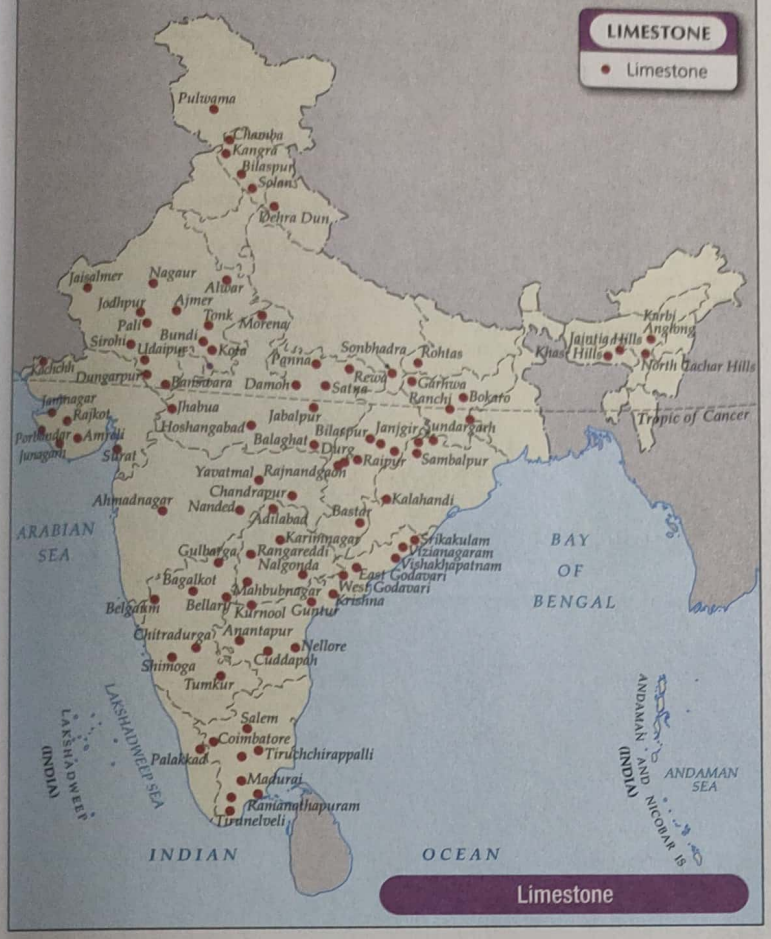
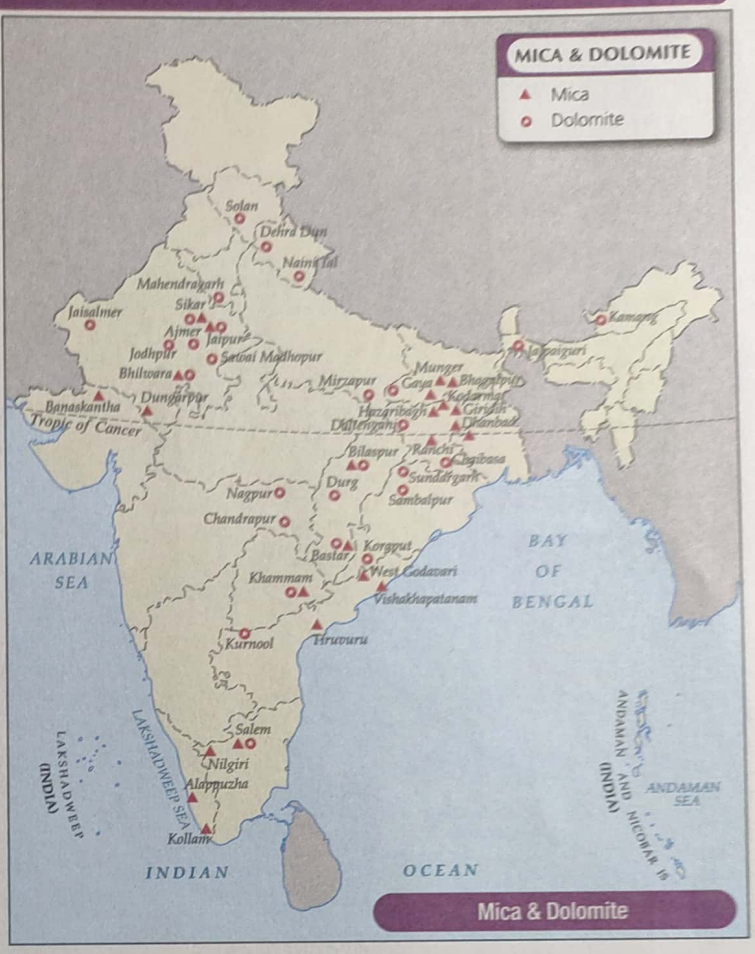
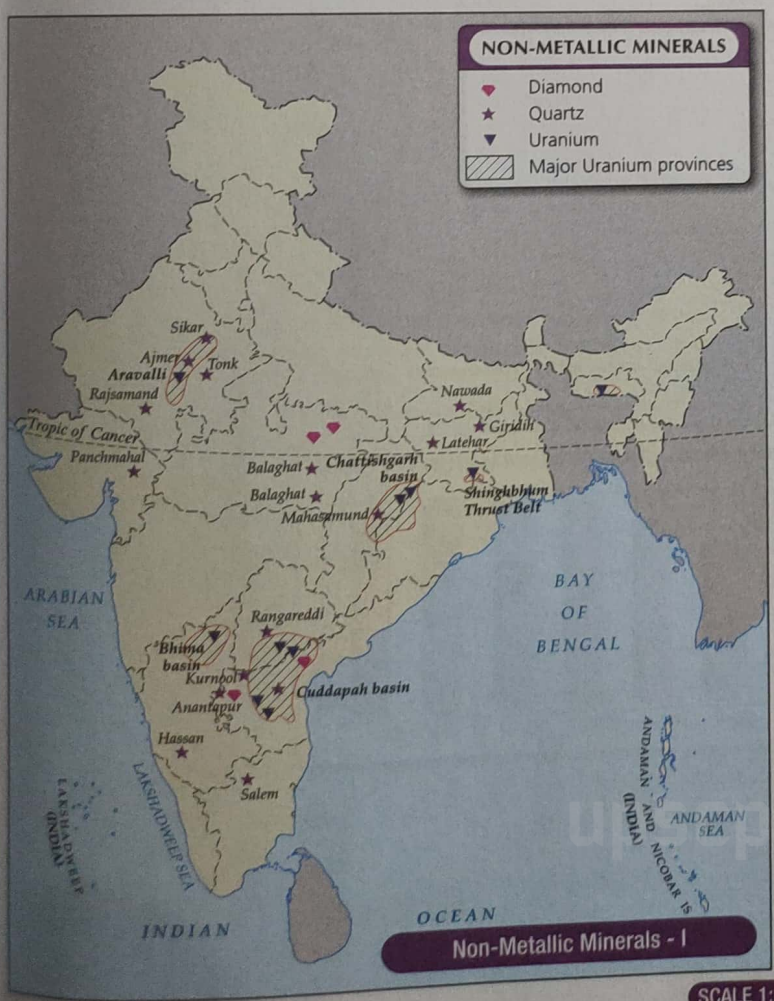
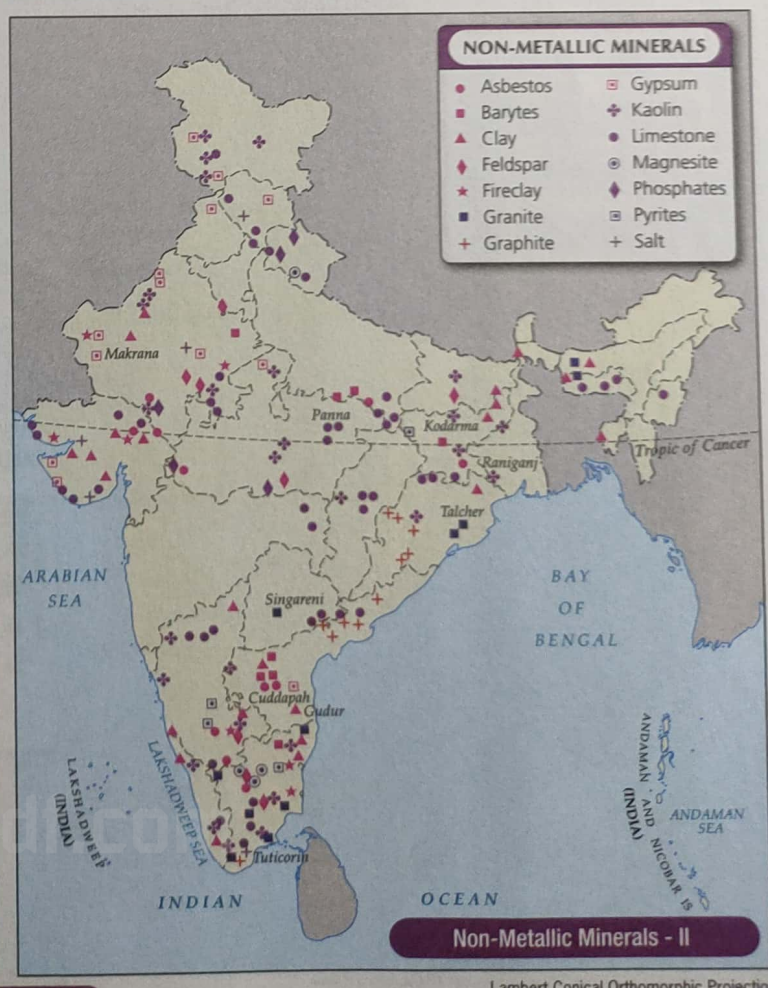
Lambert Conical Orthomorphic Projection



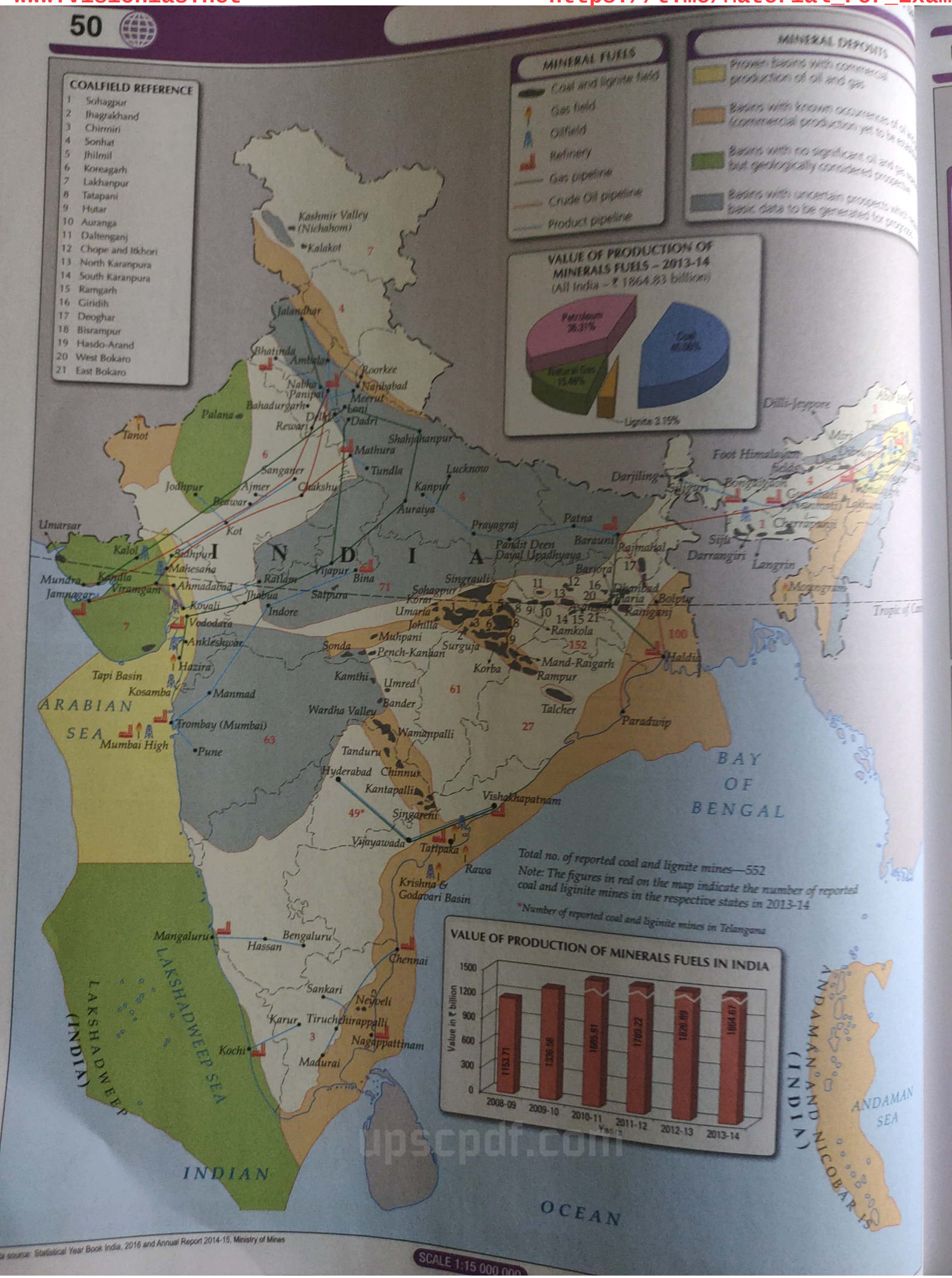




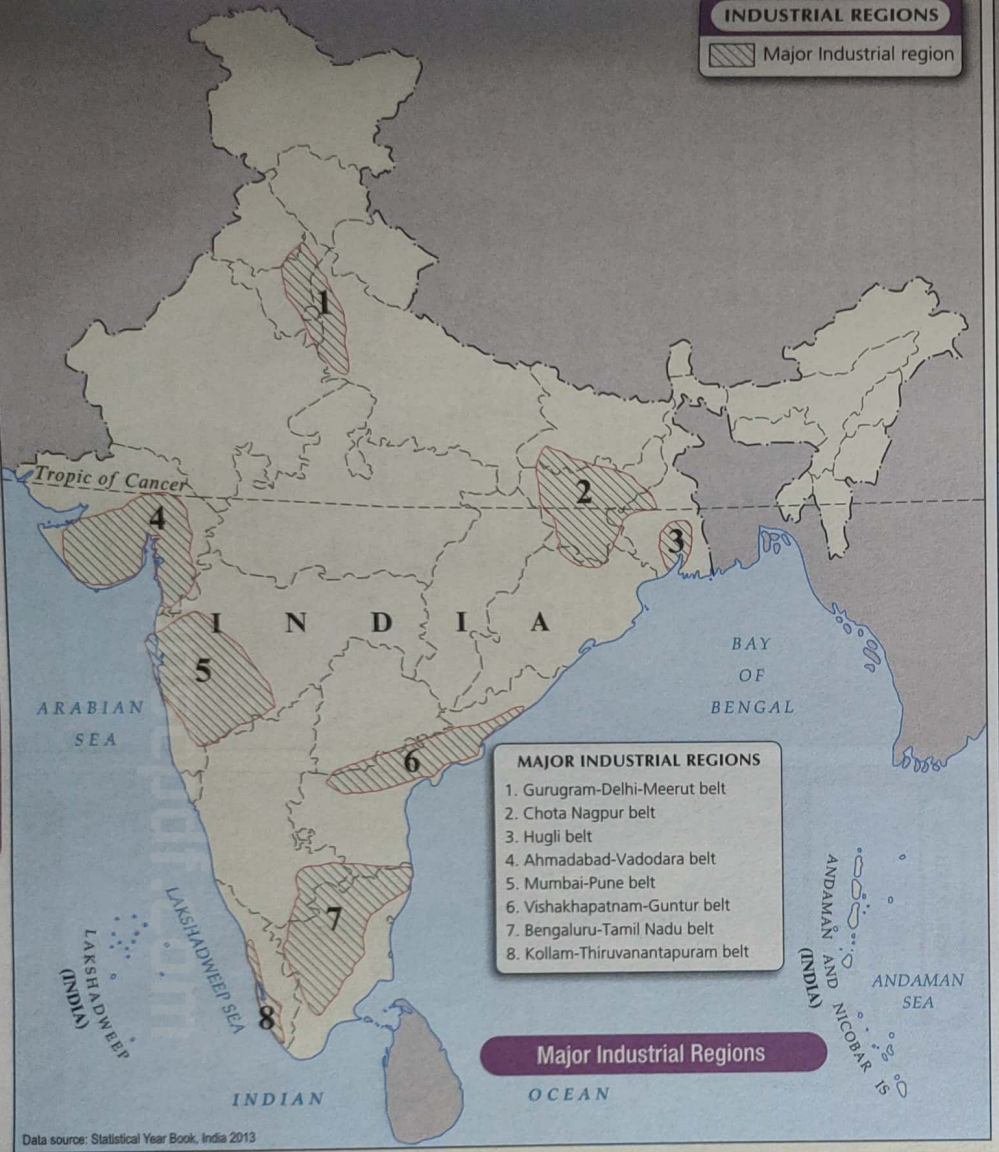


SCALE 1:30 500 000

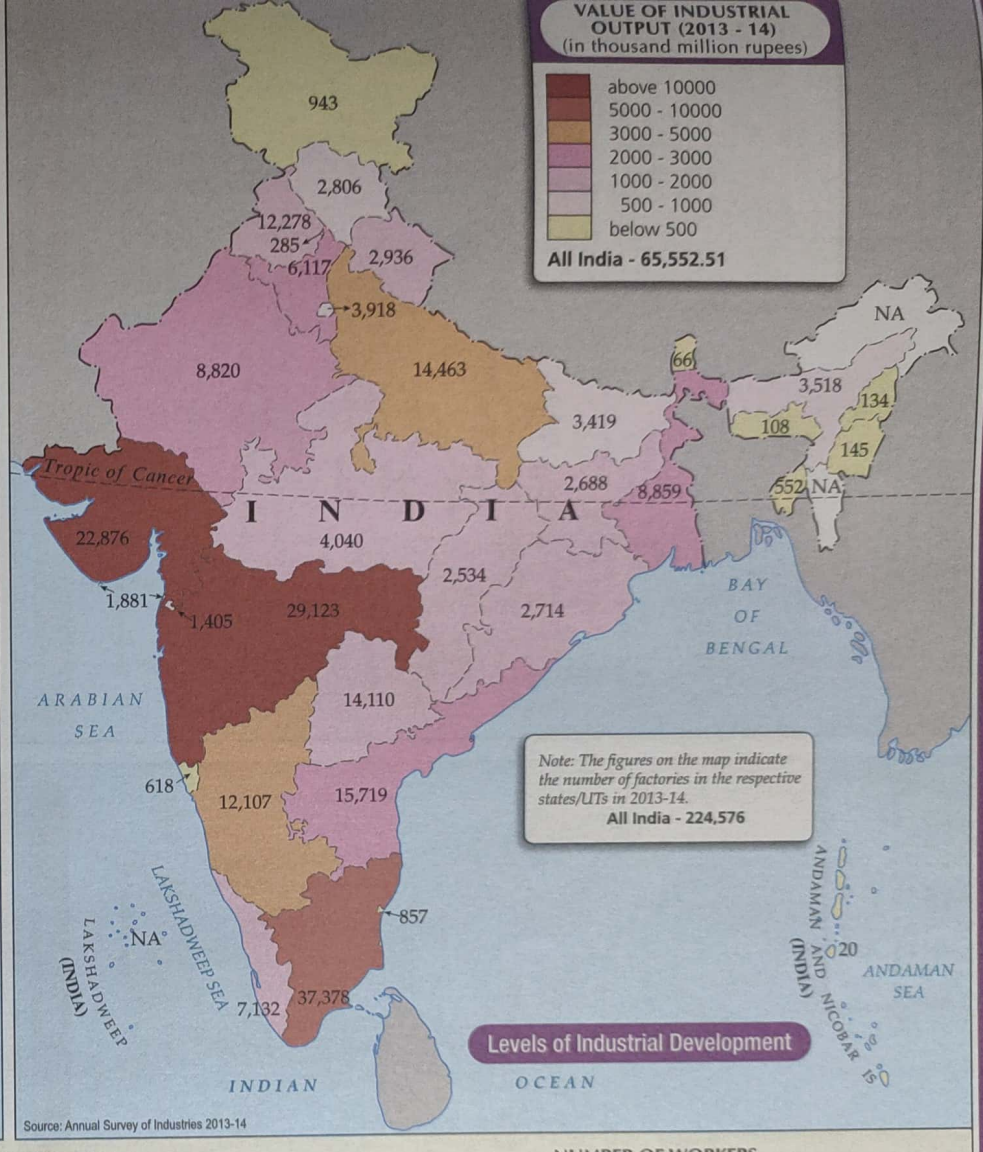
Lambert Conical Orthomorphic Projection



Source: Statistical Year Book India, 2016 and Annual Report 2014-15, Ministry of Mines

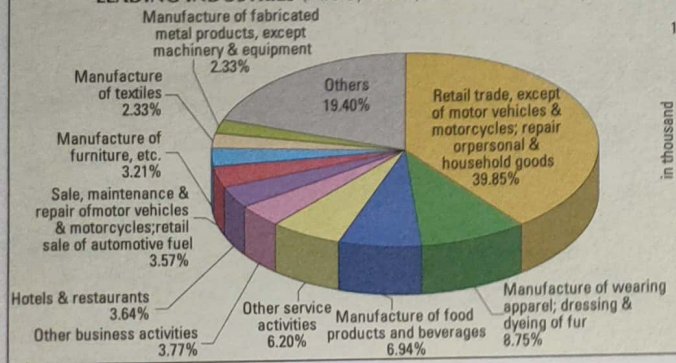


Data source: Statistical Year Book, India 2013

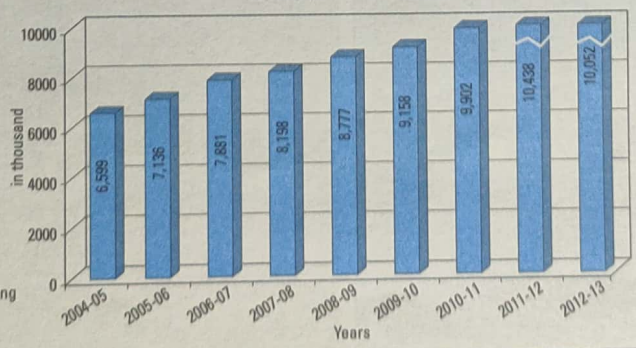


Source: Annual Survey of Industries 2013-14

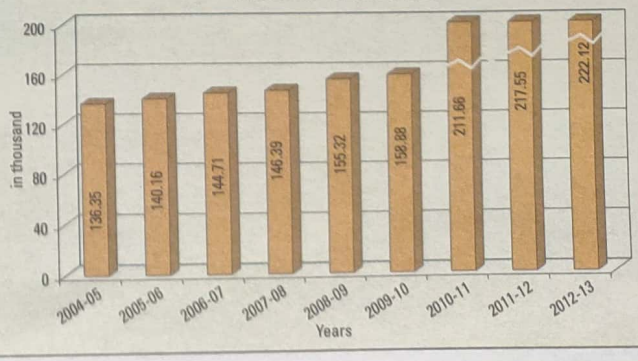
LEADING INDUSTRIES (Micro, Small, and medium enterprises)



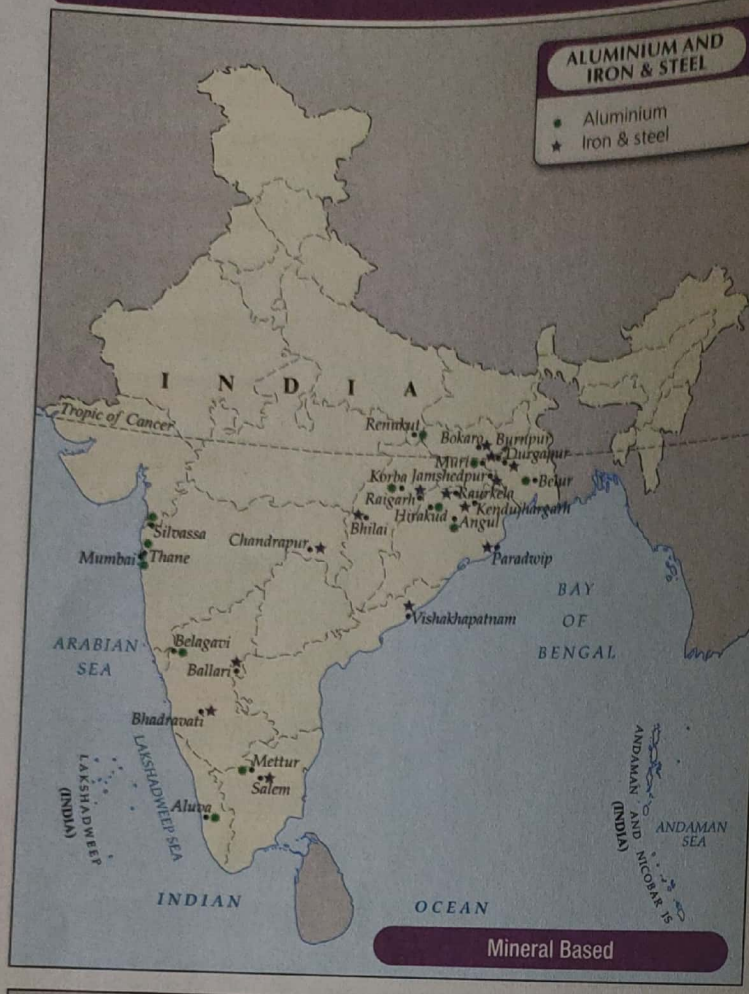
NUMBER OF WORKERS

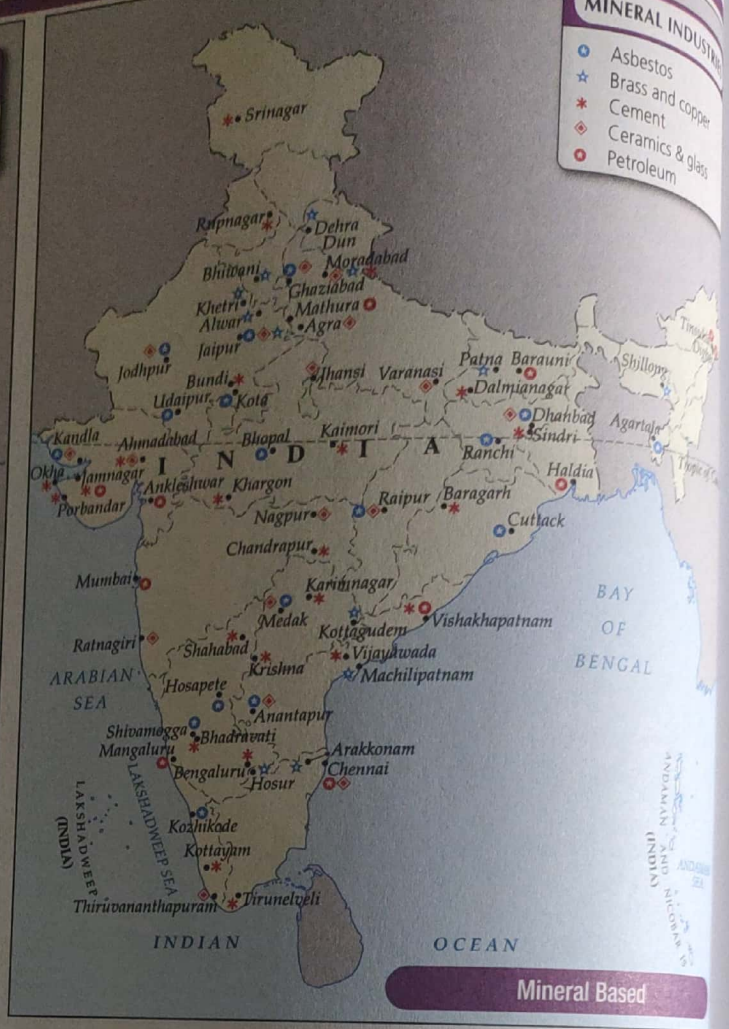


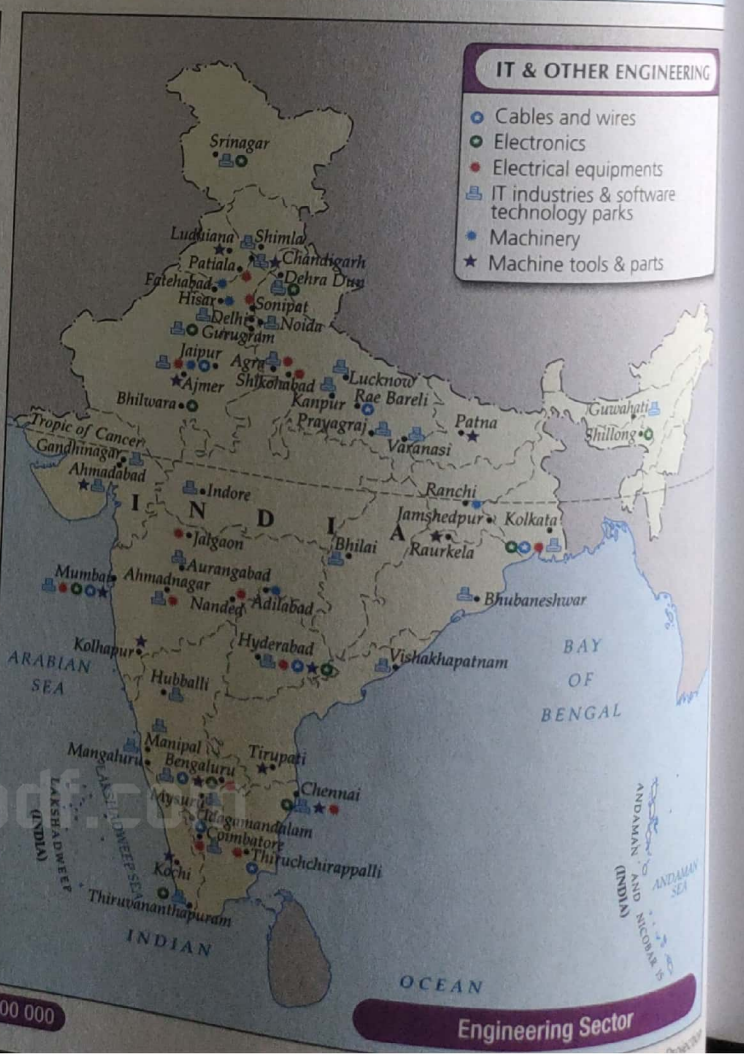
NUMBER OF WORKERS



Data source: Annual Survey of Industries 2010-11

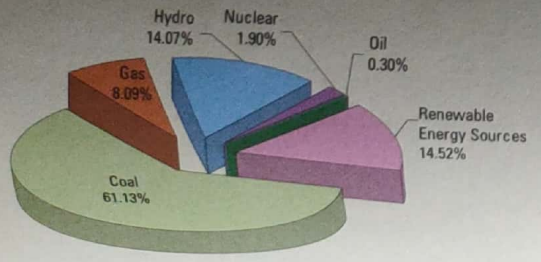




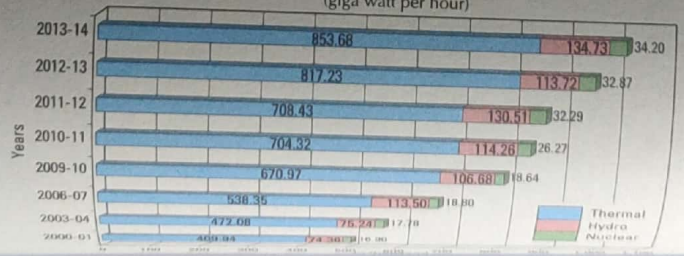


SCALE 1:30 500 000

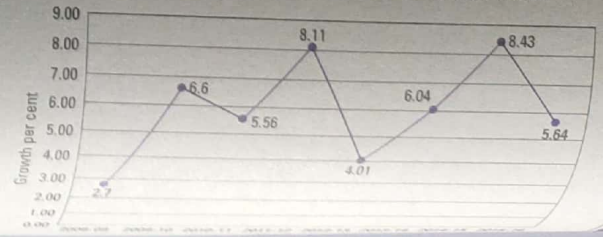
SOURCES OF PRIMARY ENERGY – 2015-16

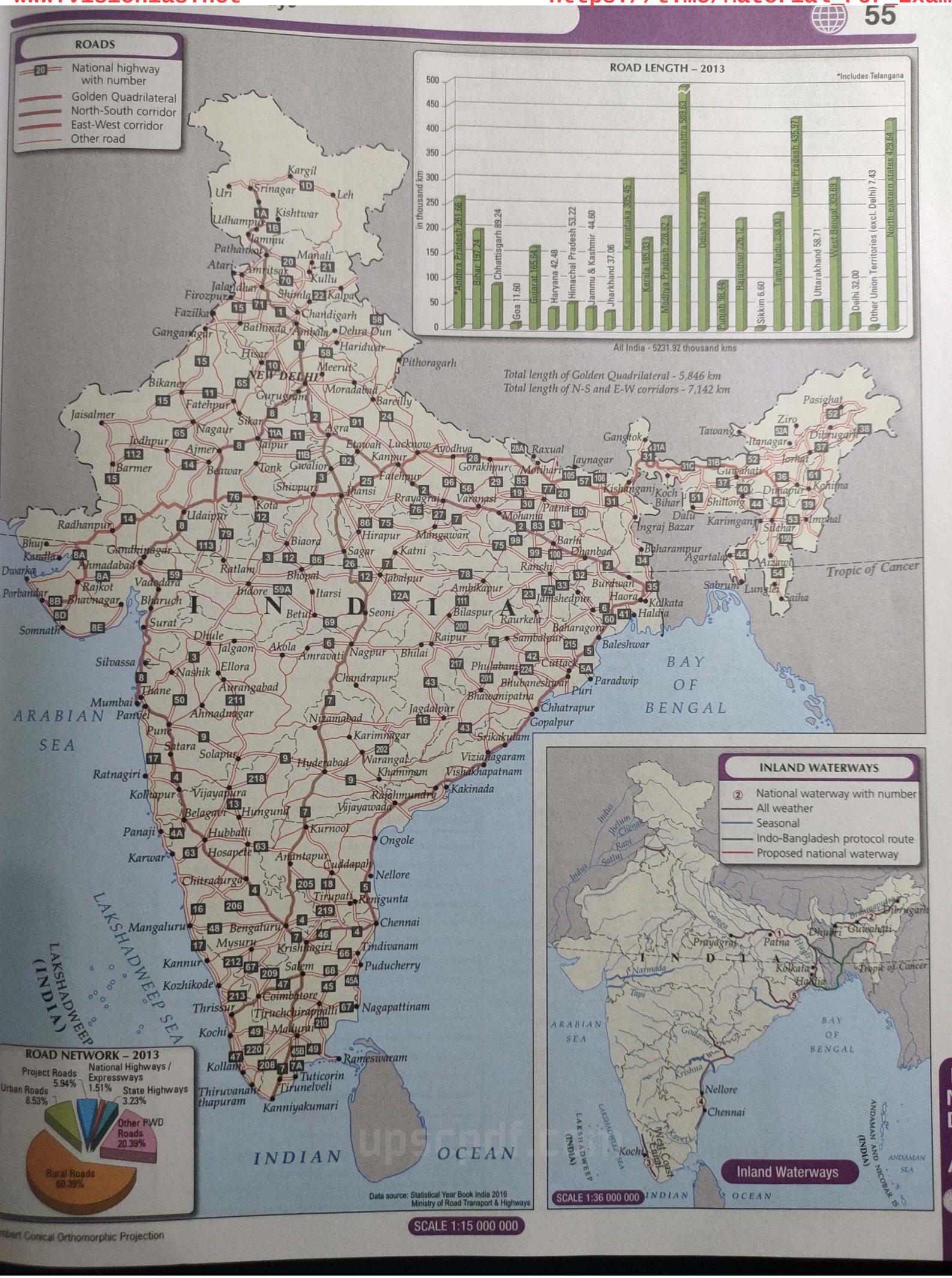


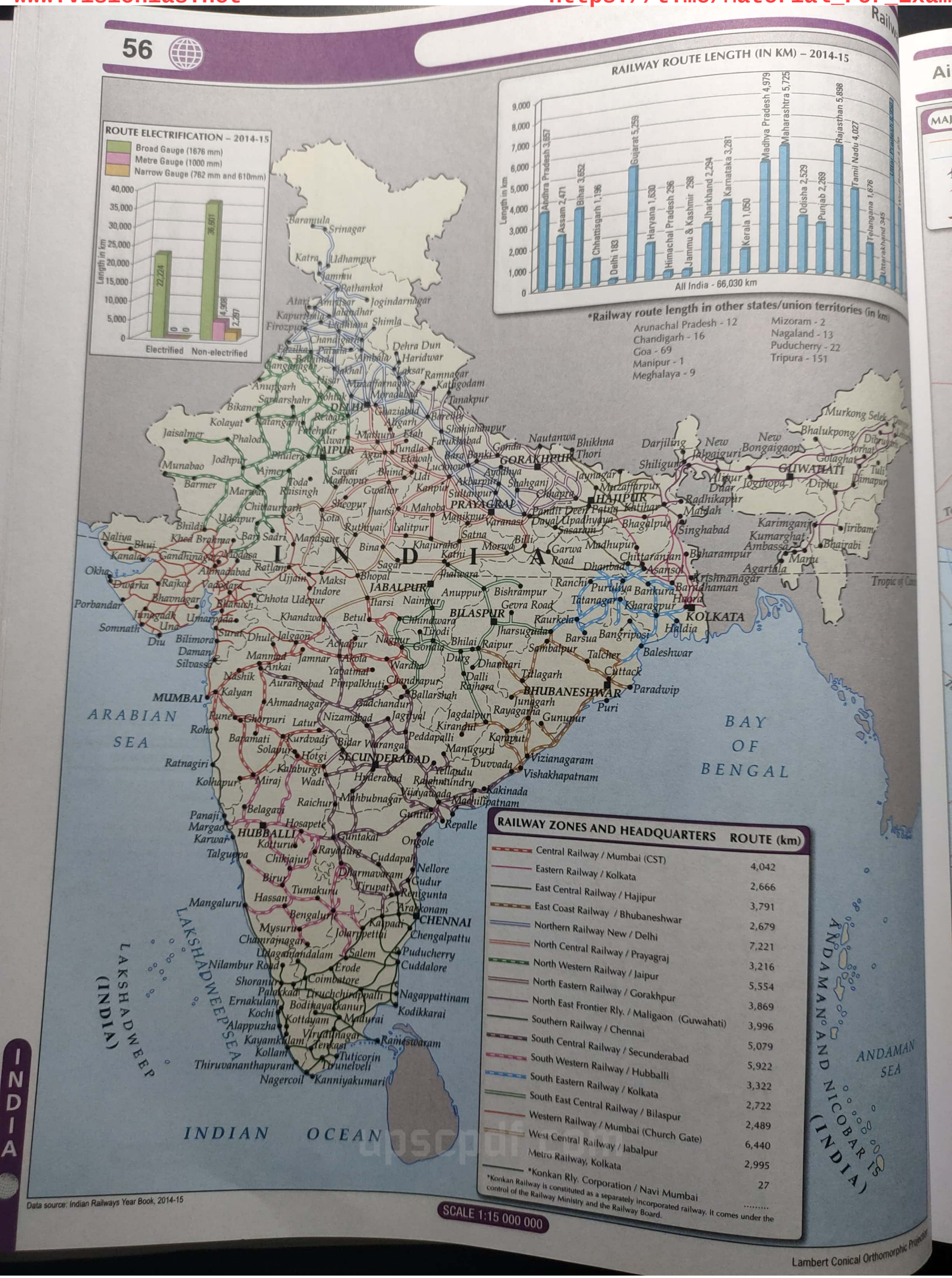
POWER GENERATION
(giga watt per hour)

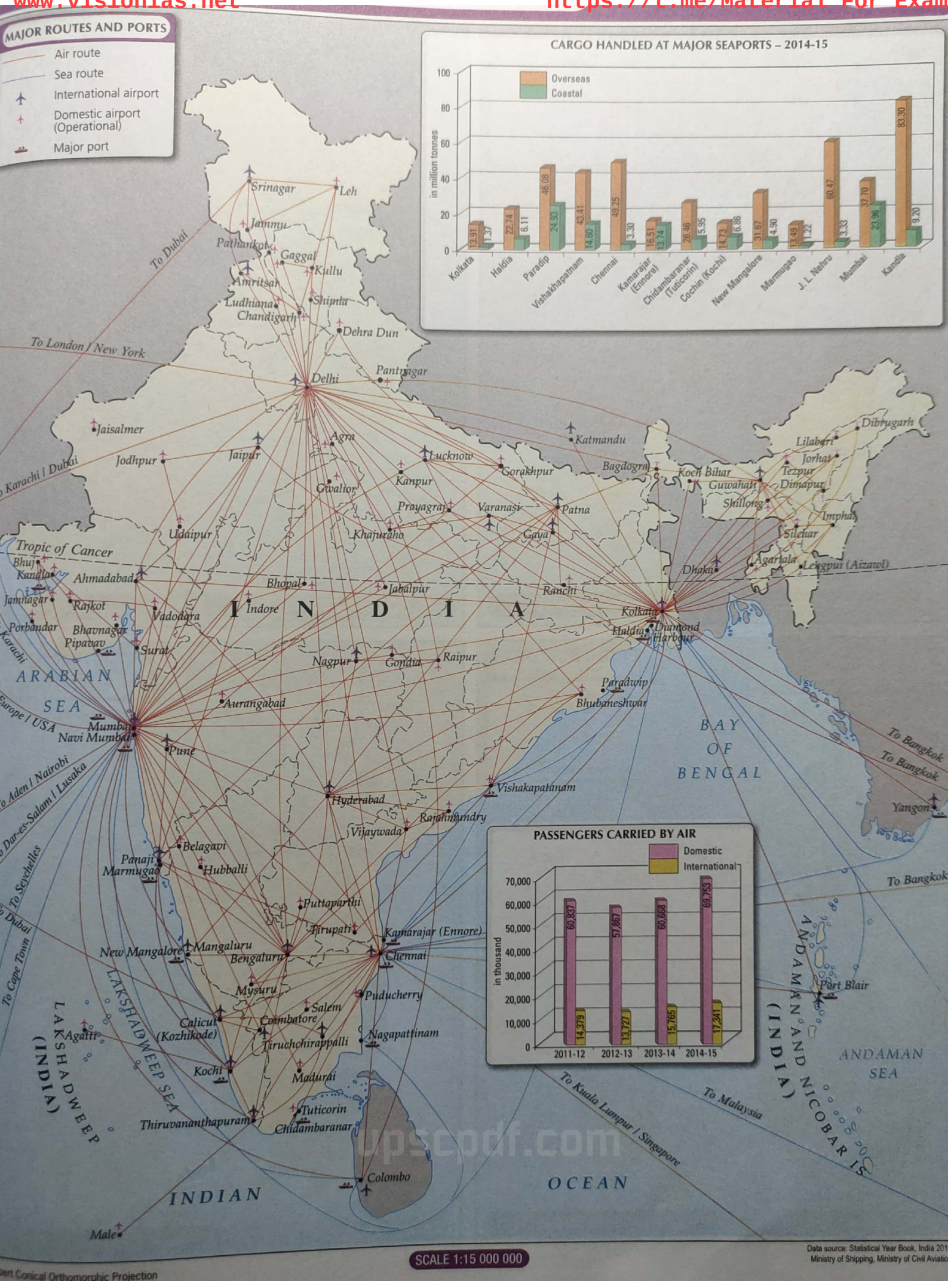


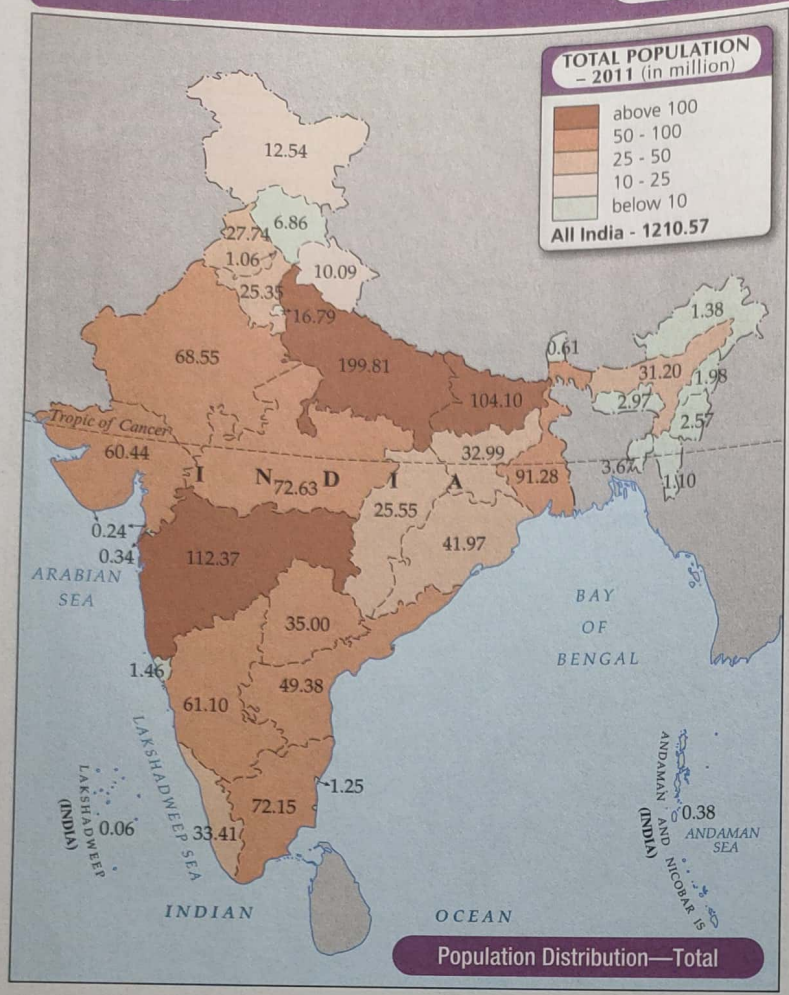
ANNUAL GROWTH IN POWER GENERATION

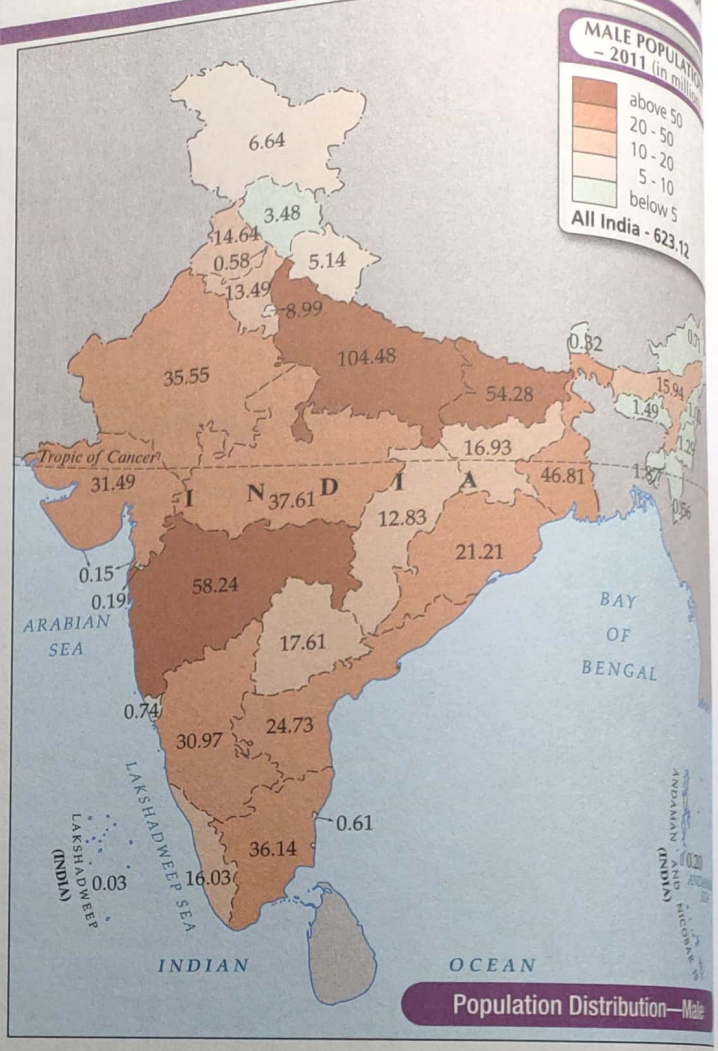


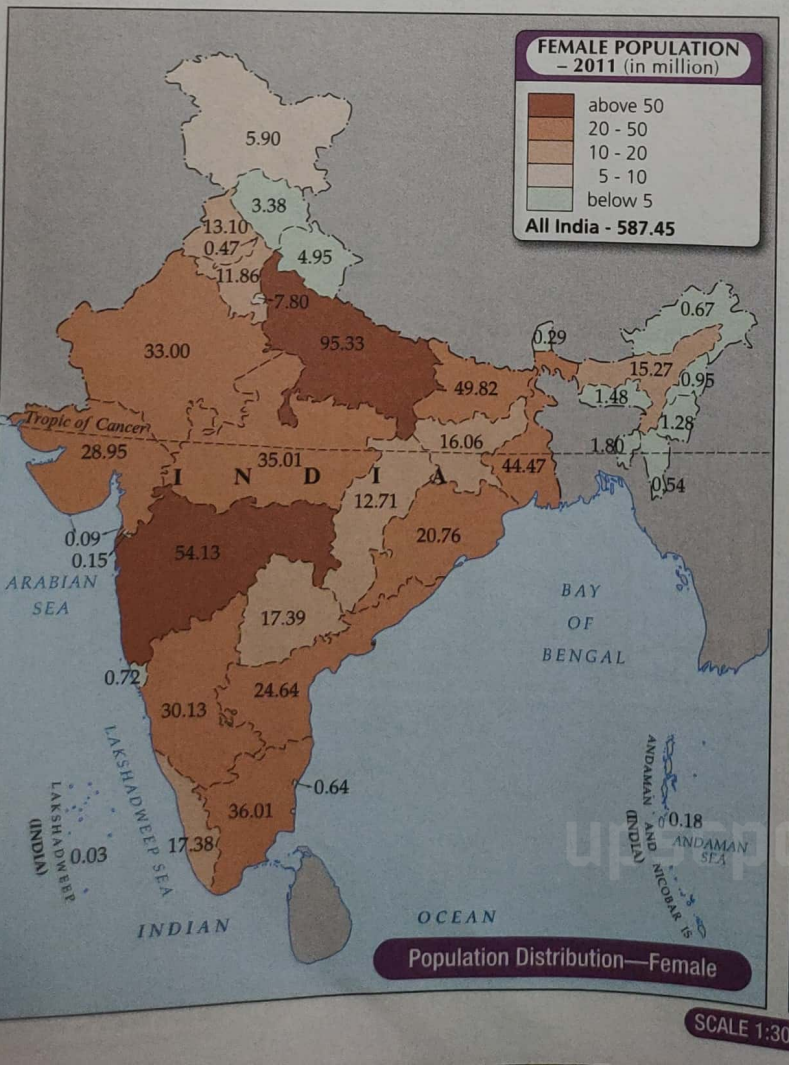


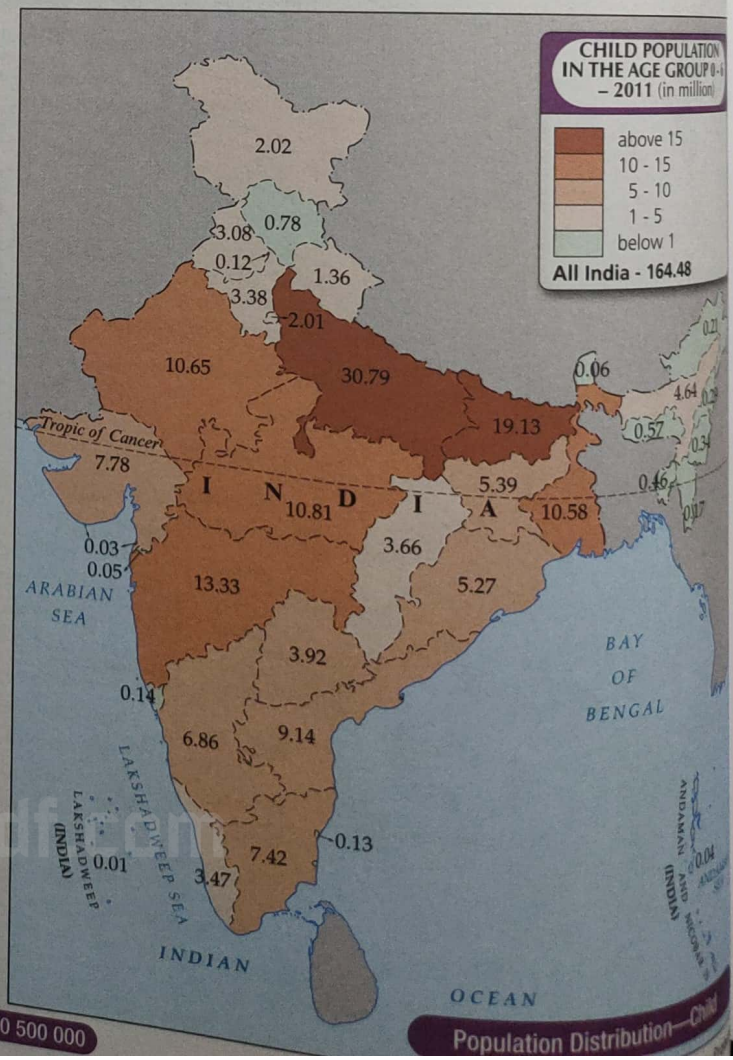




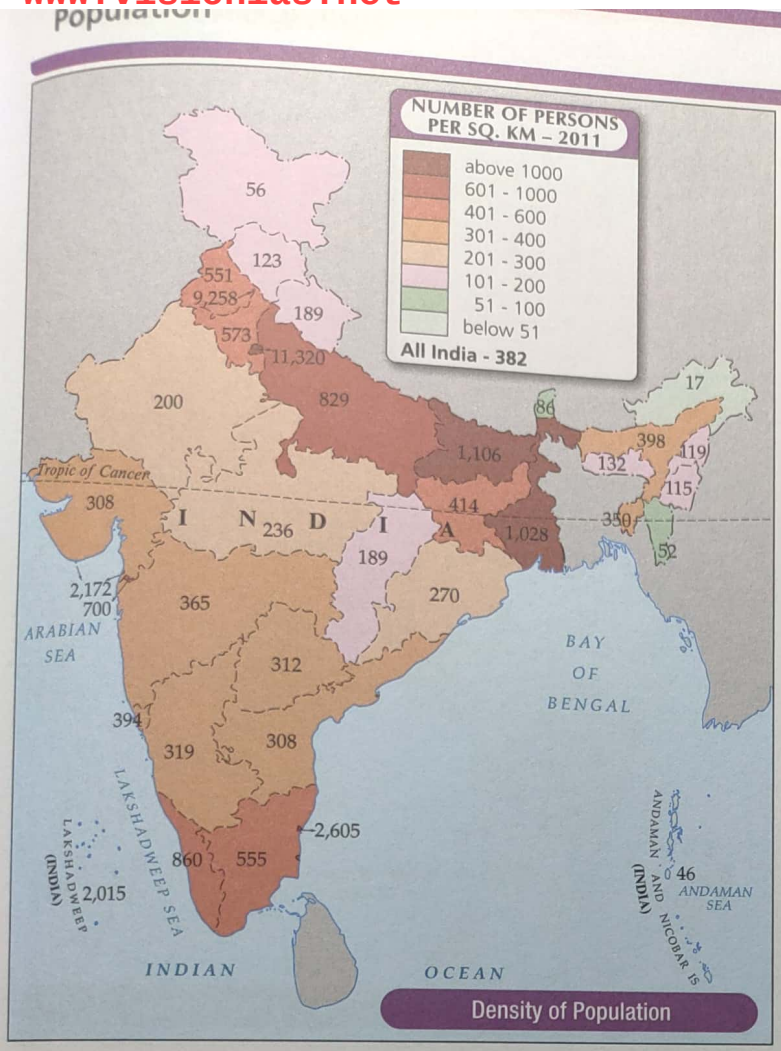


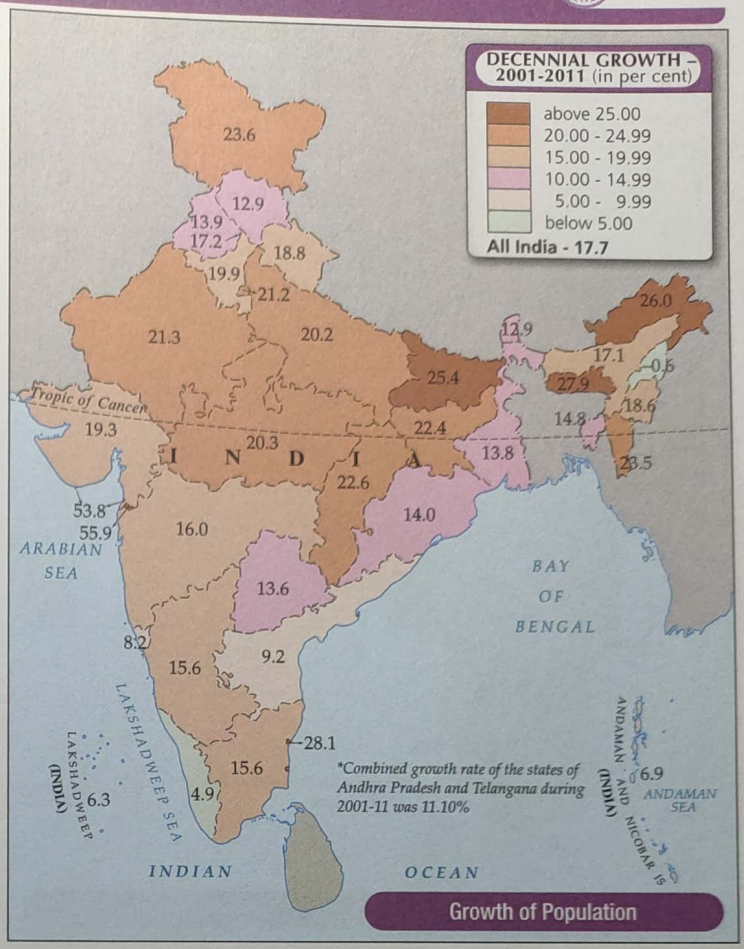


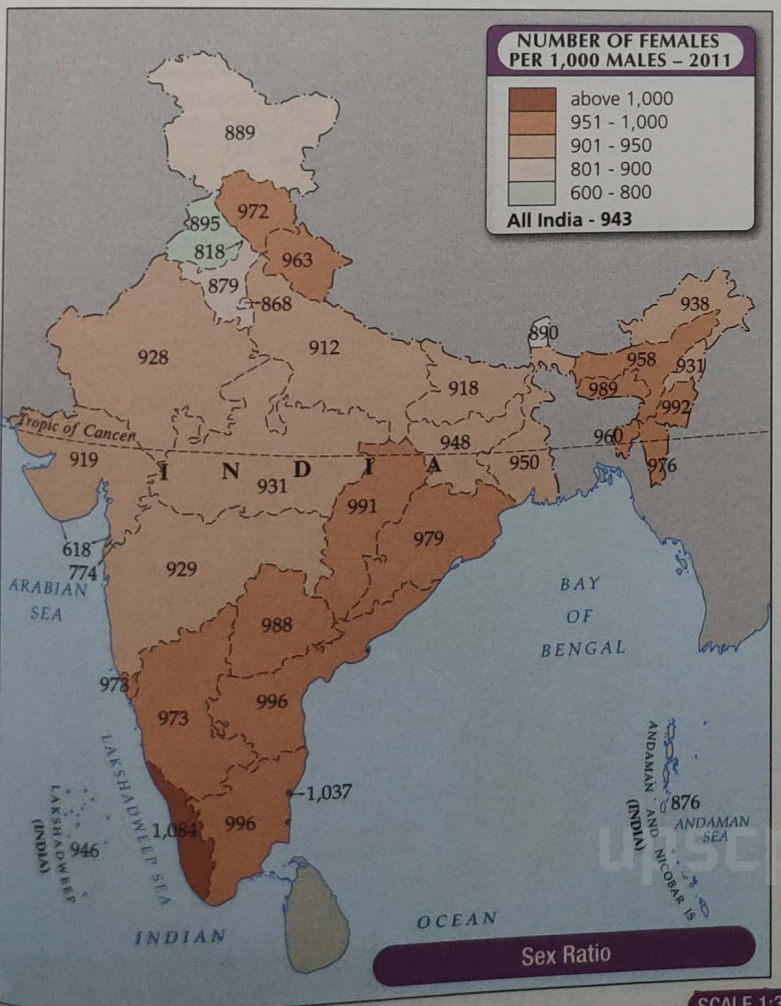


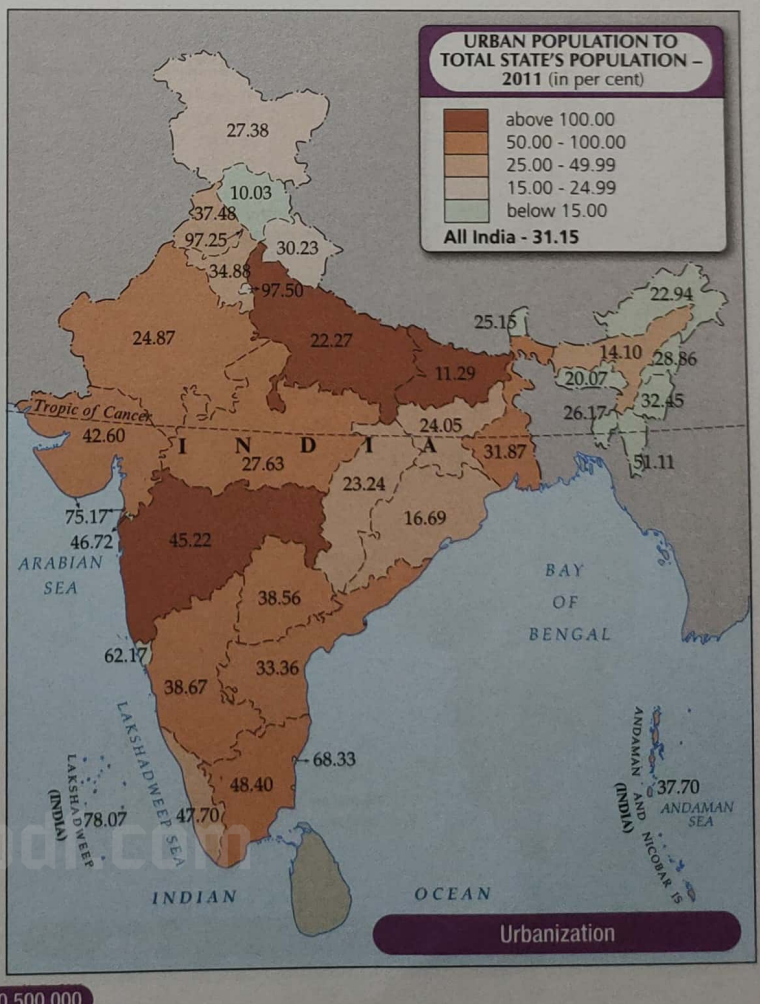


SCALE 1:30 500 000









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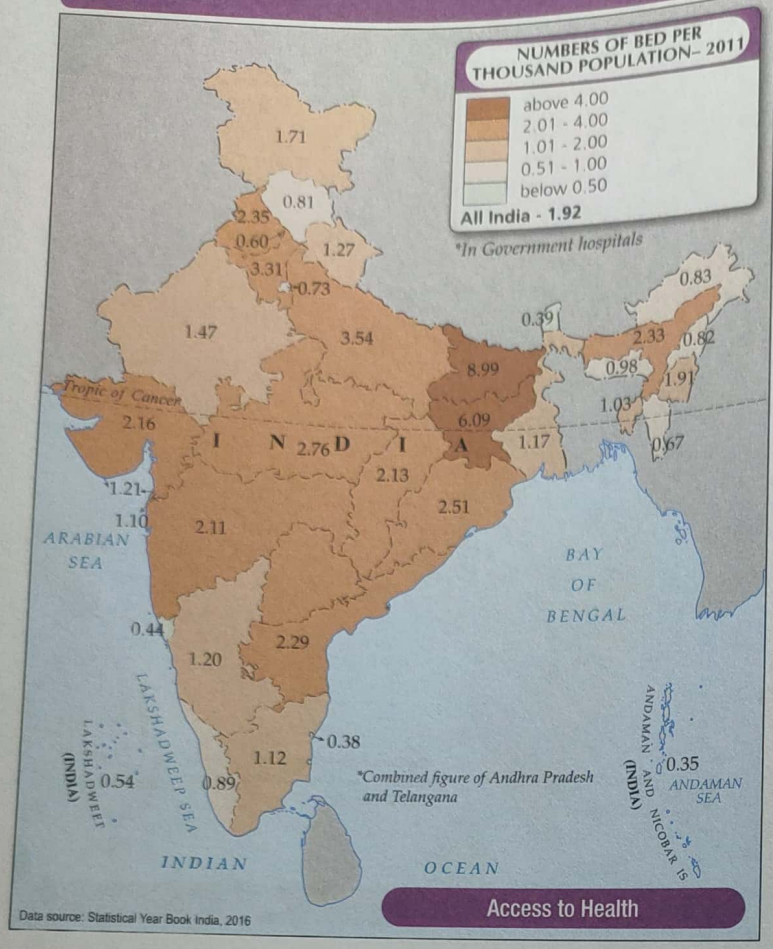
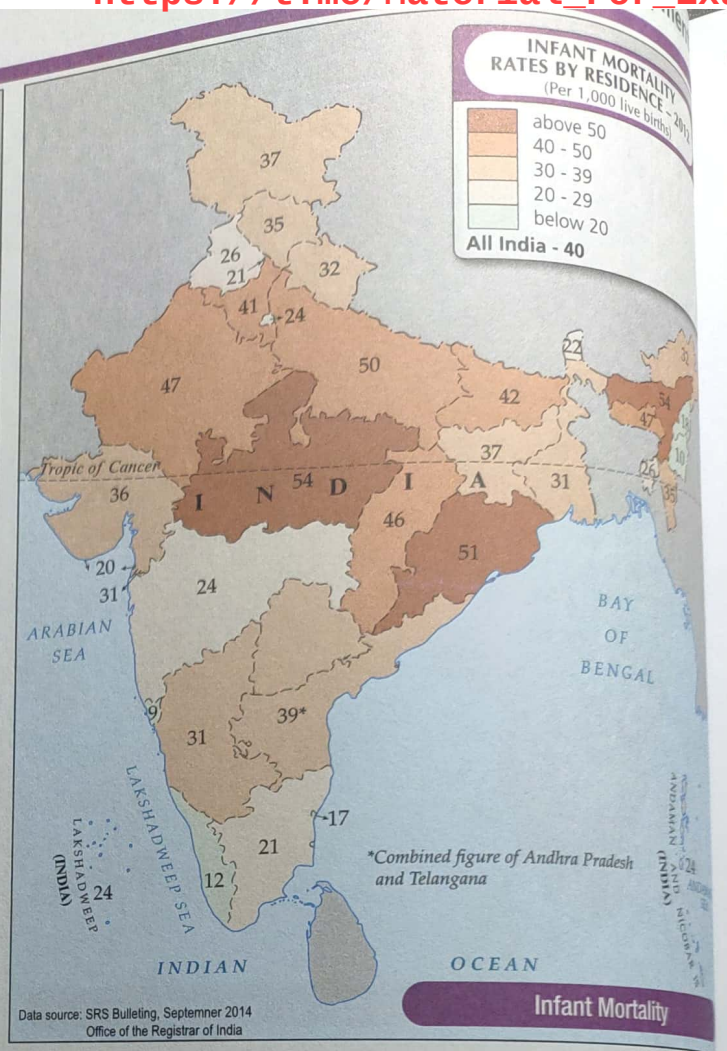
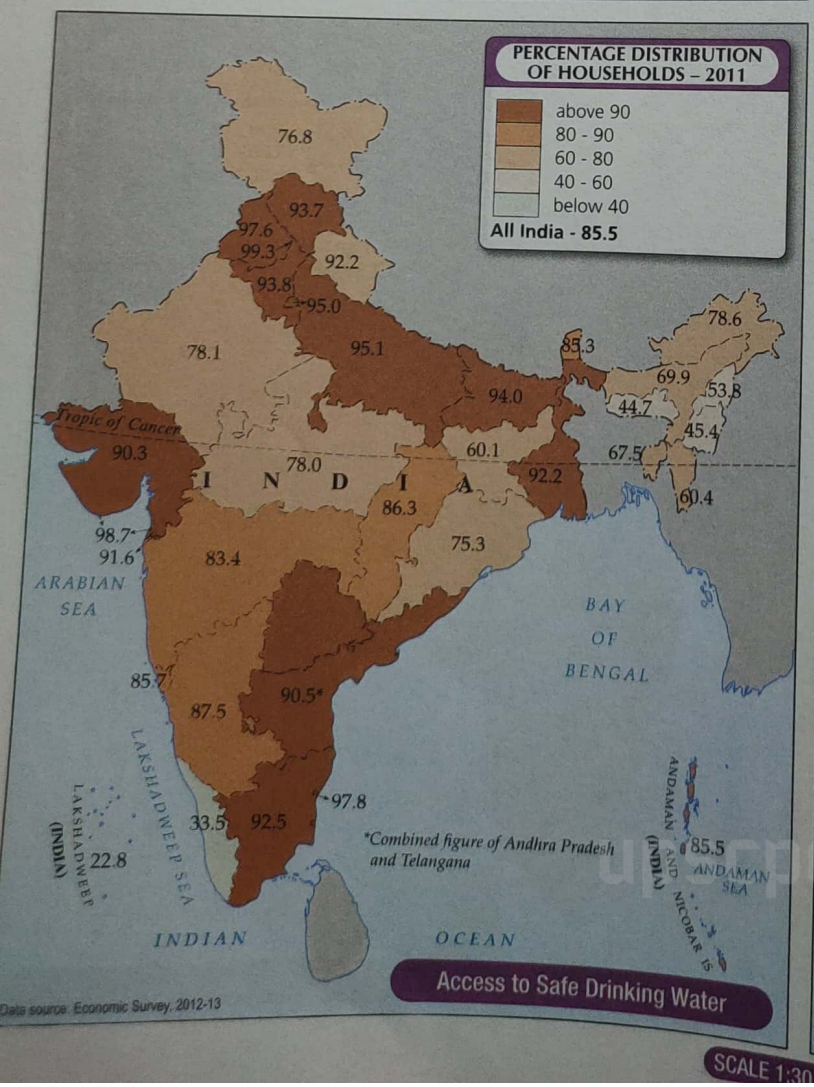
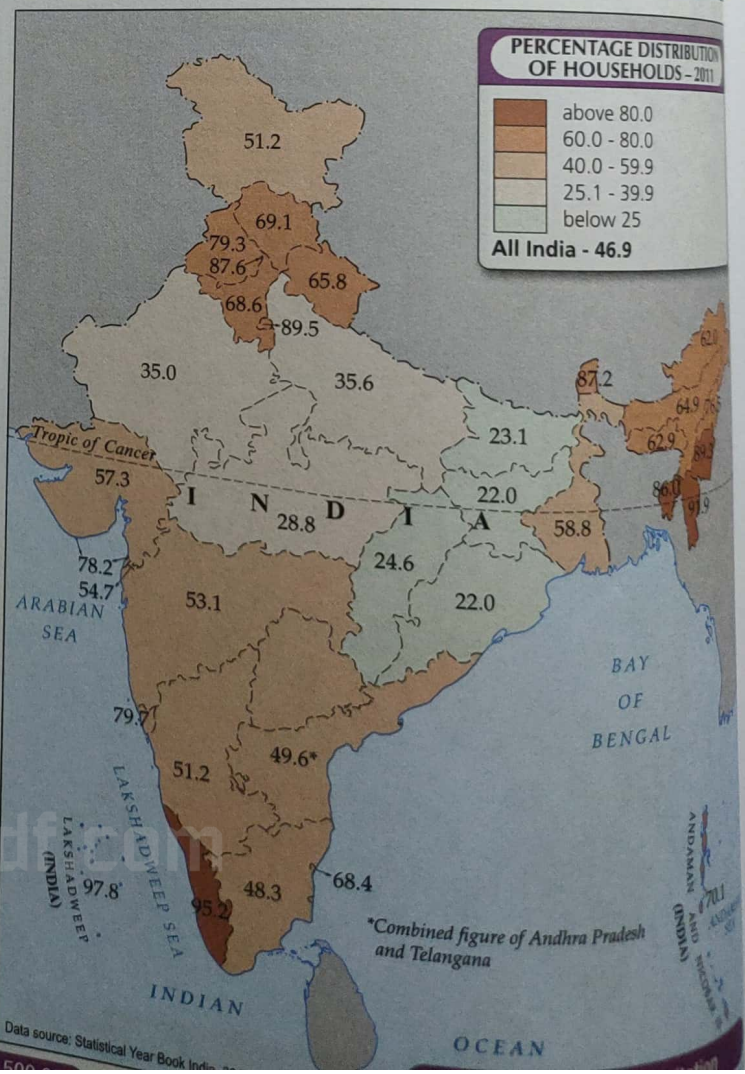
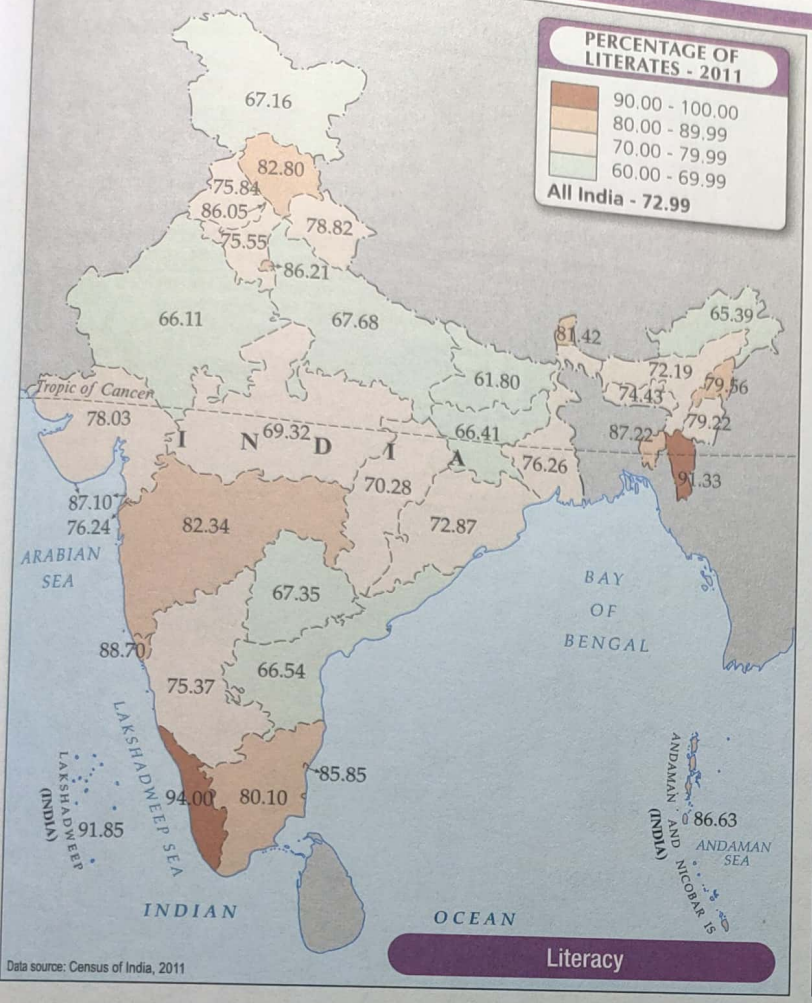
Lambert Conical Orthomorphic Projection

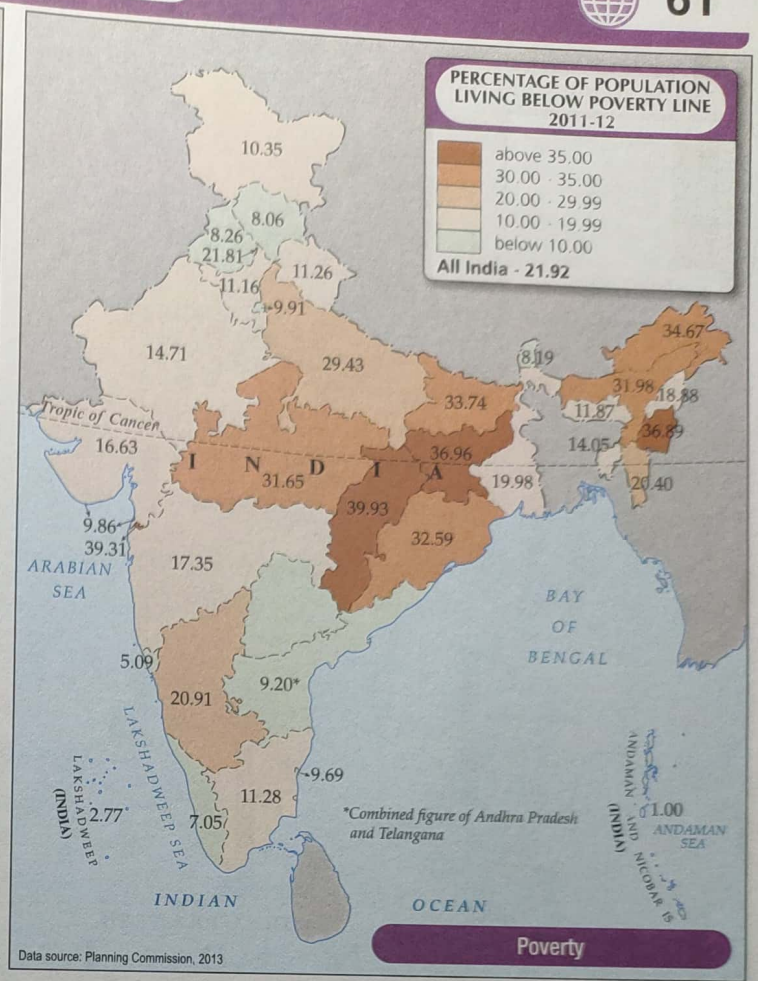


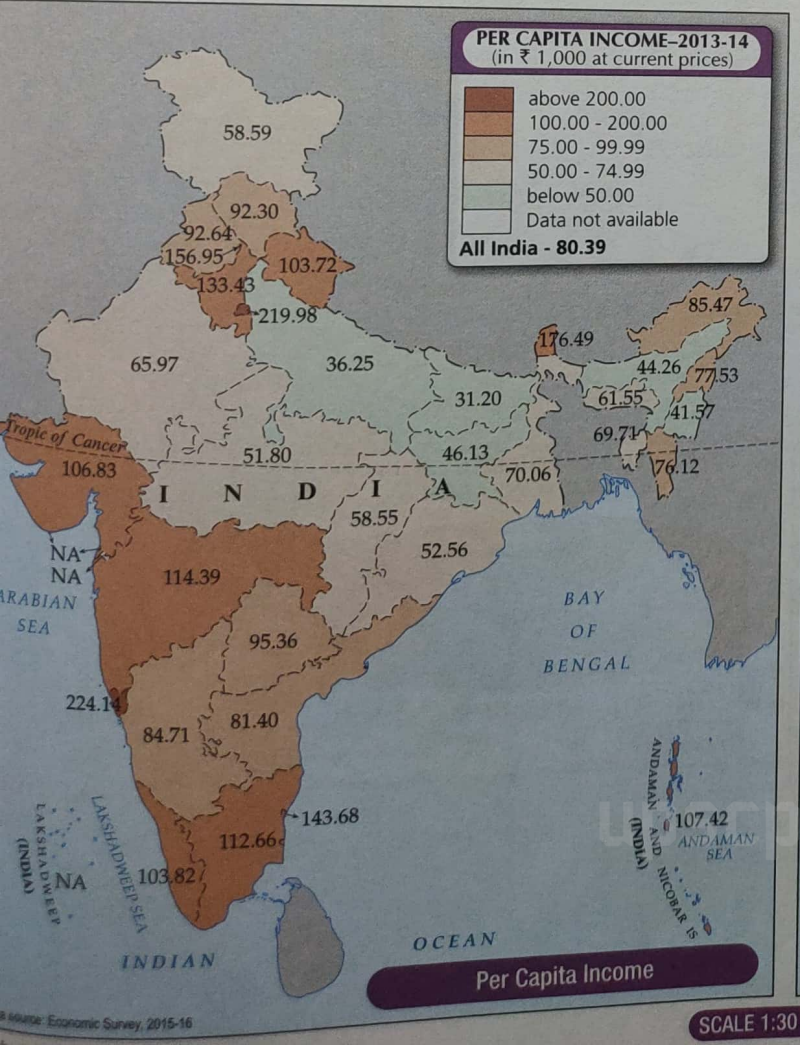


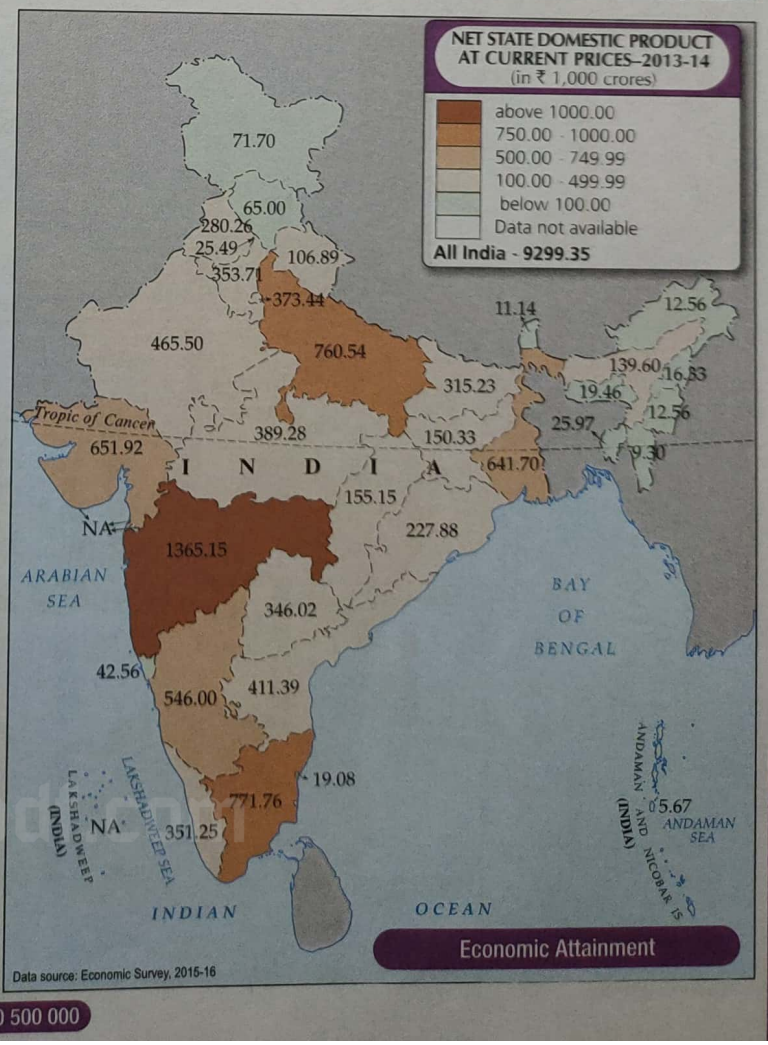












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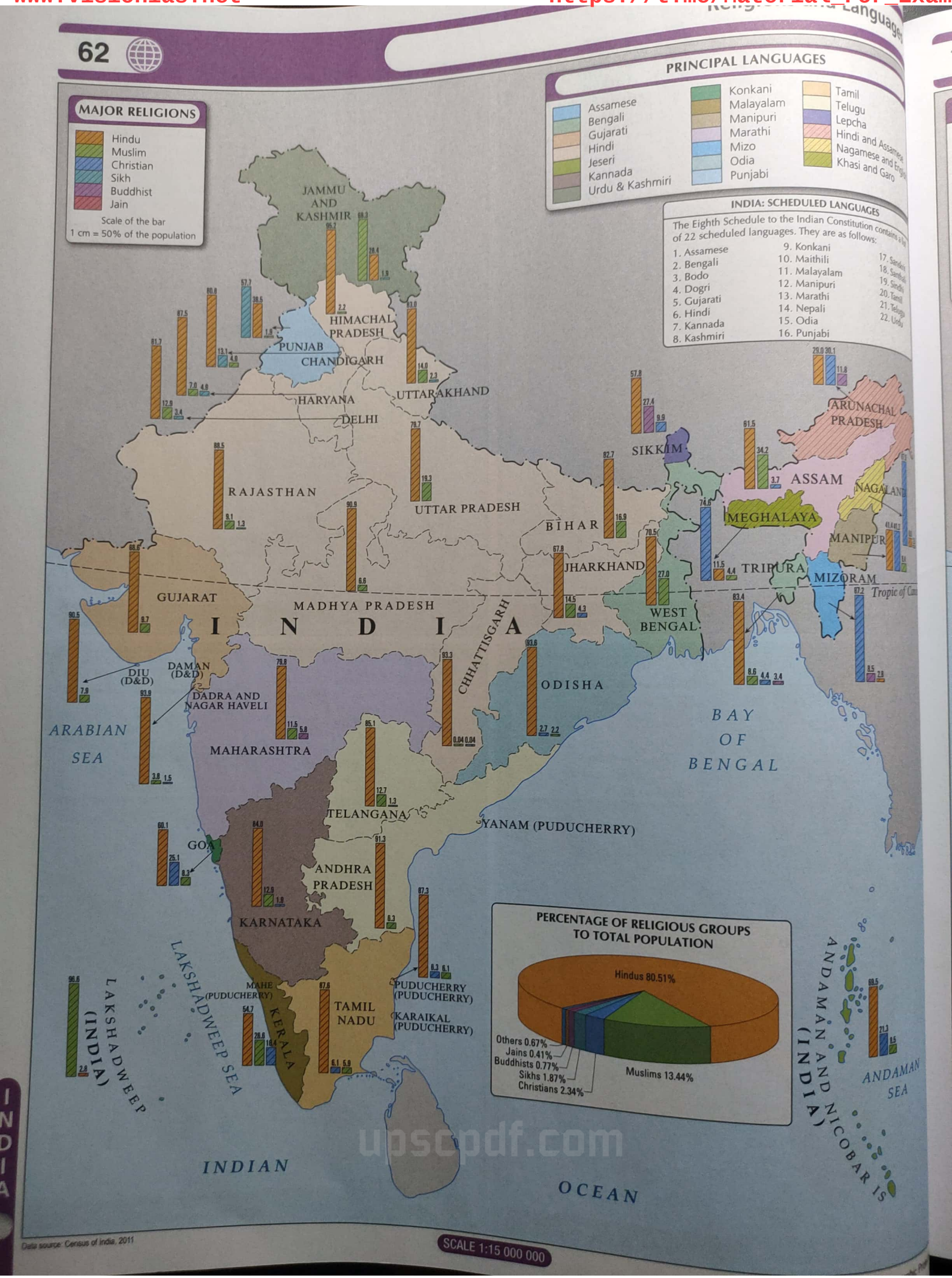
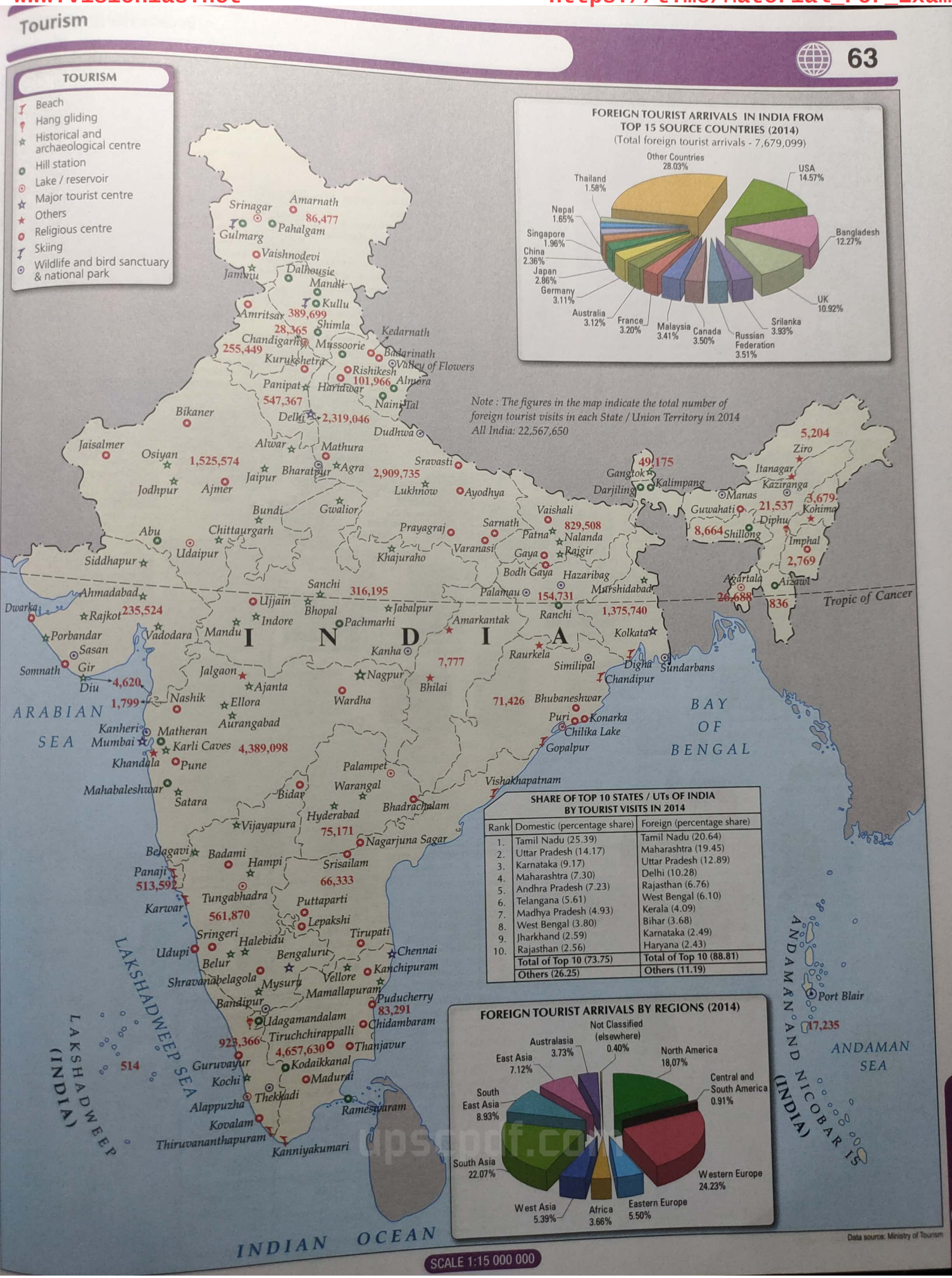




WORLD HERITAGE SITES (CULTURAL)	STATE	YEAR OF INSCRIPTION
Agra Fort	Uttar Pradesh	1983
Ajanta Caves	Maharashtra	1983
Ellora Caves	Maharashtra	1983
Taj Mahal	Uttar Pradesh	1983
Group of monuments at Mamallapuram (Mahabalipuram)	Tamil Nadu	1984
Sun Temple, Konark	Odisha	1984
Churches and convents of Goa	Goa	1986
Fatehpur Sikri	Uttar Pradesh	1986
Group of monuments at Hampi	Karnataka	1986
Khajuraho group of monuments	Madhya Pradesh	1986
Elephanta Caves	Maharashtra	1987
Great Living Chola Temples	Tamil Nadu	1987
Group of monuments at Pattadakal	Karnataka	1987
Buddhist monuments at Sanchi	Madhya Pradesh	1989
Humayun's Tomb	Delhi	1993
Qutb Minar and its monuments	Delhi	1993
Mountain Railways of India	West Bengal and Tamil Nadu	1999, 2005
Mahabodhi Temple Complex, Bodh Gaya	Bihar	2002
Rock Shelters of Bhimbetka	Madhya Pradesh	2003
Champaner-Pavagadh Archaeological Park	Gujarat	2004
Chhatrapati Shivaji Terminus	Maharashtra	2004


Red Fort (Delhi)


Humayun's Tomb (Delhi)


Agra Fort (Agra)


Fatehpur Sikri (Agra)


Great Himalayan National Park Conservation Area (Himachal Pradesh)


The Architectural Work of Le Corbusier (Chandigarh)


Valley of Flowers (Uttarakhand)

Valley of Flowers
Nanda Devi


Qutb Minar (Delhi)


Nanda Devi (Uttarakhand)


Keoladeo Ghana (Bharatpur)


Rani-ki-Vav (Patan)


Hill Forts of Rajasthan (Chittorgarh, Kumbhalgarh, Sawai Madhopur, Jhalawar, Jaipur and Jaisalmer)


Jantar Mantar (Jaipur)


Taj Mahal (Agra)


Khajuraho Temple


Archaeological site of Nalanda Mahavihara (Nalanda)


Khangchendzonga National Park


Darjiling Himalayan Railway


Manas


Kaziranga

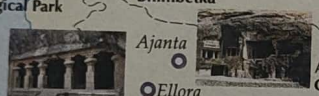

Mahabodhi Temple (Bodh Gaya)

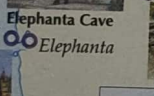

Champaner-Pavagadh Archaeological Park


Bhimbetka


Sanchi Stupa


Sunderbans


Ajanta Cave


Ellora Cave


Elephanta Cave


Sun Temple (Konark)


Chhatrapati Shivaji Terminus


Pattadakal


Basilica of Bom Jesus (Goa)


Hampi


Western Ghats


Shore Temple (Mamallapuram)

Mamallapuram (Mahabalipuram)


Nilgiri Railway

WORLD HERITAGE SITES (CULTURAL)	STATE	YEAR OF INSCRIPTION
Red Fort Complex	Delhi	2007
The Jantar Mantar, Jaipur	Rajasthan	2010
Hill Forts of Rajasthan	Rajasthan	2013
Rani-ki-Vav at Patan	Gujarat	2014
The Architectural Work of Le Corbusier	Chandigarh	2016
Archaeological site of Nalanda Mahavihara	Bihar	2016

WORLD HERITAGE SITES (NATURAL)	STATE	YEAR OF INSCRIPTION
Kaziranga National Park	Assam	1985
Keoladeo National Park	Rajasthan	1985
Manas Wildlife Sanctuary	Assam	1985
Sundarbans National Park	West Bengal	1987
Nanda Devi National Park and Valley of Flowers	Uttarakhand	1988, 2005
Western Ghats	Kerala, Karnataka, Maharashtra and Tamil Nadu	2012
Great Himalayan National Park Conservation Area	Himachal Pradesh	2014

WORLD HERITAGE SITES (MIXED)	STATE	YEAR OF INSCRIPTION
Khangchendzonga National Park	Sikkim	2016

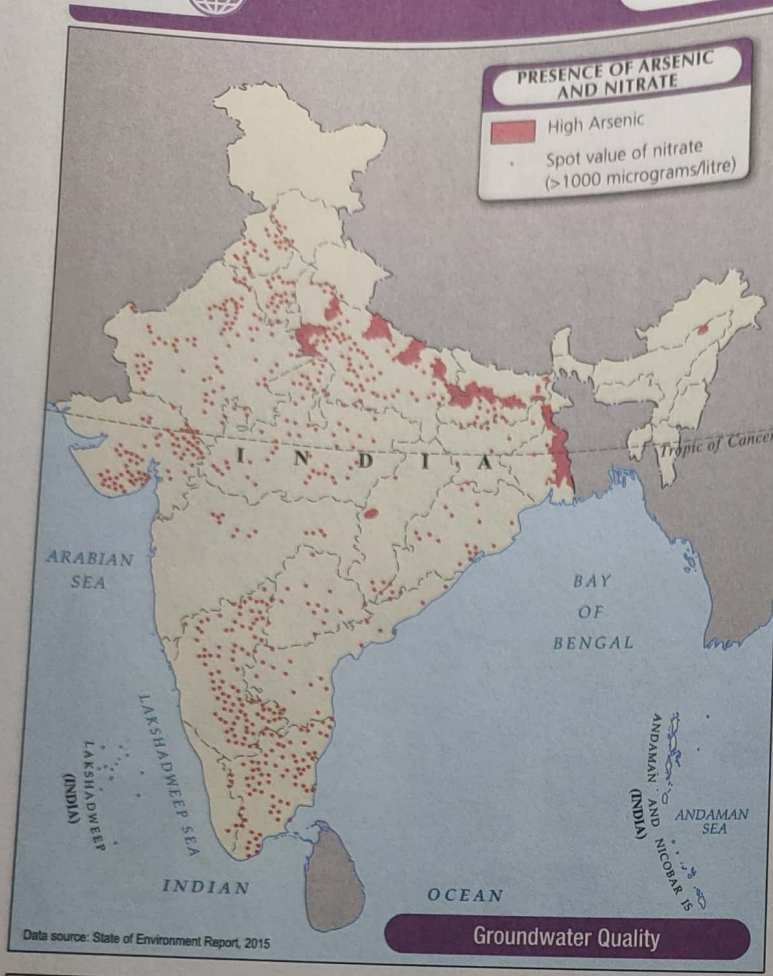
ARABIAN SEA
BAY OF BENGAL
INDIAN OCEAN
LAKSHADWEEP SEA
LAKSHADWEEP (INDIA)
ANDAMAN AND NICOBAR IS (INDIA)
ANDAMAN SEA
Sundarbans
New Moore I. (India)
Preparis I. (MYANMAR)
Coco Is (MYANMAR)
Narcondam (INDIA)
Barren I. (INDIA)
Tropic of Cancer
Mumbai
Elephanta
Goa
Udagamandalam
Patan
Pavagarh
Sanchi
Bhimbetka
Ajanta
Ellora
Pattadakal
Hampi
Konark
Gaya
Nalanda
Khajuraho
Delhi
Bharatpur
Agra
Jaipur
Darjiling
Manas
Kaziranga
Chandigarh

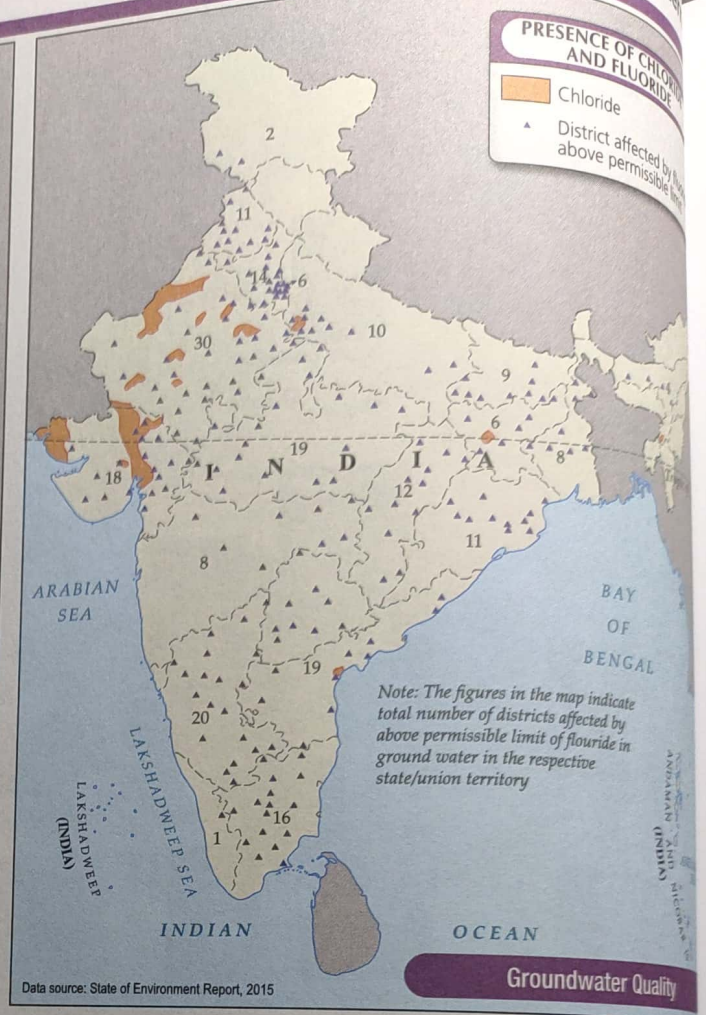
Data source: UNESCO World Heritage Convention

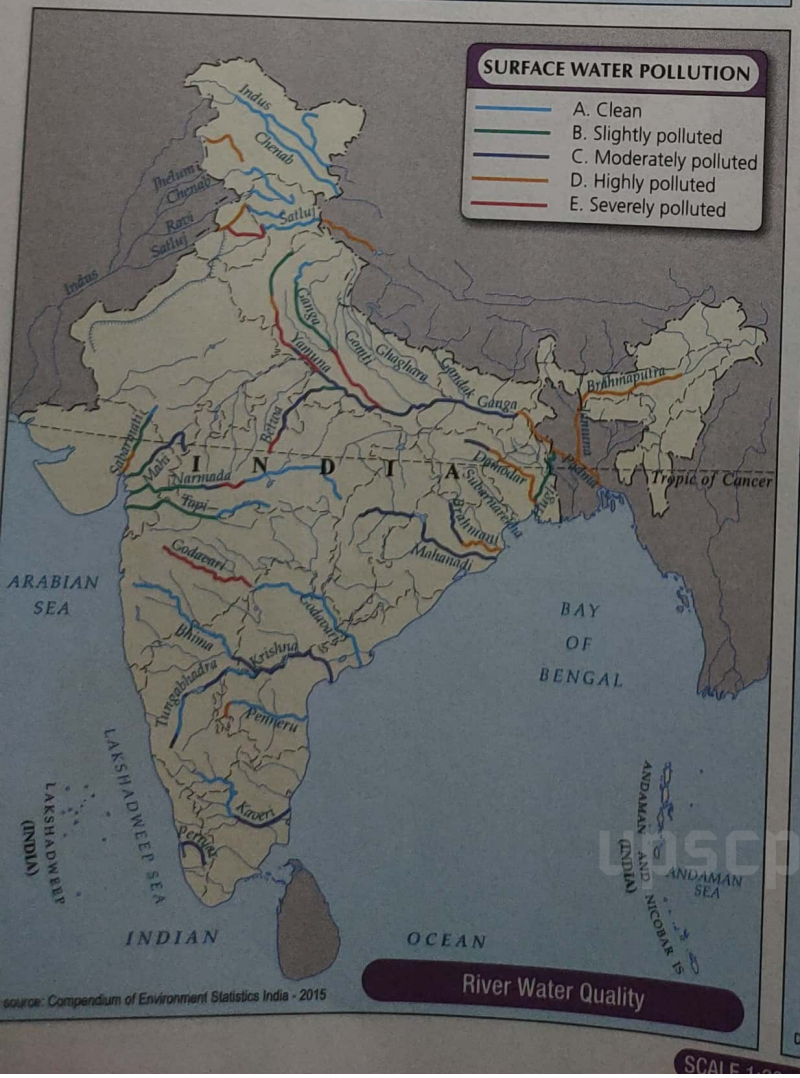
SCALE 1:15 000 000

Lambert Conical Orthomorphic Projection

INDIA







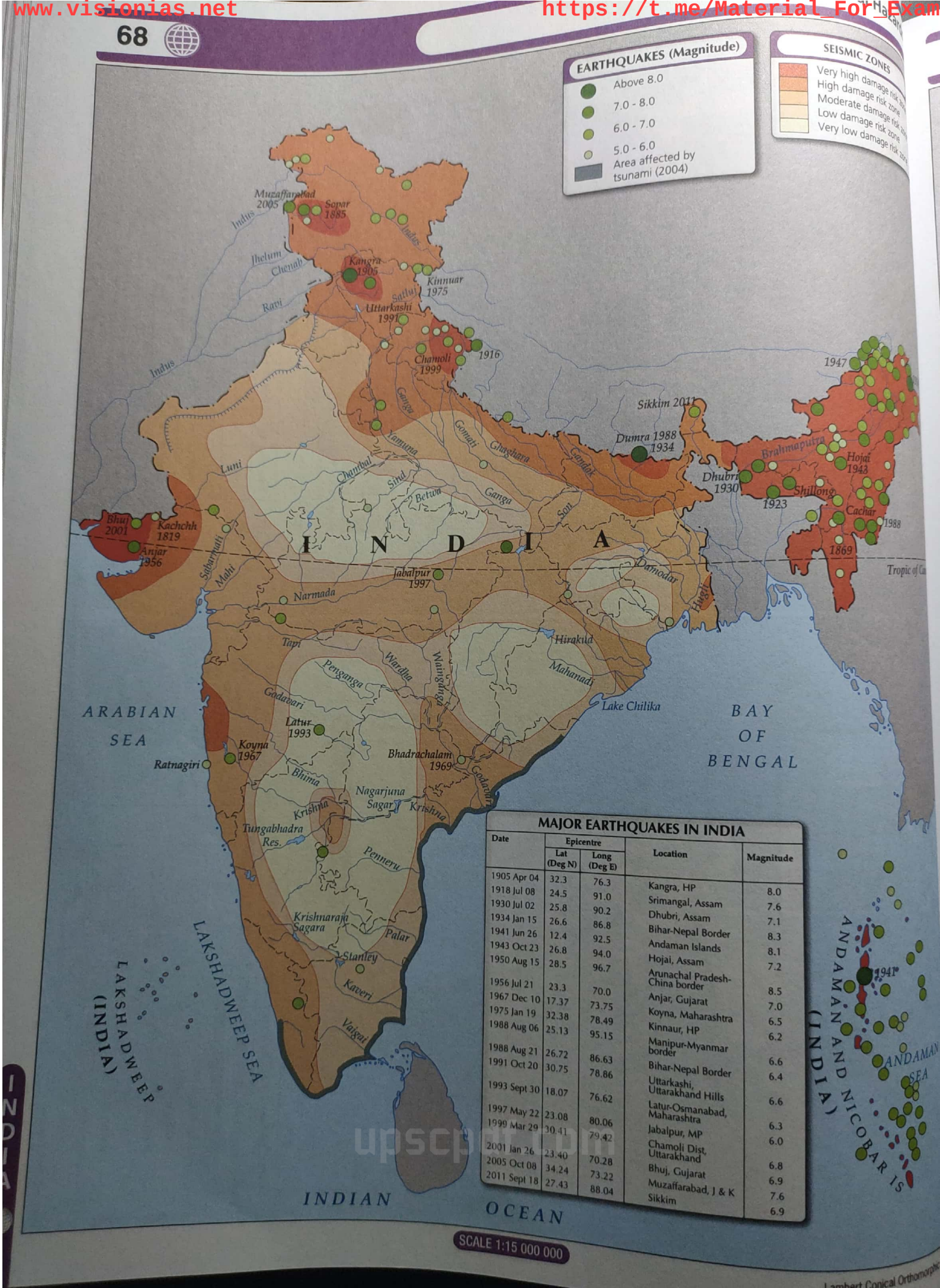
THREATENED SPECIES

	Mammals	Birds	Reptiles	Amphibians	Fishes	Molluses	Other Inverts	Plants	Total
	96	76	25	65	40	2	109	246	659

	EX	EW	Sub-total	CR	EN	VU	Sub-total
INDIA	0	0	0	74	206	383	663
Animals	0	0	0	77	172	139	388
Plants	6	2	8				

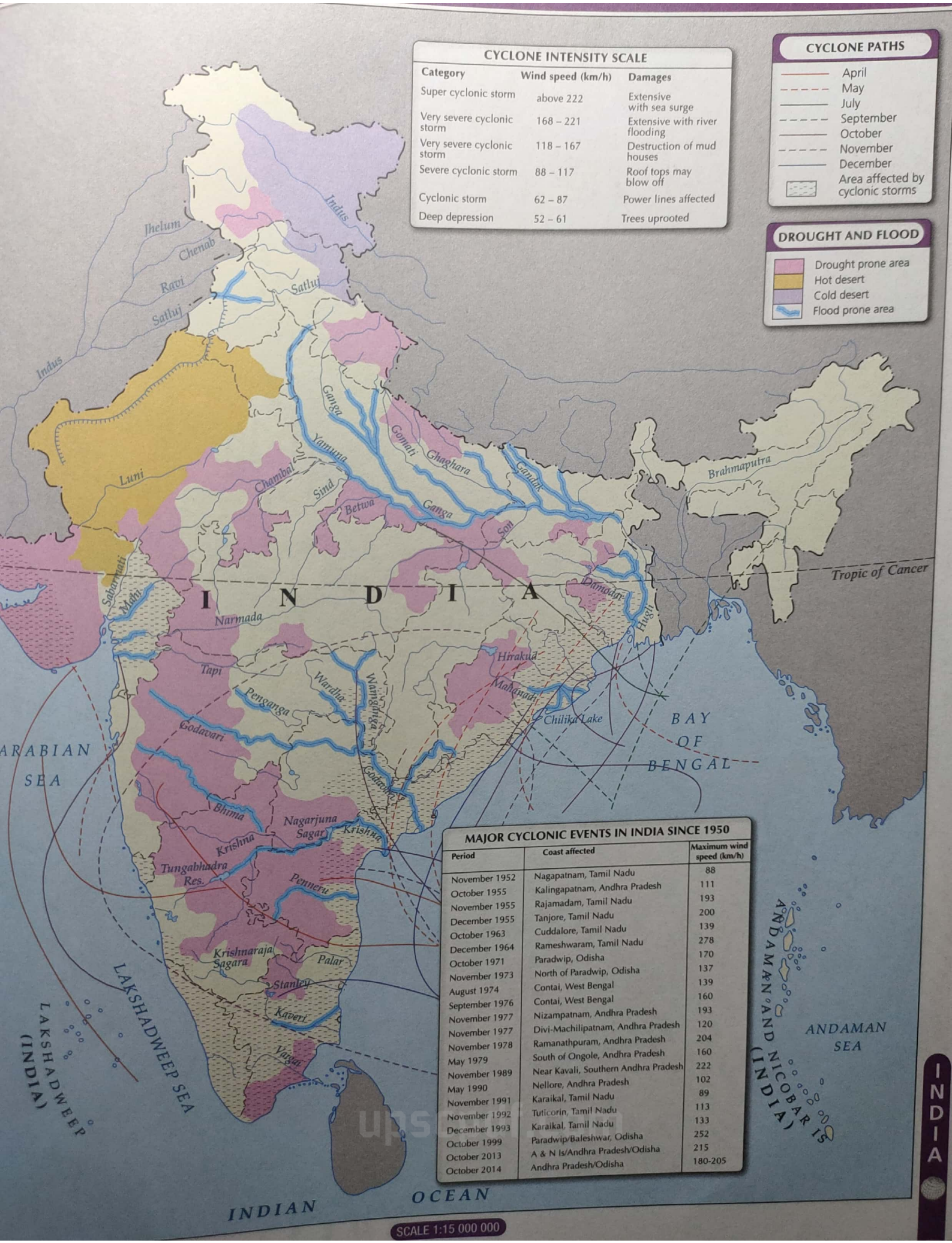
IUCN Red List Categories: EX - Extinct, EW - Extinct in the wild, CR - Critically Endangered, VU - Vulnerable.

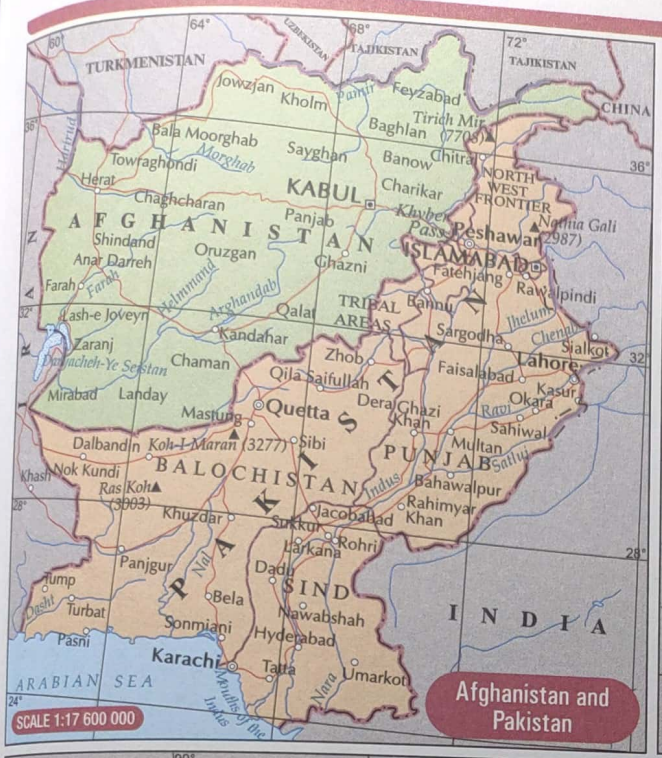
Data source: IUCN Red List version 2016-1, as on 30 June 2016



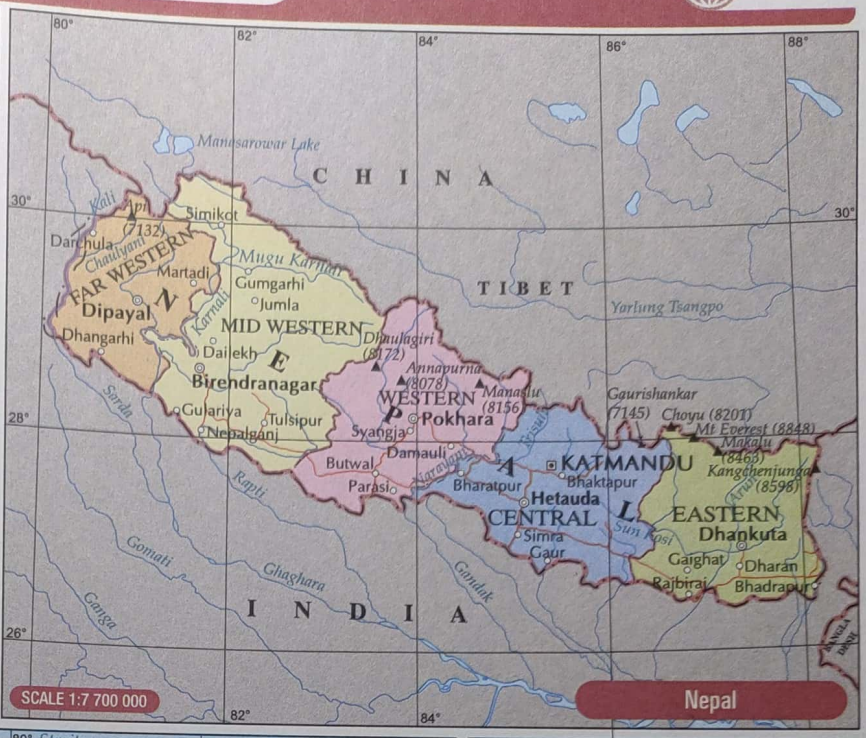
MAJOR EARTHQUAKES IN INDIA

Date	Epicentre		Location	Magnitude
	Lat (Deg N)	Long (Deg E)		
1905 Apr 04	32.3	76.3	Kangra, HP	8.0
1918 Jul 08	24.5	91.0	Srimangal, Assam	7.6
1930 Jul 02	25.8	90.2	Dhubri, Assam	7.1
1934 Jan 15	26.6	86.8	Bihar-Nepal Border	8.3
1941 Jun 26	12.4	92.5	Andaman Islands	8.1
1943 Oct 23	26.8	94.0	Hojai, Assam	7.2
1950 Aug 15	28.5	96.7	Arunachal Pradesh-China border	8.5
1956 Jul 21	23.3	70.0	Anjar, Gujarat	7.0
1967 Dec 10	17.37	73.75	Koyna, Maharashtra	6.5
1975 Jan 19	32.38	78.49	Kinnaur, HP	6.2
1988 Aug 06	25.13	95.15	Manipur-Myanmar border	6.6
1988 Aug 21	26.72	86.63	Bihar-Nepal Border	6.4
1991 Oct 20	30.75	78.86	Uttarkashi, Uttarakhand Hills	6.6
1993 Sept 30	18.07	76.62	Latur-Osmanabad, Maharashtra	6.3
1997 May 22	23.08	80.06	Jabalpur, MP	6.0
1999 Mar 29	30.41	79.42	Chamoli Dist, Uttarakhand	6.8
2001 Jan 26	23.40	70.28	Bhuj, Gujarat	6.9
2005 Oct 08	34.24	73.22	Muzaffarabad, J & K	7.6
2011 Sept 18	27.43	88.04	Sikkim	6.9

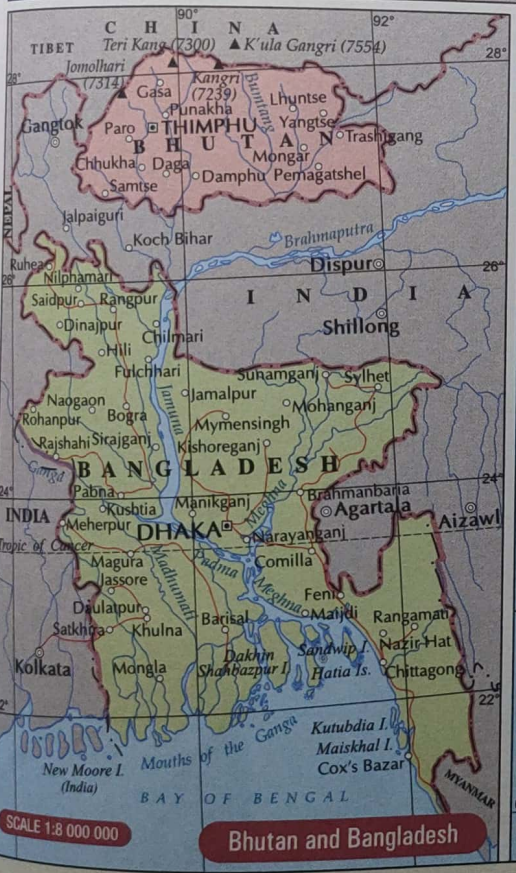




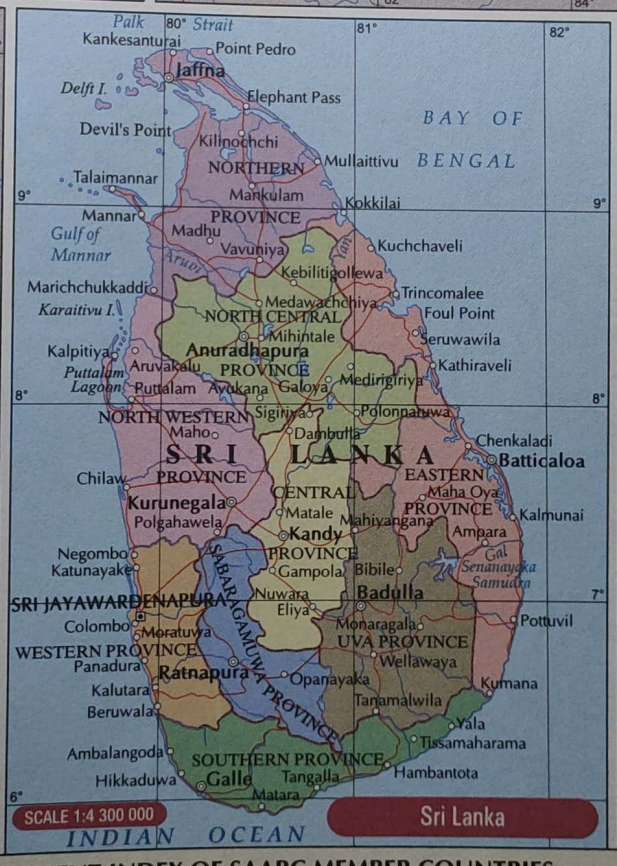
Afghanistan and Pakistan



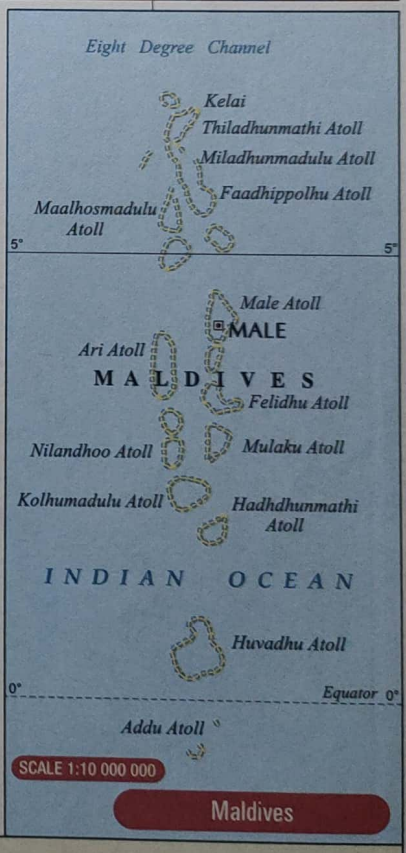
Nepal



Bhutan and Bangladesh



Sri Lanka



Maldives

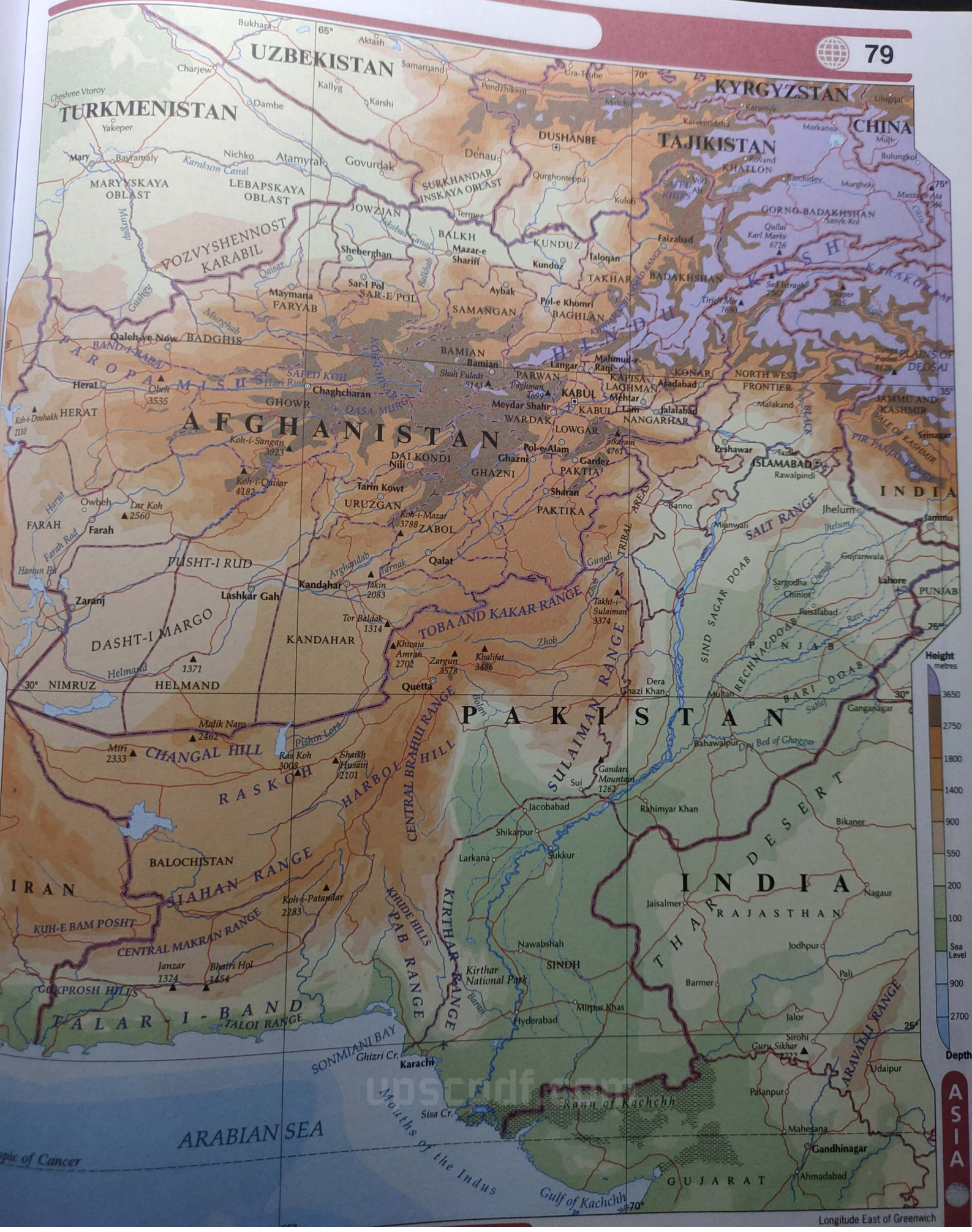
HUMAN DEVELOPMENT INDEX OF SAARC MEMBER COUNTRIES

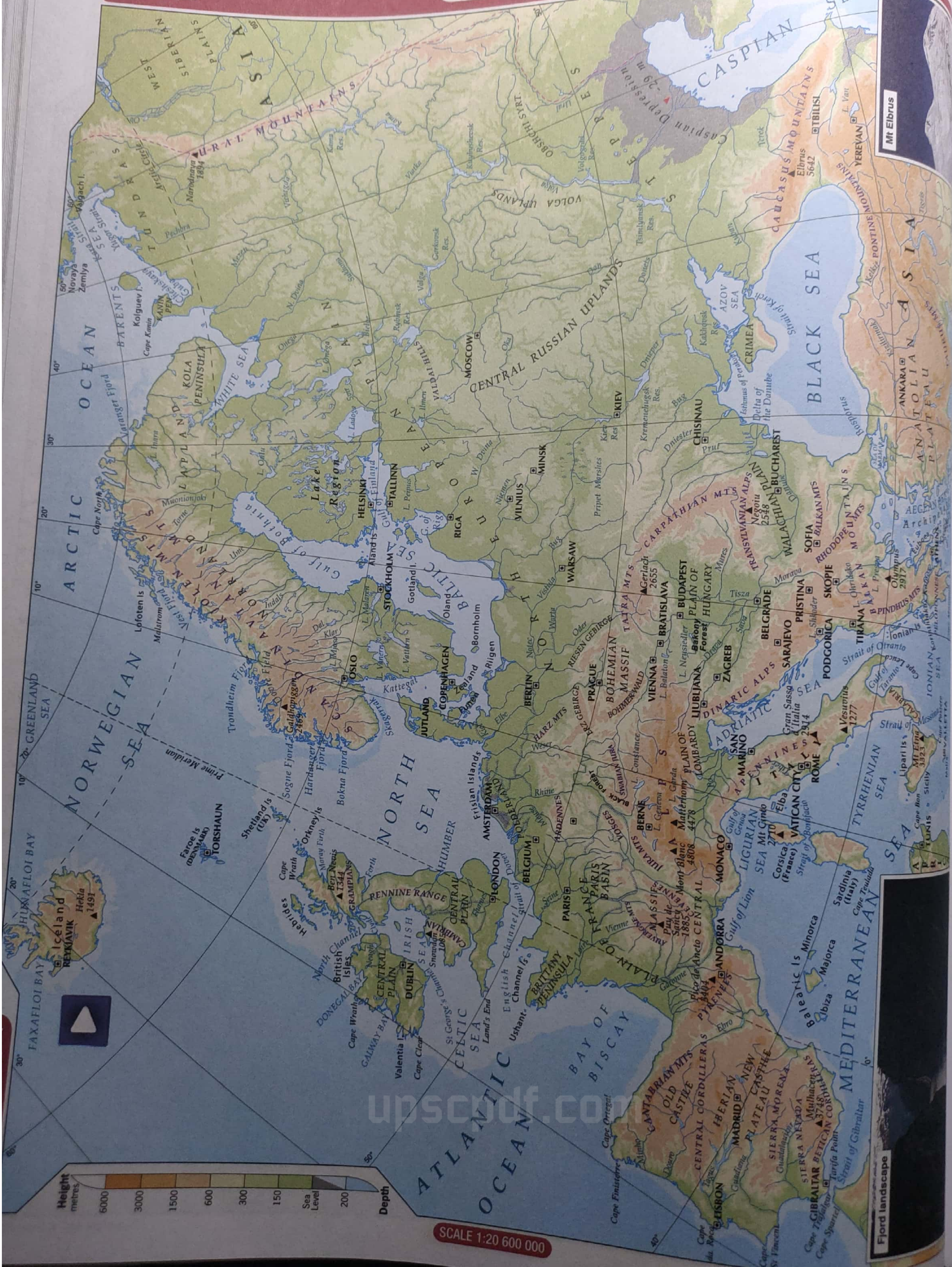
Source: HDR 2015

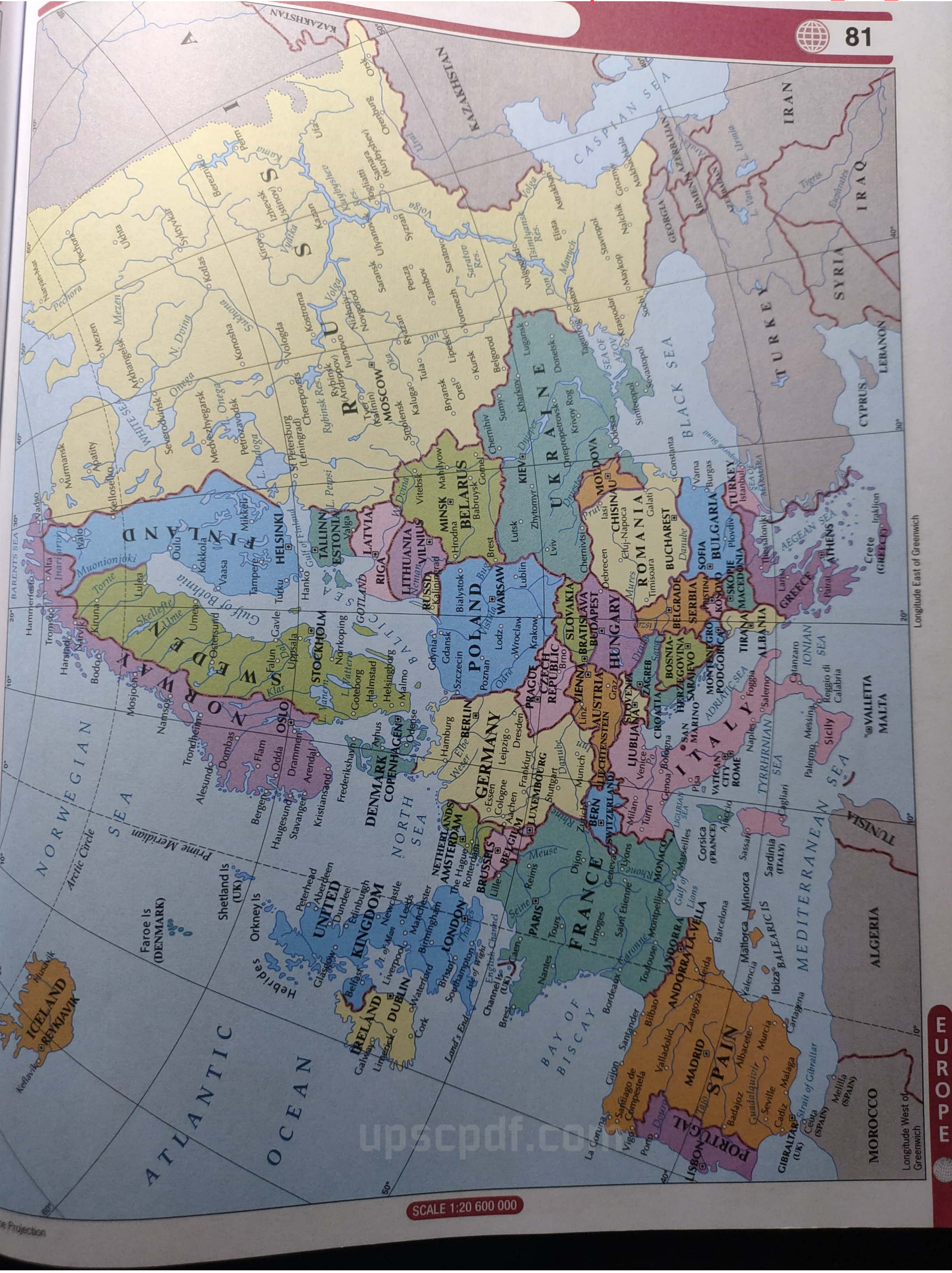
HDI RANK		HUMAN DEVELOPMENT COMPONENTS				ECONOMY	EDUCATION	HEALTH	POVERTY
HDI rank in world	Country	Human development index (HDI) value	GNI per capita (2005 PPP US$)	Life expectancy at birth (years)	Mean years of schooling (years)	GDP per capita (2005 PPP US$)	Adult literacy rate (%)	Expenditure on health (% of GDP)	Population below income poverty line (%) (PPP US$1.25 a day)
73	Sri Lanka	0.757	9,779	74.9	10.8	9,426	91.2	3.2	...
104	Maldives	0.706	12,328	76.8	5.8	11,283	98.4	10.8	1.5
130	India*	0.609	5,497	68.0	5.4	5,238	62.8	4.0	23.6
132	Bhutan	0.605	7,176	69.5	3.0	7,167	52.8	3.6	2.4
142	Bangladesh	0.570	3,191	71.6	5.1	2,853	58.8	3.7	43.3
145	Nepal	0.548	2,311	69.6	3.3	2,173	57.4	6.0	23.7
147	Pakistan	0.538	4,866	66.2	4.7	4,454	54.7	2.8	12.7
175	Afghanistan	0.465	1,885	60.4	3.2	1,884	31.7	8.1	...
...	SOUTH ASIA	0.607	5,605	68.4	5.5	5,324	62.5	4.3	...

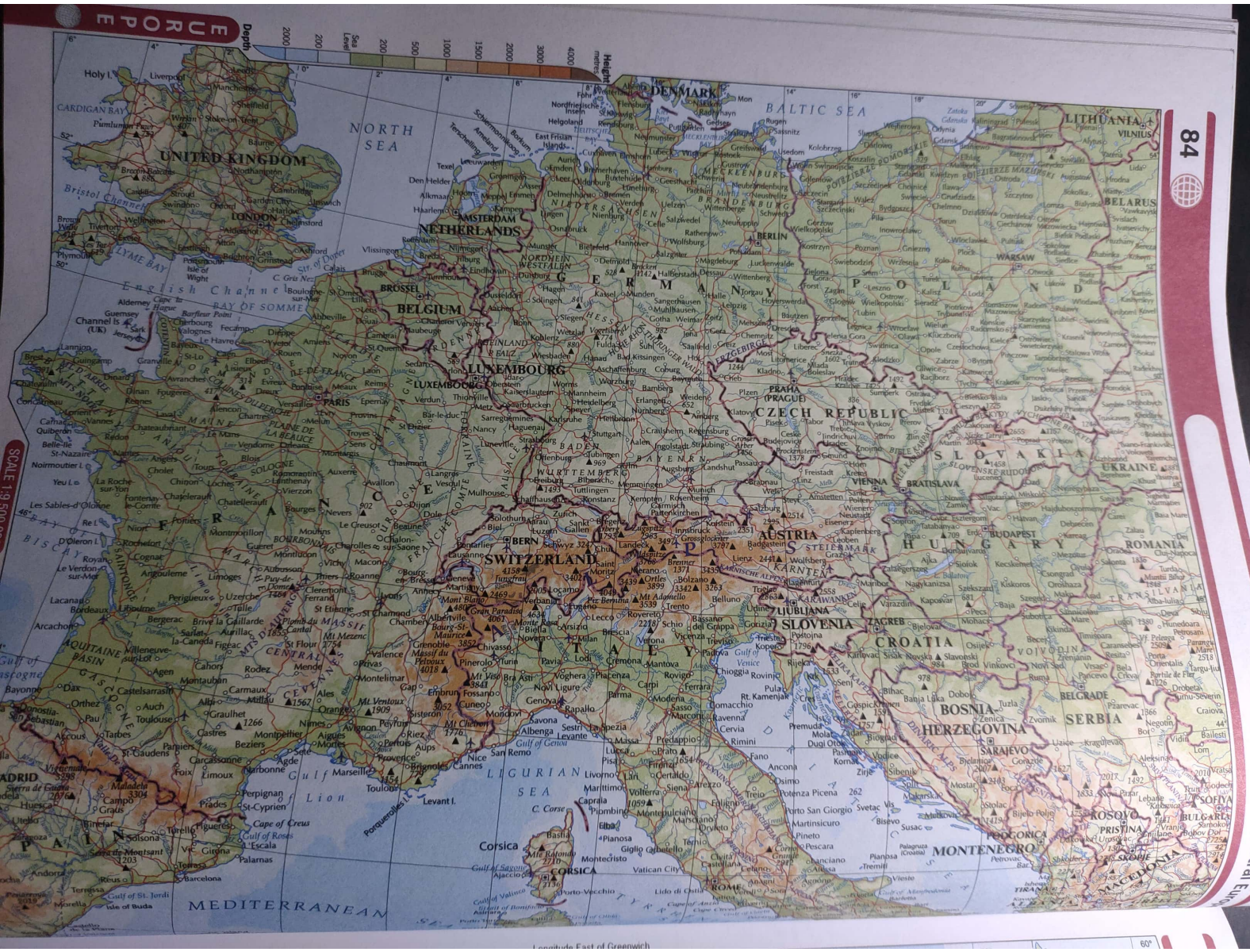
Longitude East of Greenwich

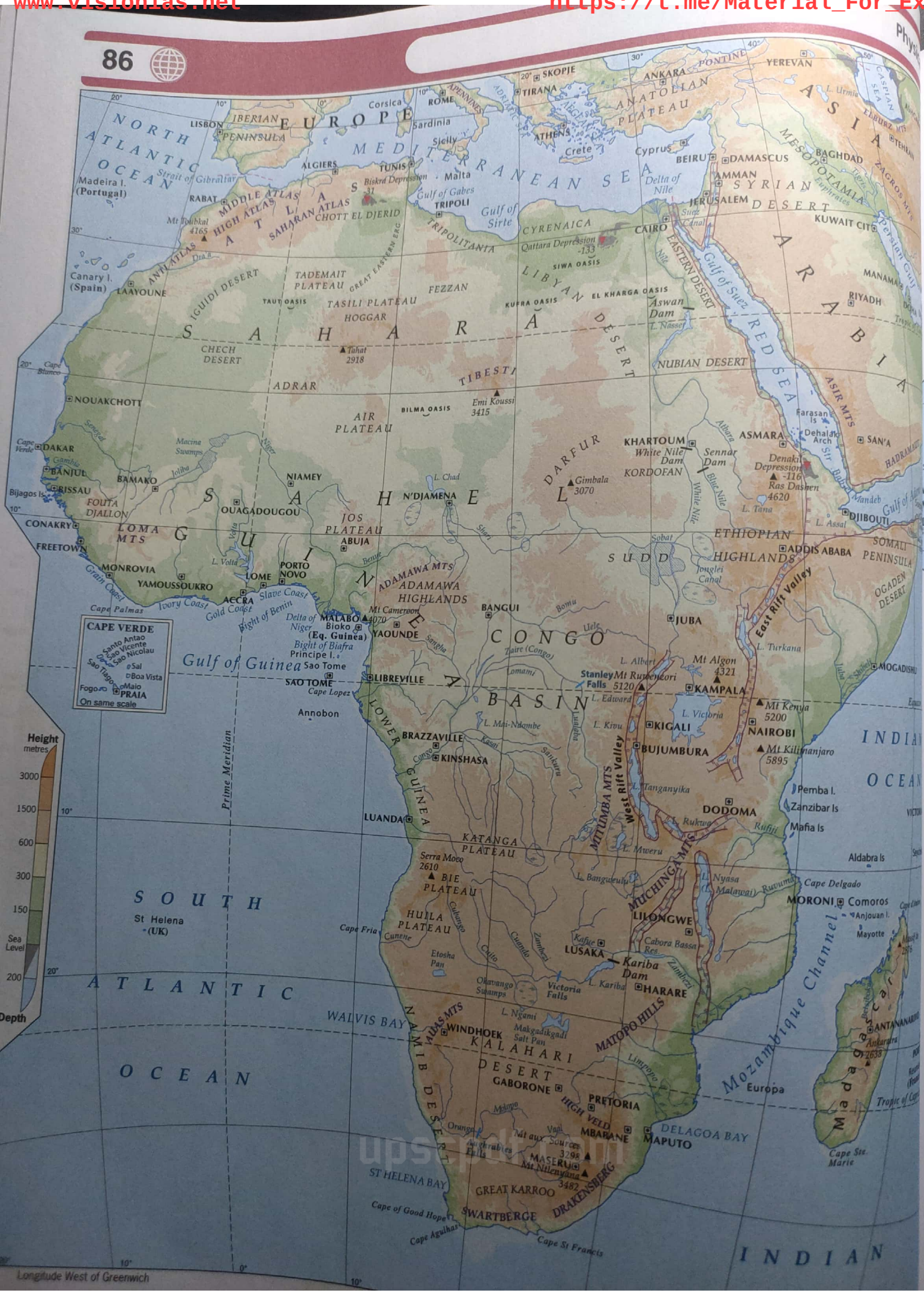
*Map details of India are given in the preceding pages

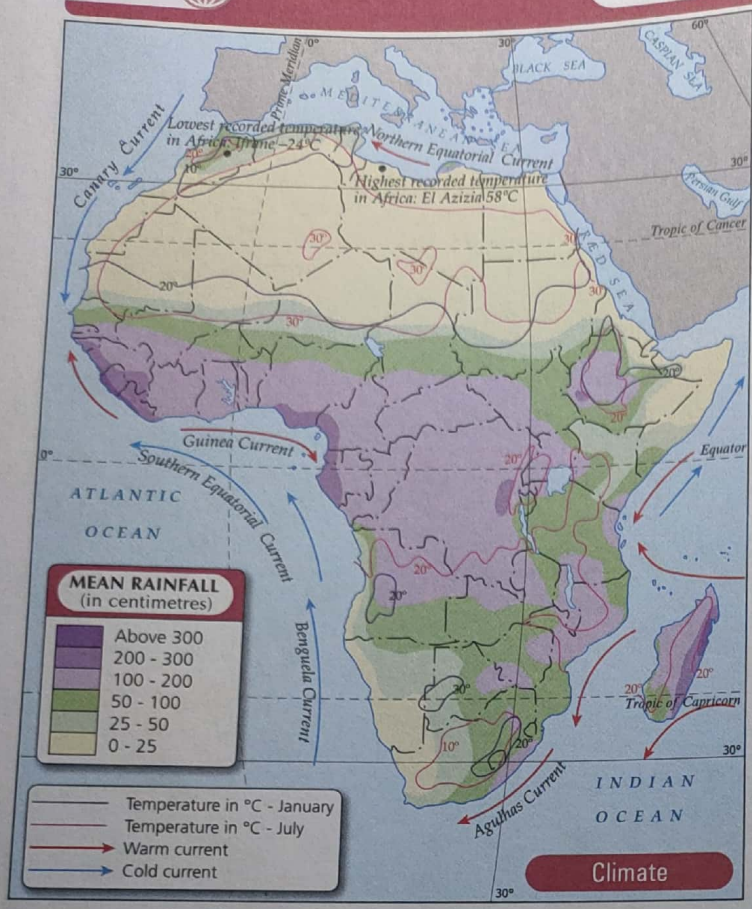


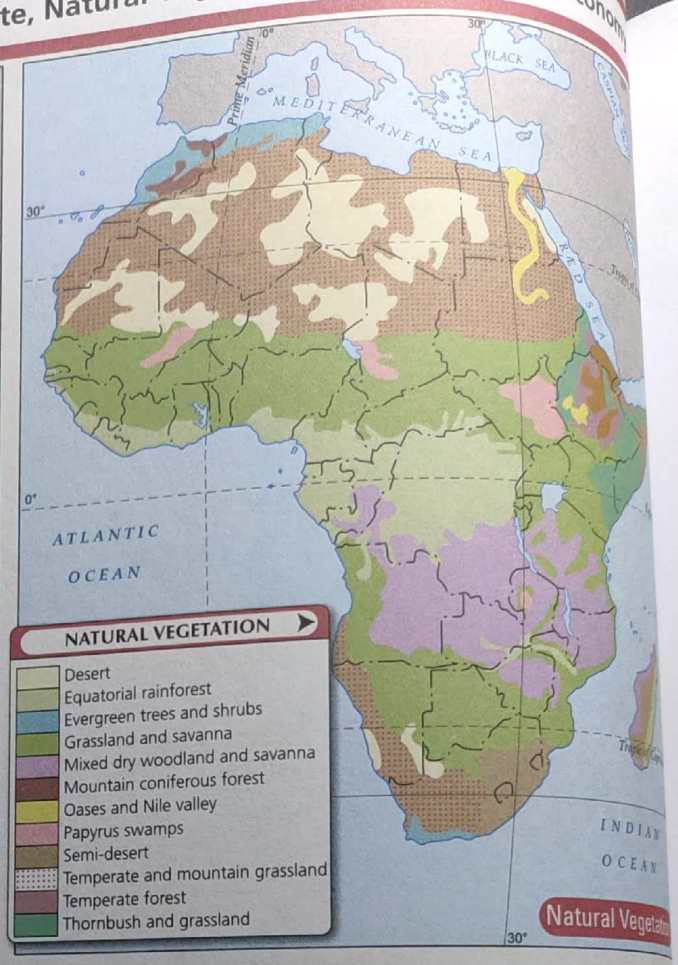












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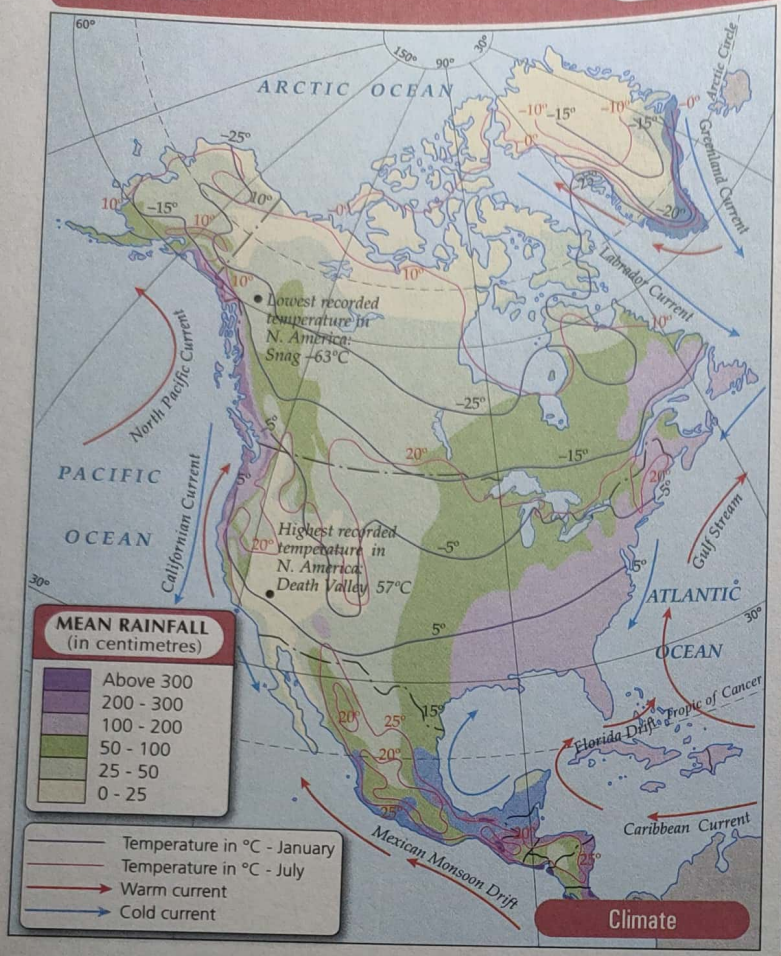
Zenithal Equidistant Projection

AFRICA



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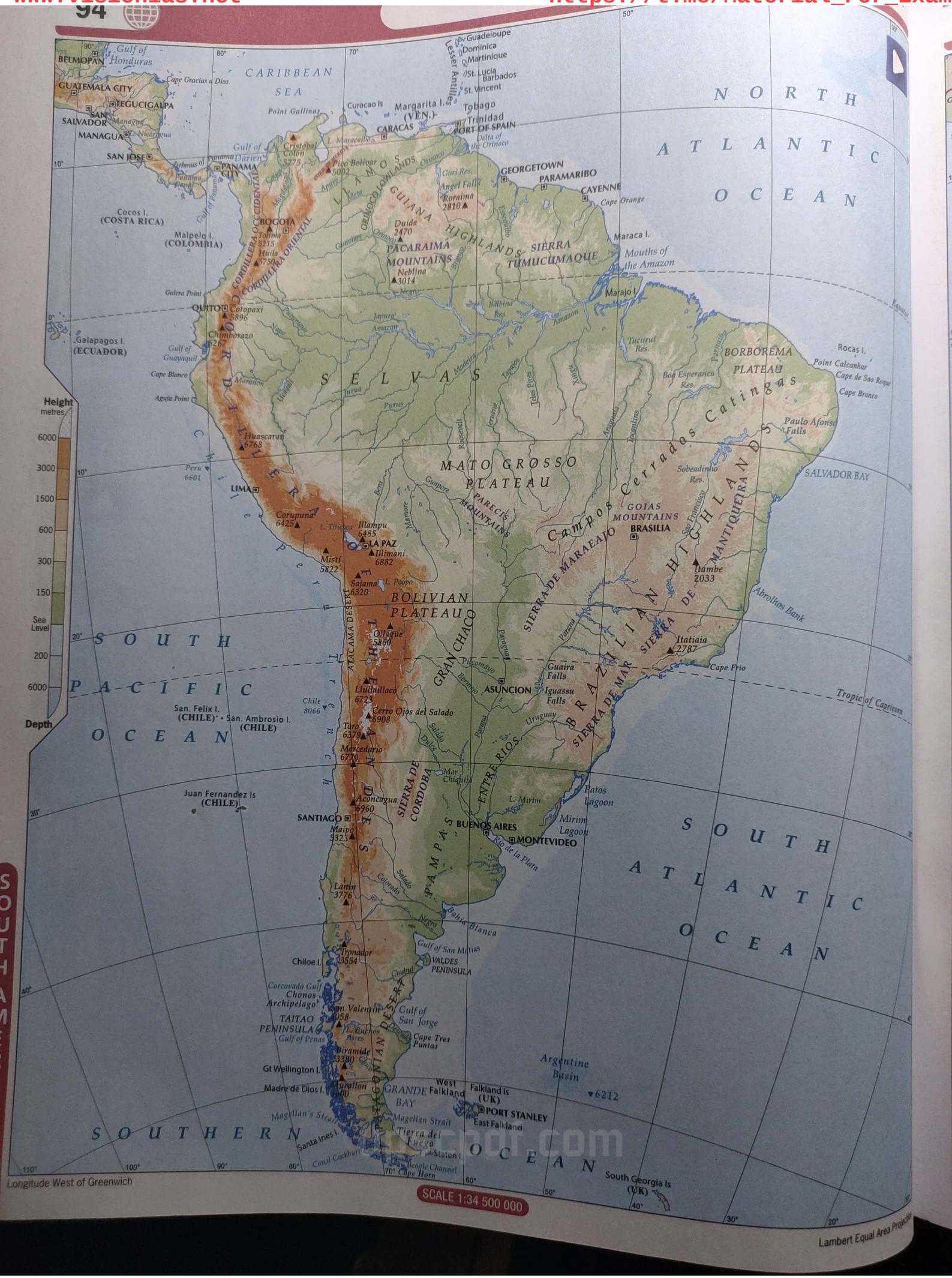
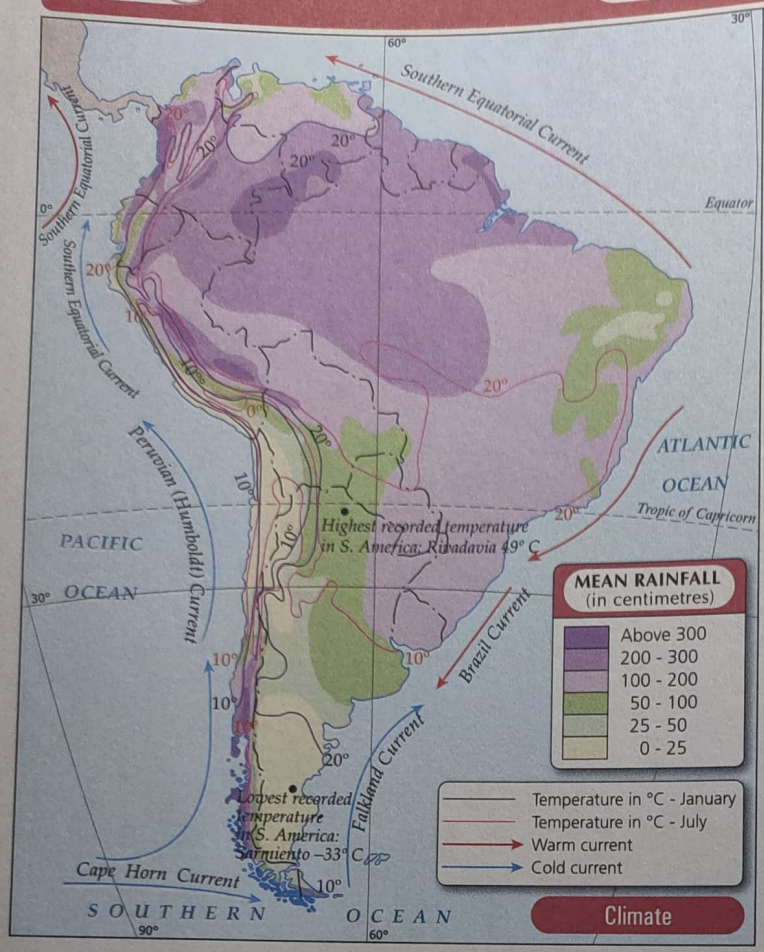
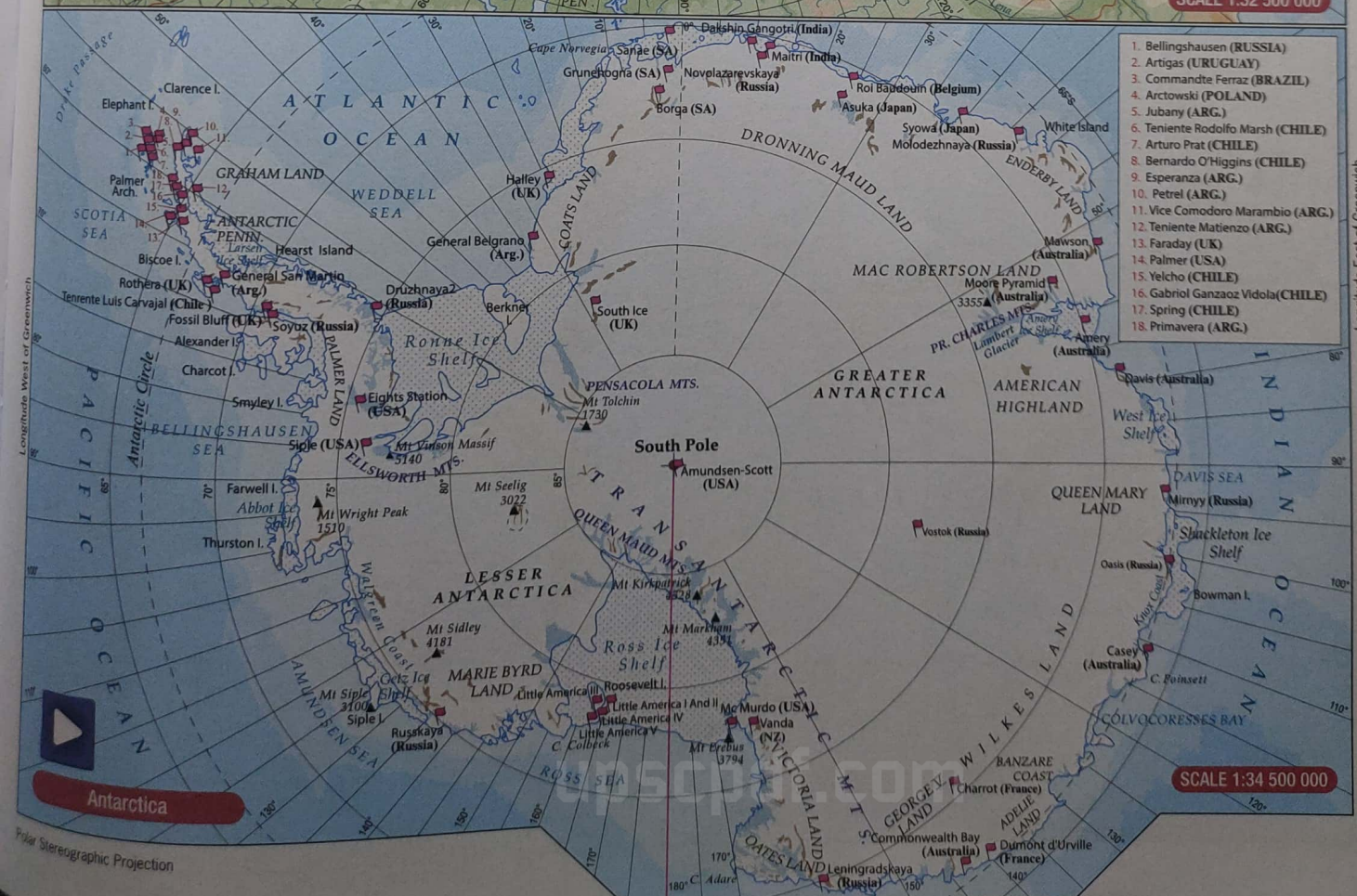
SCALE 1:18 800 000





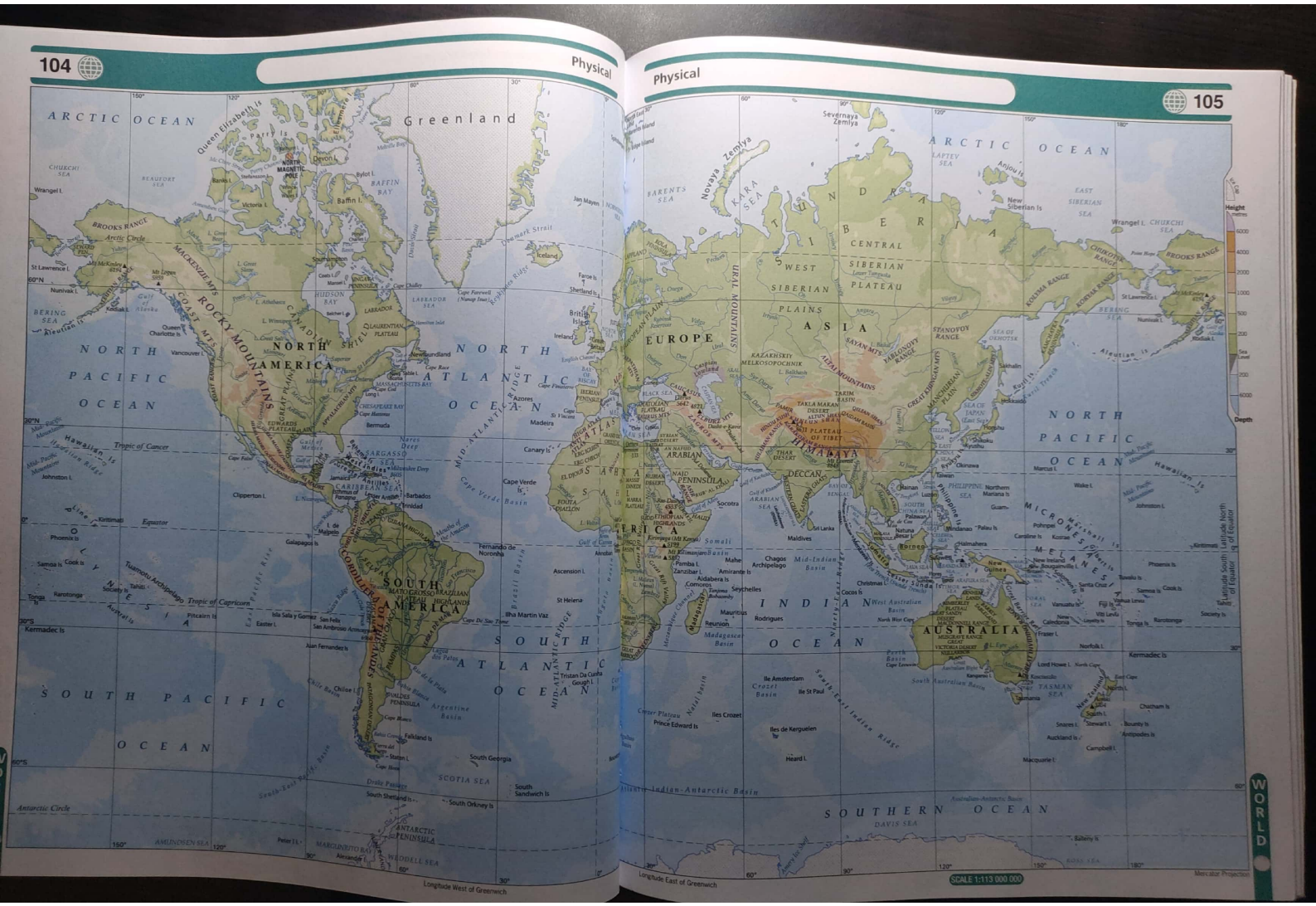
SOUTH AMERICA

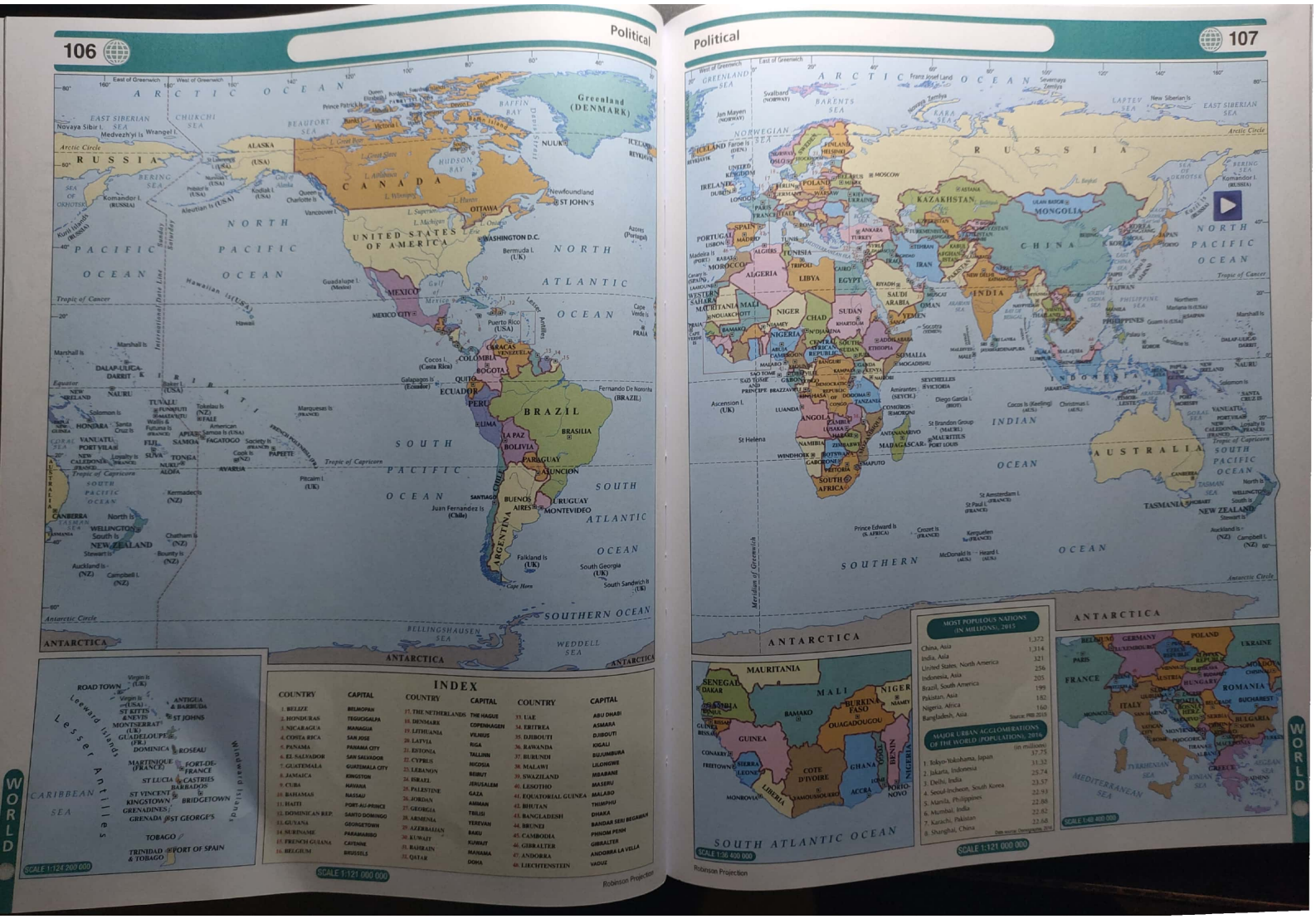
SCALE 1:66 000 000

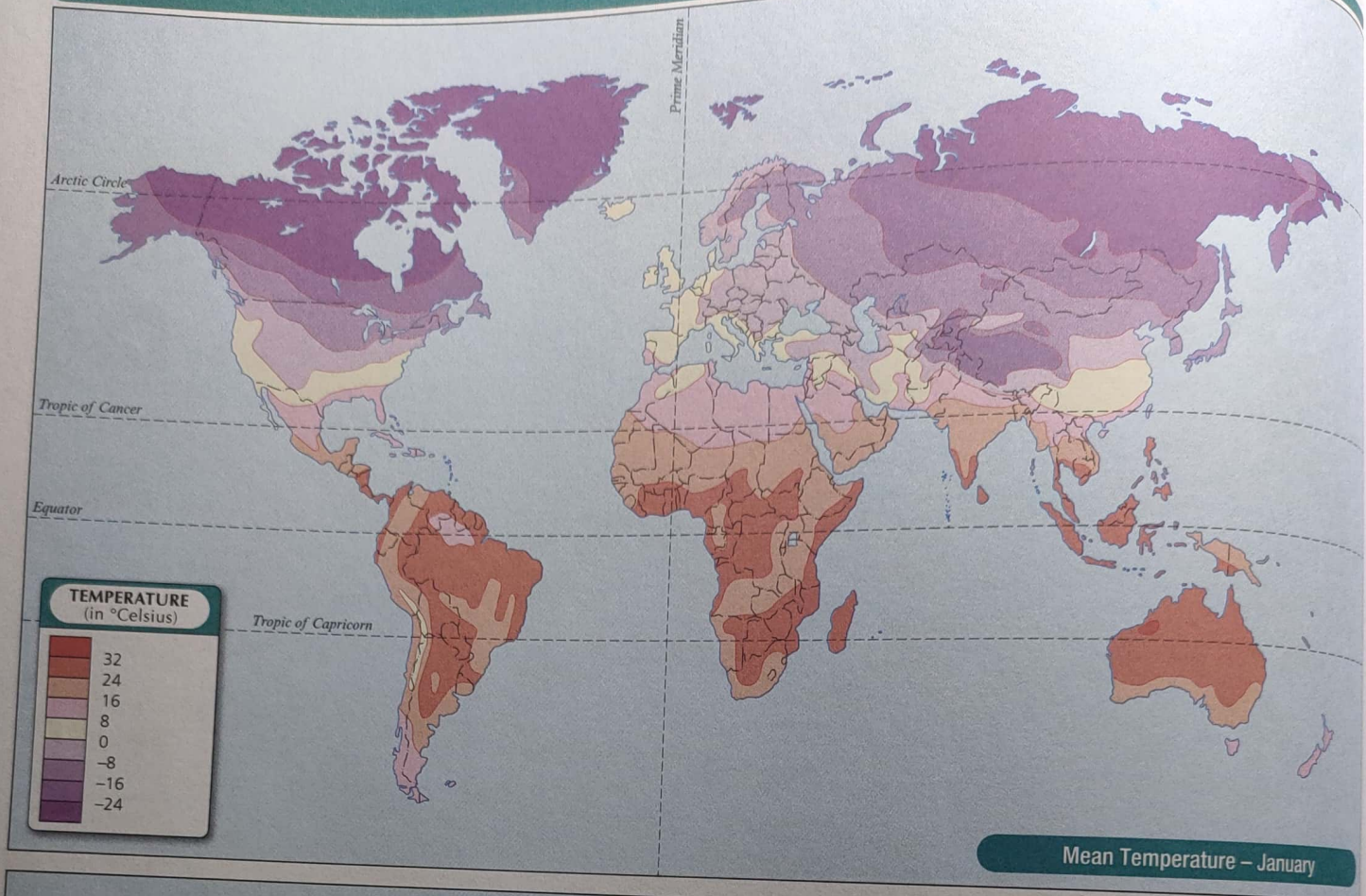


1. Bellingshausen (RUSSIA)
2. Artigas (URUGUAY)
3. Commandte Ferraz (BRAZIL)
4. Arctowski (POLAND)
5. Jubany (ARG.)
6. Teniente Rodolfo Marsh (CHILE)
7. Arturo Prat (CHILE)
8. Bernardo O'Higgins (CHILE)
9. Esperanza (ARG.)
10. Petrel (ARG.)
11. Vice Comodoro Marambio (ARG.)
12. Teniente Matienzo (ARG.)
13. Faraday (UK)
14. Palmer (USA)
15. Yelcho (CHILE)
16. Gabriol Ganzaoz Vidola(CHILE)
17. Spring (CHILE)
18. Primavera (ARG.)

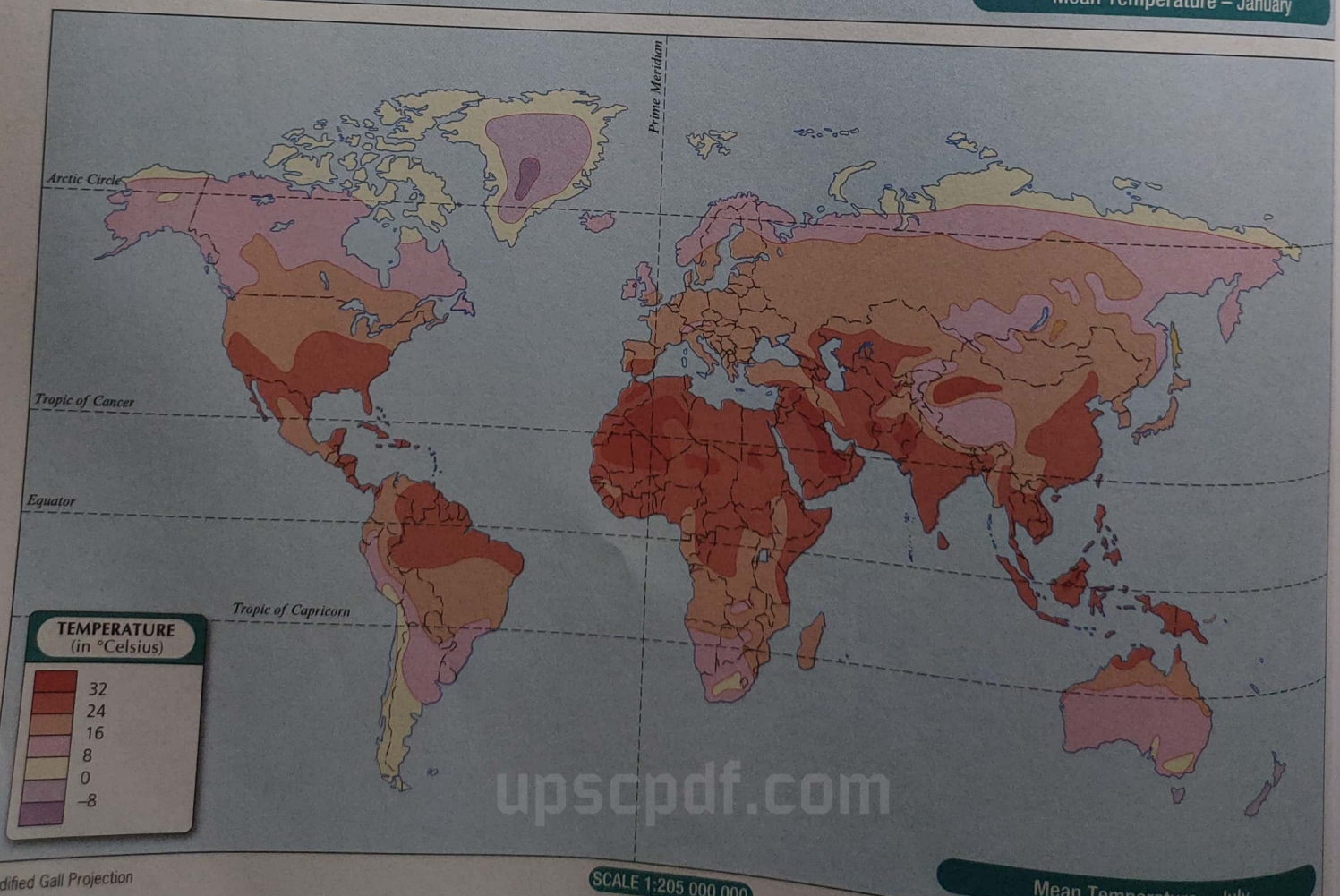
POLAR REGIONS







Mean Temperature – January

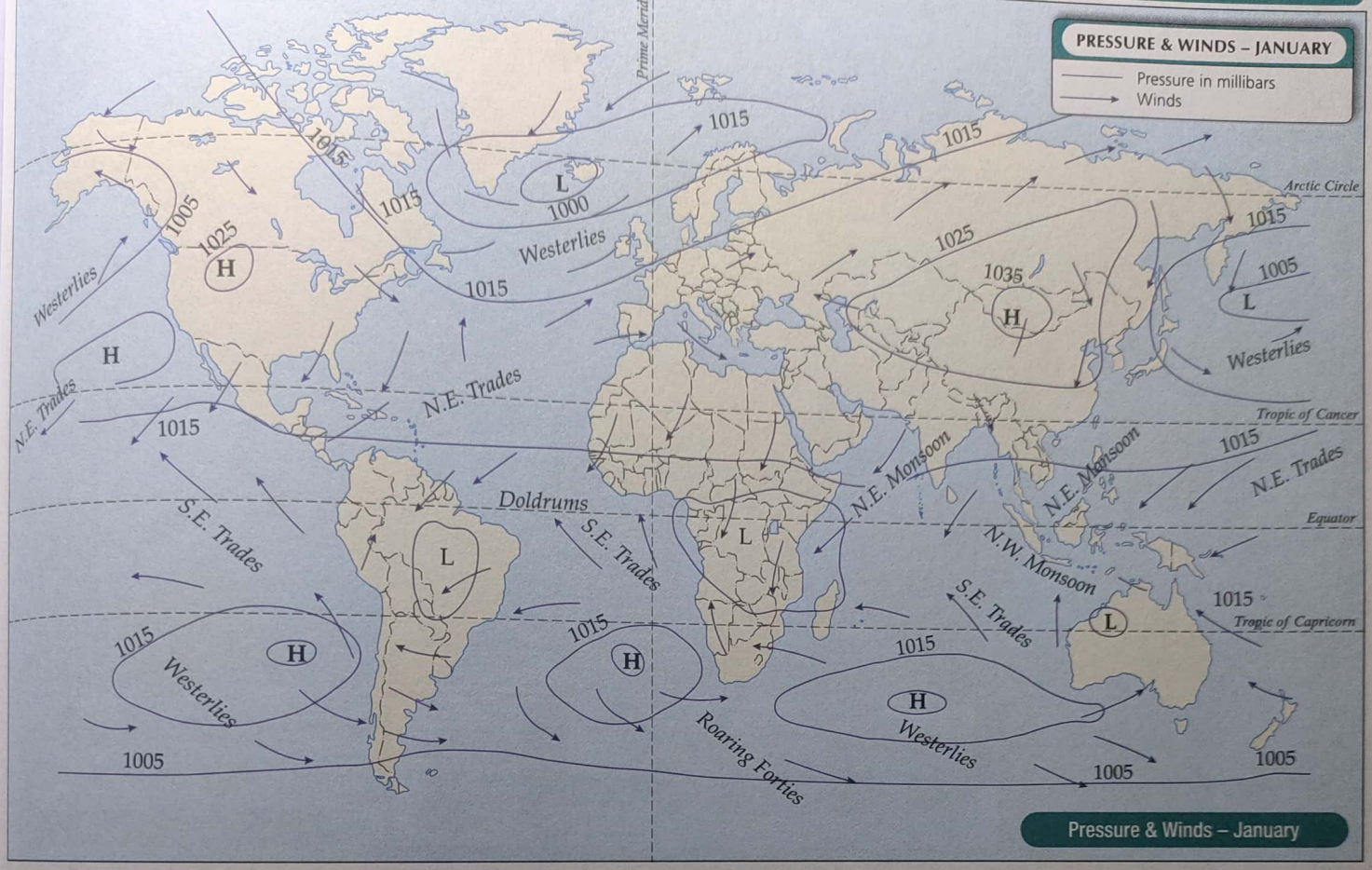


Modified Gall Projection

SCALE 1:205 000 000

Mean Temperature – July

WORLD



Pressure & Winds – January

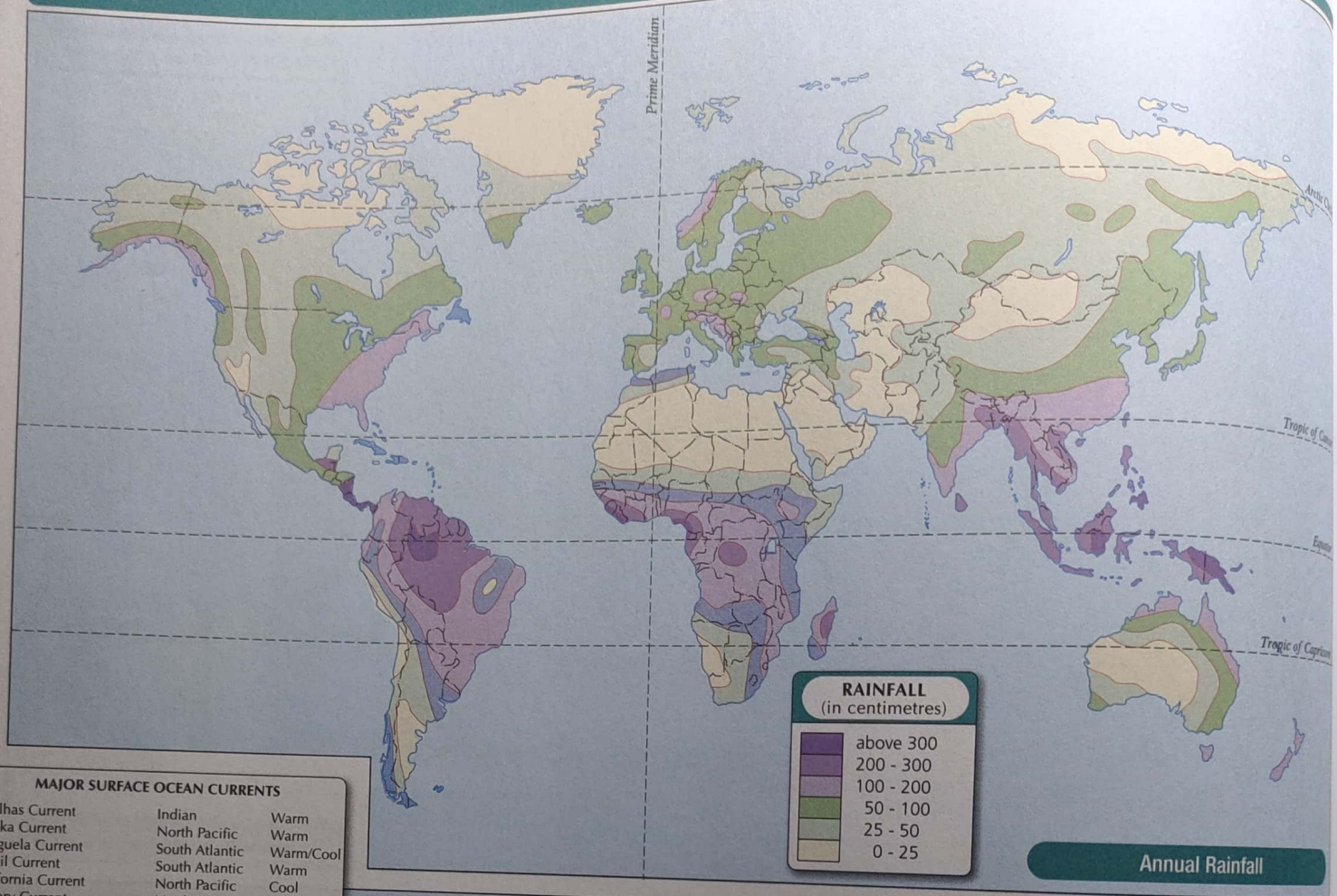
Pressure & Winds – July

SCALE 1:205 000 000

Modified Gall Projection

WORLD

Annual Rainfall and Major Oceanic Currents



MAJOR SURFACE OCEAN CURRENTS

Agulhas Current	Indian	Warm
Alaska Current	North Pacific	Warm
Benguela Current	South Atlantic	Warm/Cool
Brazil Current	South Atlantic	Warm
California Current	North Pacific	Cool
Canary Current	North Atlantic	Cool
East Australian Current	South Pacific	Warm
Equatorial Current	Pacific	Warm
Gulf Stream	North Altantic	Warm
Humboldt (Peru) Current	South Pacific	Cool
Kuro Siwo (Japan) Current	North Pacific	Warm
Labrador Current	North Atlantic	Cool
North Atlantic Drift	North Atlantic	Warm
North Pacific Drift	North Pacific	Warm
Oya Siwo Current	North Pacific	Cool
West Australian Current	Indian	Cool
West Wind Drift	South Pacific	Cool

Modified Gall Projection

SCALE 1:205 000 000

Major Ocean Currents

CLIMATIC REGIONS OF WORLD
(based on Koppen's classification)

Tropical rainy climates
- *Af* Rainforest climate
- *Am* Monsoon climate
- *Aw* Savanna climate

Dry climates
- *BS* Steppe climate
- *BW* Desert climate

Warm temperate rainy climates
- *Cw* Dry winter climate
- *Cs* Dry summer climate
- *Cf* Climate with no dry season

Cold temperate rainy climates
- *Dw* Dry winter climate
- *Df* Climate with no dry season

Polar climates
- *ET* Tundra climate
- *EF* Polar climate

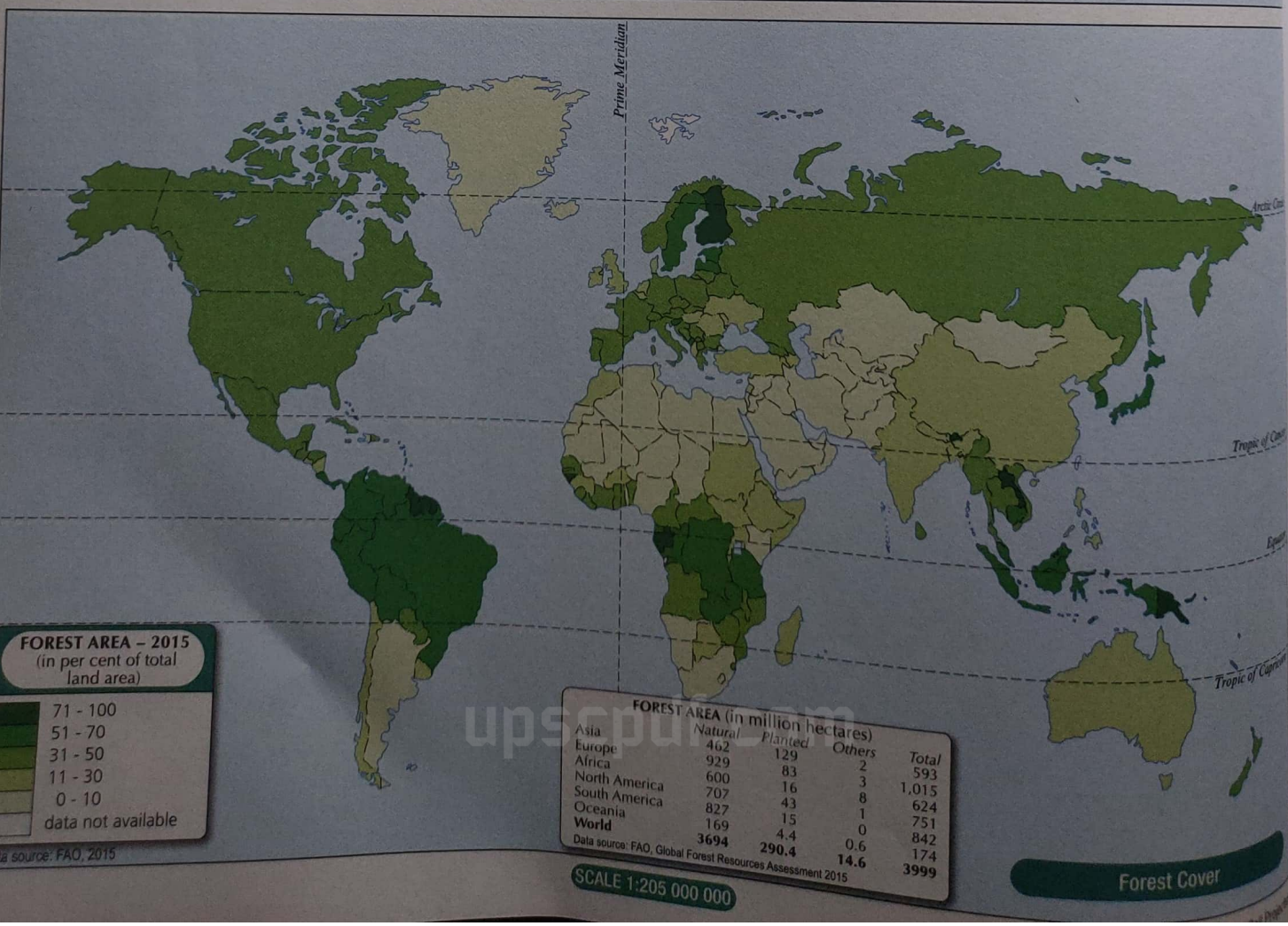
WATERSHEDS
(where the rivers flow on a continental scale)

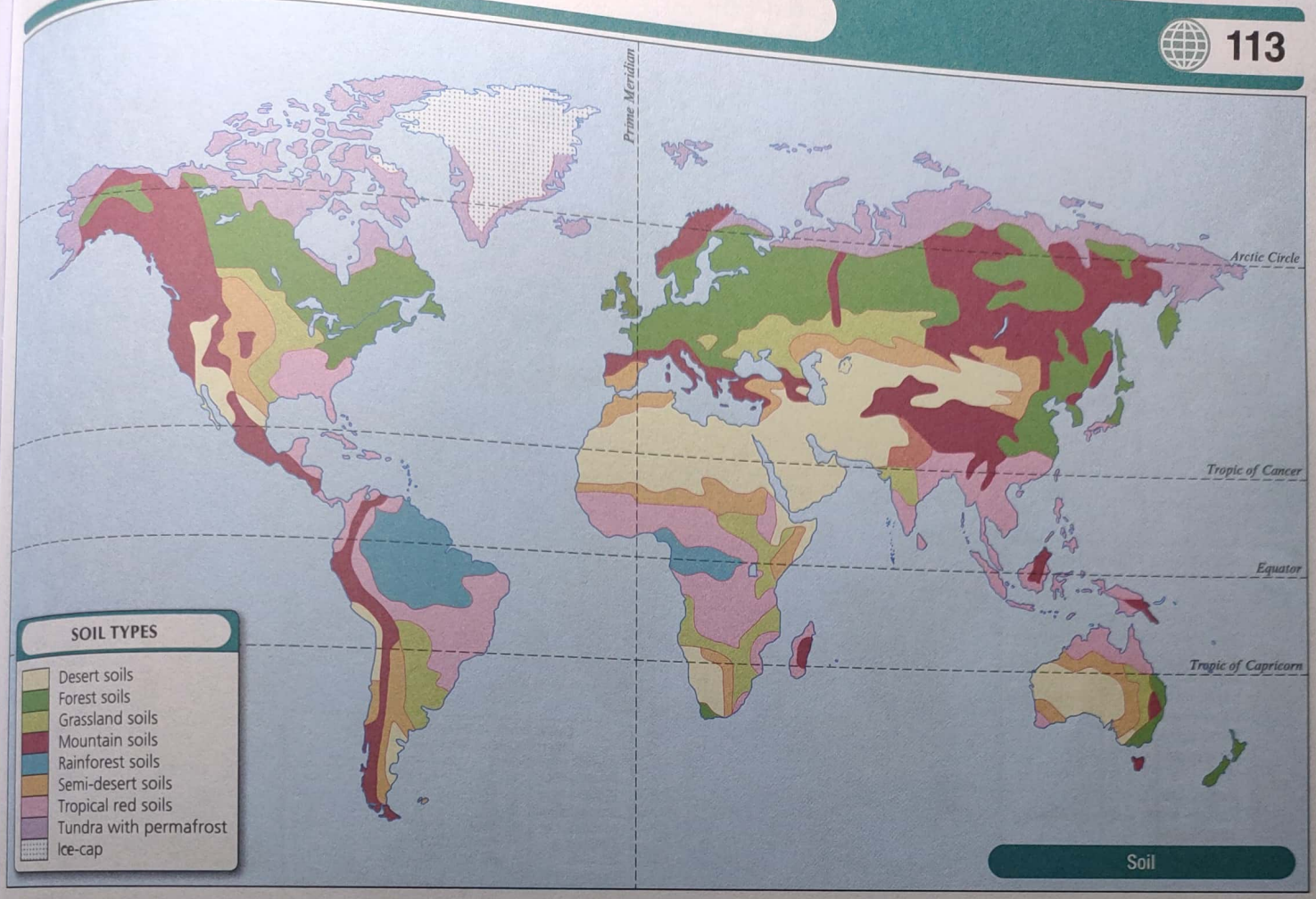
- Pacific Ocean
- Indian Ocean
- Arctic Ocean
- Atlantic Ocean
- Caribbean Sea – Gulf of Mexico
- Mediterranean Sea
- Inland basins, ice caps and deserts

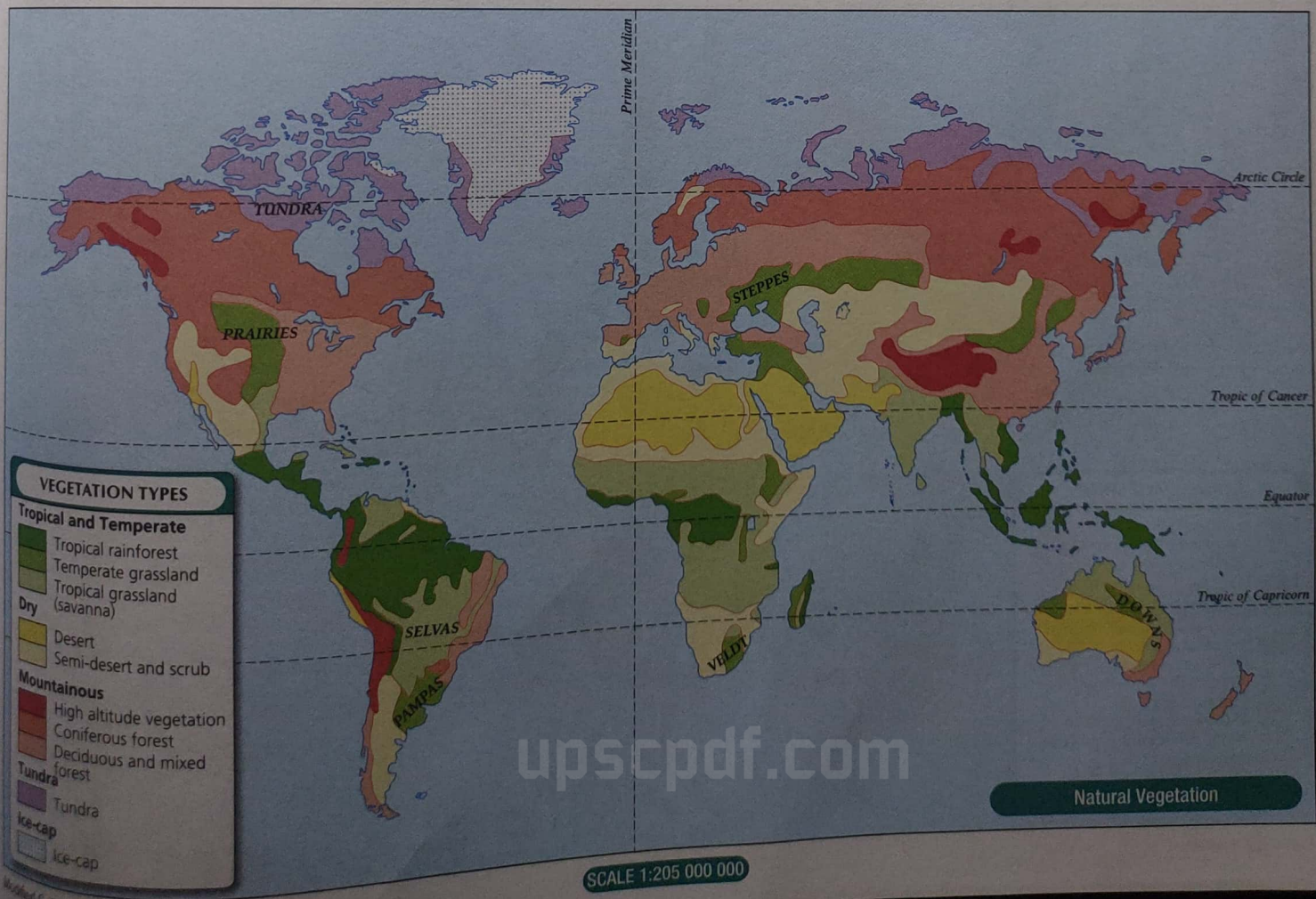
Note: The world's 20 longest rivers are shown in brackets

Projection

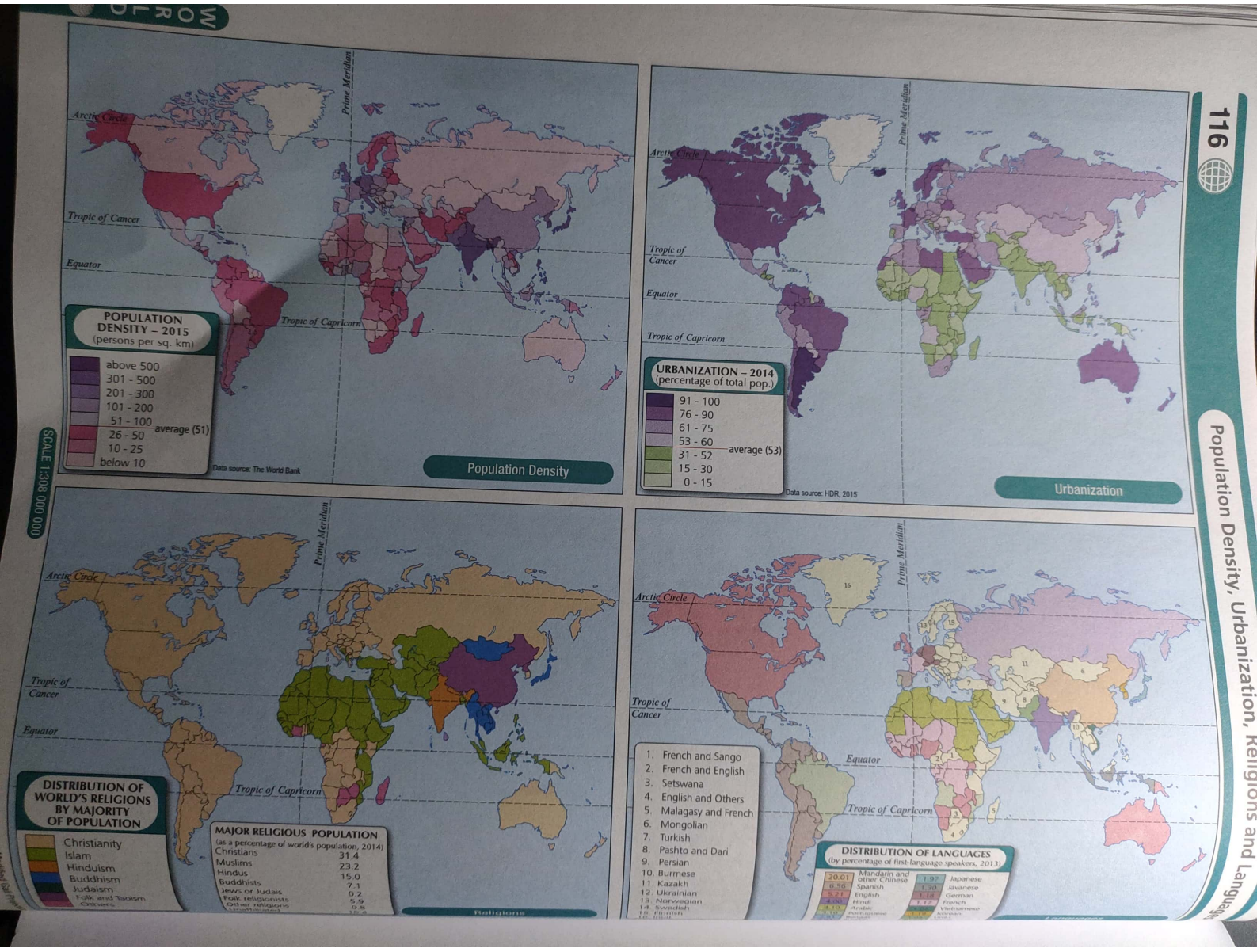
SCALE 1:205 000 000







WORLD

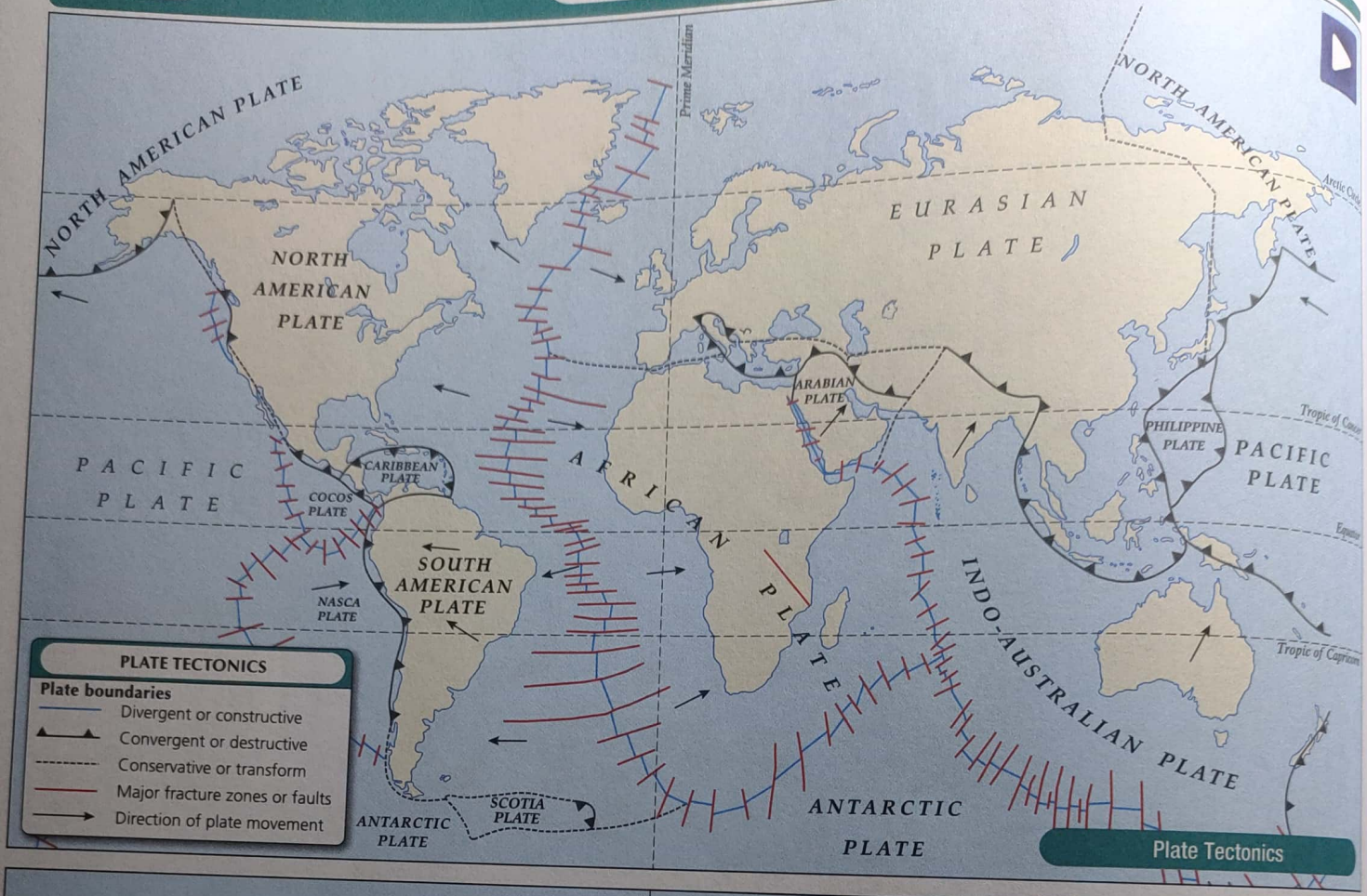


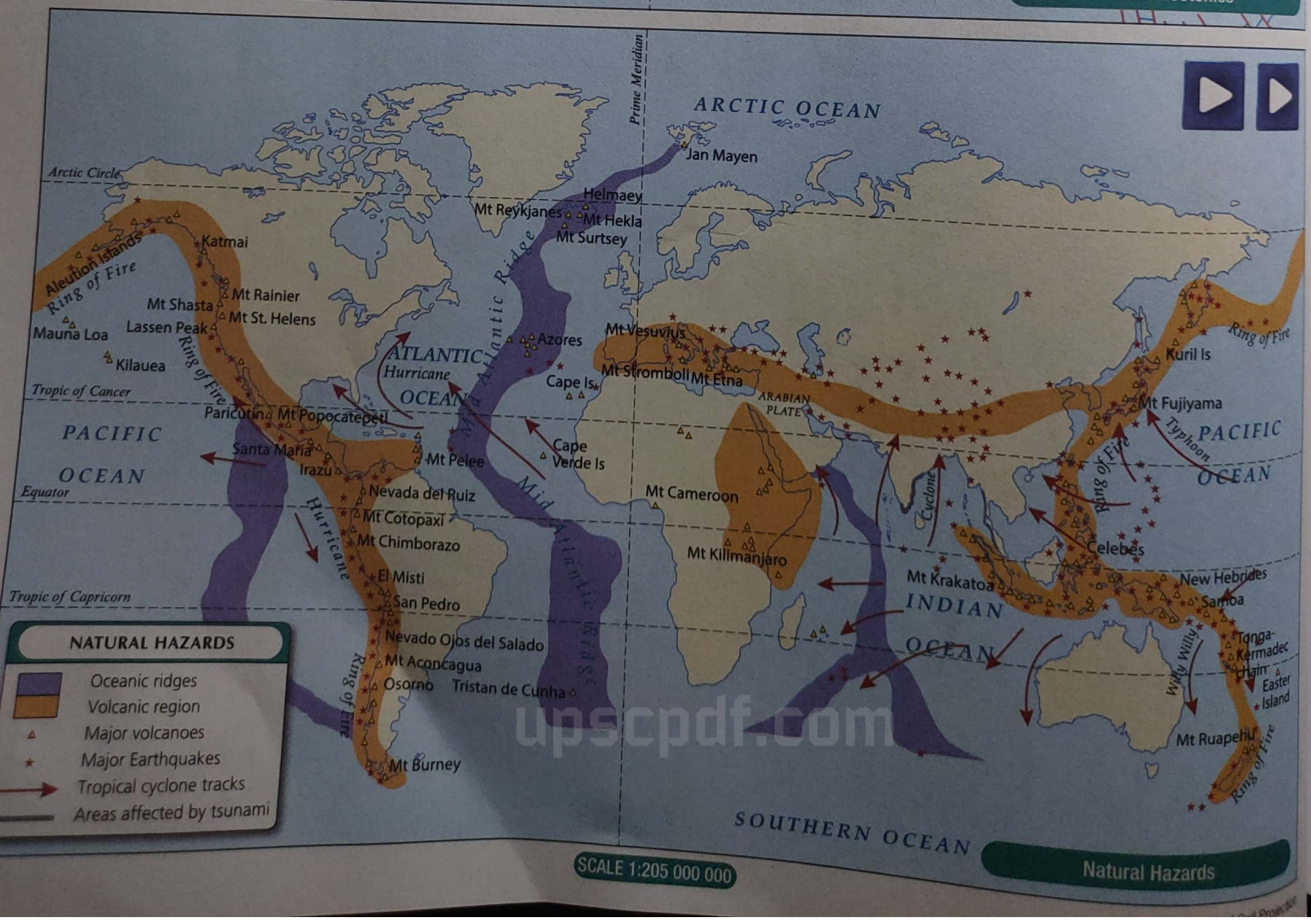
STUDYPHABA.COM

Desertification and Deforestation

Pollutants and CO_2 Emissions

WORLD





THE WORLD'S BUSIEST AIRPORTS, 2013
Total passengers (arriving + departing + transit)

1.	Atlanta (USA)	94,431,224
2.	Beijing (China)	83,712,355
3.	London Heathrow (UK)	72,368,061
4.	Tokyo Haneda (Japan)	68,906,509
5.	Chicago (USA)	66,777,161
6.	Los Angeles (USA)	66,667,619
7.	Dubai (UAE)	66,431,533
8.	Paris (France)	62,052,917
9.	Dallas / Fort Worth (USA)	60,470,507
10.	Jakarta (Indonesia)	60,137,347

Data source: Airports Council International, 2014-15

AIR ROUTES AND MAJOR AIRPORTS
Air routes
Major airports

Air Routes

HE WORLD'S BUSIEST SEAPORTS (2014)
Based on cargo tonnage

Shanghai (China)
Singapore (Singapore)
Guangzhou (China)
Qingdao (China)
Port Hedland (Australia)
Tianjin (China)
Rotterdam (The Netherlands)
Ningbo (China)
Dalian (China)
Busan (South Korea)

Data source: World Shipping Council, 2015

SEA ROUTES AND MAJOR PORTS
Sea routes
Major seaports

Sea Routes

SCALE 1:205 000 000

Gall Projection

WORLD

AFGHANISTAN (AF)
Area (sq. km): 652,225
Population (million): 32.5
Capital: Kabul
Language: Dari Persian, Pushtu
Monetary Unit: Afghani (AFA)
GDP (per capita US$): 590.3

ARMENIA (AM)
Area (sq. km): 29,800
Population (million): 3.0
Capital: Yerevan
Language: Armenian, Yezidi
Monetary Unit: Dram (AMD)
GDP (per capita US$): 3,499.8

AZERBAIJAN (AZ)
Area (sq. km): 86,600
Population (million): 9.7
Capital: Baku
Language: Azerbaijani, Armenian
Monetary Unit: Az. Manat (AZM)
GDP (per capita US$): 5,496.3

BAHRAIN (BH)
Area (sq. km): 691
Population (million): 1.4
Capital: Manama
Language: Arabic, English
Monetary Unit: Bahraini Dinar (BHD)
GDP (per capita US$): 23,395.7

BANGLADESH (BD)
Area (sq. km): 143,998
Population(million): 161.0
Capital: Dhaka
Language: Bengali, English
Monetary Unit: Taka (BDT)
GDP (per capita US$): 1,211.7

BHUTAN (BT)
Area (sq. km): 38,394
Population (million): 0.8
Capital: Thimphu
Language: Dzongkha, Nepali
Monetary Unit: Ngultrum (BTN)
GDP (per capita US$): 2,532.5

BRUNEI (BN)
Area (sq. km): 5,765
Population (million): 0.4
Capital: Bandar Seri Begawan
Language: Malay, English
Monetary Unit: Br. Dollar (BND)
GDP (per capita US$): 36,607.9

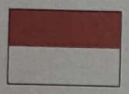
CAMBODIA (KH)
Area (sq. km): 181,000
Population (million): 15.6
Capital: Phnom Penh
Language: Khmer, French
Monetary Unit: Riel (KHR)
GDP (per capita US$): 1,158.7

CHINA (CN)
Area (sq. km): 9,562,000
Population (million): 1371.2
Capital: Beijing
Language: Mandarin, Wu
Monetary Unit: Yuan Renminbi (CNY)
GDP (per capita US$): 7,924.7

CYPRUS (CY)
Area (sq. km): 9,251
Population (million): 1.2
Capital: Nicosia
Language: Greek, Turkish
Monetary Unit: Euro (EUR)
GDP (per capita US$): 22,957.4

GEORGIA (GE)
Area (sq. km): 69,700
Population (million): 3.7
Capital: T'bilisi
Language: Georgian, Russian
Monetary Unit: Lari (GEL)
GDP (per capita US$): 3,796.0

INDIA (IN)
Area (sq. km): 3,287,263
Population (million): 1,311.1
Capital: New Delhi
Language: Hindi, English
Monetary Unit: Ind. Rupee (INR)
GDP (per capita US$): 1,581.6

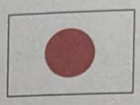


INDONESIA (ID)
Area (sq. km): 1,919,445
Population (million): 257.6
Capital: Jakarta
Language: Indonesian
Monetary Unit: Rupiah (IDR)
GDP (per capita US$): 3,346.5

IRAN (IR)
Area (sq. km): 1,648,000
Population (million): 79.1
Capital: Tehran
Language:Farsi, Azeri
Monetary Unit: Iranian Rial (IRR)
GDP (per capita US$): NA

IRAQ (IQ)
Area (sq. km): 438,317
Population (million): 36.4
Capital: Baghdad
Language: Arabic, Kurdish
Monetary Unit: Iraqi Dinar (IQD)
GDP (per capita US$): 4,629.1

ISRAEL (IL)
Area (sq. km): 20,770
Population (million): 8.47
Capital: Jerusalem
Language: Hebrew, Arabic
Monetary Unit: Sheqel (ILS)
GDP (per capita US$): 35,329.5



JAPAN (JP)
Area (sq. km): 377,727
Population (million): 127.0
Capital: Tokyo
Language: Japanese
Monetary Unit: Yen (JPY)
GDP (per capita US$): 32,477.2

JORDAN (JO)
Area (sq. km): 89,206
Population (million): 7.6
Capital: Amman
Language: Arabic
Monetary Unit: Jord. Dinar (JOD)
GDP (per capita US$): 4,940.0

KAZAKHSTAN (KZ)
Area (sq. km): 2,717,300
Population (million): 17.5
Capital: Astana
Language: Kazakh, Russian
Monetary Unit: Tenge (KZT)
GDP (per capita US$): 10,508.4

KUWAIT (KW)
Area (sq. km): 17,818
Population (million): 3.9
Capital: Kuwait City
Language: Khalka (Mongolian)
Monetary Unit: Kuwaiti Dinar (KWD)
GDP (per capita US$): 28,984.6

KYRGYZSTAN (KG)
Area (sq. km): 198,500
Population (million): 6.0
Capital: Bishkek
Language: Kyrgyz, Russian
Monetary Unit: Ky. Som (KGS)
GDP (per capita US$): 1,103.2

LAOS (LA)
Area (sq. km): 236,800
Population (million): 6.8
Capital: Vientiane
Language: Lao
Monetary Unit: Kip (LAK)
GDP (per capita US$): 1,812.3

LEBANON (LB)
Area (sq. km):10,452
Population (million): 5.9
Capital: Beirut
Language: Arabic, Armenian
Monetary Unit: Leb. Pound (LBP)
GDP (per capita US$): 8,050.8

MALAYSIA (MY)
Area (sq. km): 332,965
Population (million): 30.3
Capital: Kuala Lumpur/Putrajaya
Language: Malay, English
Monetary Unit: Ringgit (MYR)
GDP (per capita US$): 9,766.2

MALDIVES (MV)
Area (sq. km): 298
Population (million): 0.4
Capital: Male
Language: Divehi (Maldivian)
Monetary Unit: Rufiyaa (MVR)
GDP (per capita US$): 7,681.1

MONGOLIA (MN)
Area (sq. km): 1,565,000
Population (million): 3.0
Capital: Ulan Bator
Language: Mongolian, Kazakh
Monetary Unit: Tugrik (MNT)
GDP (per capita US$): 3,973.4

MYANMAR (MM)
Area (sq. km): 676,577
Population (million): 53.9
Capital: Naypyidaw
Language: Burmese, Karen
Monetary Unit: Kyat (MMK)
GDP (per capita US$): 1,203.5

NEPAL (NP)
Area (sq. km): 147,181
Population (million): 28.5
Capital: Katmandu
Language: Nepali, Maithili
Monetary Unit: Nep. Rupee (NPR)
GDP (per capita US$): 732.3

NORTH KOREA (KP)
Area (sq. km): 120,538
Population (million): 25.2
Capital: Pyongyang
Language: Korean
Monetary Unit: N. K. Won (KPW)
GDP (per capita US$): NA

OMAN (OM)
Area (sq. km): 309,500
Population (million): 4.5
Capital: Muscat
Language: Arabic, Baluchi
Monetary Unit: Rial Omani (OMR)
GDP (per capita US$): 15,645.1

PAKISTAN (PK)
Area (sq. km): 803,940
Population (million): 188.9
Capital: Islamabad
Language: Urdu, Punjabi
Monetary Unit: Pak. Rupee (PKR)
GDP (per capita US$): 1,429.0

PHILIPPINES (PH)
Area (sq. km): 300,000
Population (million): 100.7
Capital: Manila
Language: Filipino, English
Monetary Unit: Ph. Peso (PHP)
GDP (per capita US$): 2,899.4

QATAR (QA)
Area (sq. km): 11,437
Population (million): 2.2
Capital: Doha
Language: Arabic
Monetary Unit: Qatari Riyal (QAR)
GDP (per capita US$): 74,667.2

RUSSIA (RU)
Area (sq. km): 17,075,400
Population (million): 144.1
Capital: Moscow
Language: Russian, Tatar
Monetary Unit: Rouble (RUB)
GDP (per capita US$): 9,057.1

SAUDI ARABIA (SA)
Area (sq. km): 2,200,000
Population (million): 31.5
Capital: Riyadh
Language: Arabic
Monetary Unit: Saudi Rial (SAR)
GDP (per capita US$): 20,481.7

SINGAPORE (SG)
Area (sq. km): 639
Population (million): 5.5
Capital: Singapore
Language: Chinese, English
Monetary Unit: Sin. Dollar (SGD)
GDP (per capita US$): 52,888.7

SOUTH KOREA (KR)
Area (sq. km): 99,274
Population (million): 50.6
Capital: Seoul
Language: Korean
Monetary Unit: S. K. Won (KRW)
GDP (per capita US$): 27,221.5

SRI LANKA (LK)
Area (sq. km): 65,610
Population (million): 21.0
Capital: Sri Jayawardenapura
Language: Sinhalese, Tamil
Monetary Unit: Sri L. Rupee (LKR)
GDP (per capita US$): 3,926.2

SYRIA (SY)
Area (sq. km): 185,180
Population (million): 18.5
Capital: Damascus
Language: Arabic, Kurdish
Monetary Unit: Syrian Pound (SYP)
GDP (per capita US$): NA

TAJIKISTAN (TJ)
Area (sq. km): 143,100
Population (million): 8.5
Capital: Dushanbe
Language: Tajik, Uzbek
Monetary Unit: Tajik Rouble (TJR)
GDP (per capita US$): 925.9

THAILAND (TH)
Area (sq. km): 513,115
Population (million): 68.0
Capital: Bangkok
Language: Thai, Lao
Monetary Unit: Baht (THB)
GDP (per capita US$): 5,816.4

TIMOR-LESTE (TP)
Area (sq. km): 14,874
Population (million): 1.2
Capital: Dili
Language: Portuguese, Tetun
Monetary Unit: US Dollar (USD)
GDP (per capita US$): 1,134.4

TURKEY (TR)
Area (sq. km): 779,452
Population (million): 78.7
Capital: Ankara
Language: Turkish, Kurdish
Monetary Unit: Turkish Lira (TRL)
GDP (per capita US$): 9,130.0

TURKMENISTAN (TM)
Area (sq. km): 488,100
Population (million): 5.4
Capital: Ashgabat
Language: Turkmen, Uzbek
Monetary Unit: Turk. Manat (TMM)
GDP (per capita US$): 6,947.8

U. A. EMIRATES (AE)
Area (sq. km): 77,700
Population (million): 9.2
Capital: Abu Dhabi
Language: Arabic, English
Monetary Unit: Dirham (AED)
GDP (per capita US$): 40,438.4

UZBEKISTAN (UZ)
Area (sq. km): 447 400
Population (million): 31.3
Capital: Tashkent
Language: Uzbek, Russian
Monetary Unit: Uzb. Som (UZS)
GDP (per capita US$): 2,132.1

VIETNAM (VN)
Area (sq. km): 329,565
Population (million): 91.7
Capital: Hanoi
Language: Vietnamese, Thai
Monetary Unit: Dong (VND)
GDP (per capita US$): 2,111.1

YEMEN (YE)
Area (sq. km): 527,968
Population (million): 26.8
Capital: San'a
Language: Arabic
Monetary Unit: Riyal (Yer)
GDP (per capita US$): NA

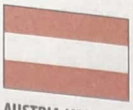
ASIA

Gross Domestic Product (GDP) is the total value of goods and services produced in a country and are given in US$ per person, adjusted for the localcost of living.
Country codes and currency codes are given in brackets along with country names and monetary units respectively.
Two major official languages are given for each country.

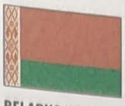
Population - World Bank 2019
GDP - World Bank 2018

ALBANIA (AL)
Area (sq. km): 28,748
Population (million): 2.9
Capital: Tirana
Language: Albanian, Greek
Monetary Unit: Lek (ALL)
GDP (per capita US$): 3,965.0

ANDORRA (AD)
Area (sq. km): 465
Population (million): 0.1
Capital: Andorra la vella
Language: Spanish, Catalan
Monetary Unit: Euro (EUR)
GDP: NA



AUSTRIA (AT)
Area (sq. km): 83,855
Population (million): 8.6
Capital: Vienna
Language: German, Croatian
Monetary Unit: Euro (EUR)
GDP (per capita US$): 43,438.9



BELARUS (BY)
Area (sq. km): 207,600
Population (million): 9.5
Capital: Minsk
Language: Belarusian, Russian
Monetary Unit: Belarussian Rouble (BYR)
GDP (per capita US$): 5,740.5

BELGIUM (BE)
Area (sq. km): 30,520
Population (million): 11.3
Capital: Brussels
Language: Dutch , French
Monetary Unit: Euro (EUR)
GDP (per capita US$): 40,231.3

BOSNIA-HERZEGOVINA (BA)
Area (sq. km): 51,130
Population (million): 3.8
Capital: Sarajevo
Language: Bosnian, Serbian
Monetary Unit: Convertible Mark (BAM)
GDP (per capita US$): 4,197.8

BULGARIA (BG)
Area (sq. km): 110,994
Population (million): 7.2
Capital: Sofia
Language: Bulgarian, Turkish
Monetary Unit: Lev (BGL)
GDP (per capita US$): 6,819.9

CROATIA (HR)
Area (sq. km): 56,538
Population (million): 4.2
Capital: Zagreb
Language: Croatian, Serbian
Monetary Unit: Kuna (HRK)
Croatian Dinar (HRD)
GDP (per capita US$): 11,535.8

CZECH REPUBLIC (CZ)
Area (sq. km): 78,864
Population (million): 10.6
Capital: Prague
Language: Czech, Moravian
Monetary Unit: Czech Koruna (CZK)
GDP (per capita US$): 17,231.3

DENMARK (DK)
Area (sq. km): 43,075
Population (million): 5.7
Capital: Copenhagen
Language: Danish
Monetary Unit: Danish Krone (DKK)
GDP (per capita US$): 52,002.2

ESTONIA (EE)
Area (sq. km): 45,200
Population (million): 1.3
Capital: Tallinn
Language: Estonian, Russian
Monetary Unit: Kroon (EEK)
GDP (per capita US$): 17,295.4

FINLAND (FI)
Area (sq. km): 338,145
Population (million): 5.5
Capital: Helsinki
Language: Finnish, Swedish
Monetary Unit: Euro (EUR)
GDP (per capita US$): 41,920.8

FRANCE (FR)
Area (sq. km): 543,965
Population (million): 66.8
Capital: Paris
Language: French
Monetary Unit: Euro (EUR)
GDP (per capita US$): 36,248.2

GERMANY (DE)
Area (sq. km): 357,022
Population (million): 81.4
Capital: Berlin
Language: German, Turkish
Monetary Unit: Euro (EUR)
GDP (per capita US$): 41,219.0

GREECE (GR)
Area (sq. km): 131,957
Population (million): 10.8
Capital: Athens
Language: Greek
Monetary Unit: Euro (EUR)
GDP (per capita US$): 18,035.6

HOLY SEE (VA)
Area (sq. km): 0.5
Population (million): NA
Capital: Vatican City
Language:
Monetary Unit: Euro (EUR)
GDP (per capita US$): NA

HUNGARY (HU)
Area (sq. km): 93,030
Population (million): 9.8
Capital: Budapest
Language: Hungarian
Monetary Unit: Forint (HUF)
GDP (per capita US$): 12,259.1

ICELAND (IS)
Area (sq. km): 102,820
Population (million): 0.3
Capital: Reykjavik
Language: Icelandic
Monetary Unit: Icelandic Krona (ISK)
GDP (per capita US$): 50,173.3

IRELAND (IE)
Area (sq. km): 70,282
Population (million): 4.6
Capital: Dublin
Language: English, Irish
Monetary Unit: Euro (EUR)
GDP (per capita US$): 51,289.7

ITALY (IT)
Area (sq. km): 301,245
Population (million): 60.8
Capital: Rome
Language: Italian
Monetary Unit: Euro (EUR)
GDP (per capita US$): 29,847.0

KOSOVO (XK)*
Area (sq. km): 10,908
Population (million): 1.8
Capital: Pristina
Language: Albanian, Serbian
Monetary Unit: Euro (EUR)
GDP (per capita US$): 3,553.4

LATVIA (LV)
Area (sq. km): 63,700
Population (million): 2.0
Capital: Riga
Language: Latvian, Russian
Monetary Unit: Lats (LVL)
GDP (per capita US$): 13,664.9

LIECHTENSTEIN (LI)
Area (sq. km): 160
Population (million): 0.04
Capital: Vaduz
Language: German
Monetary Unit: Swiss franc (CHF)
GDP: NA

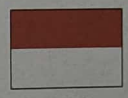
LITHUANIA (LT)
Area (sq. km): 65,200
Population (million): 2.9
Capital: Vilnius
Language: Lithuanian, Russian
Monetary Unit: Litas (LTL)
GDP (per capita US$): 14,172.2

LUXEMBOURG (LU)
Area (sq. km): 2,586
Population (million): 0.6
Capital: Luxembourg
Language: Luxembourgish, German
Monetary Unit: Euro (EUR)
GDP (per capita US$): 1,01,450.0

MACEDONIA (MK)
Area (sq. km): 25,713
Population (million): 2.1
Capital: Skopje
Language: Macedonian, Albanian
Monetary Unit: Dinar (MKD)
GDP (per capita US$): 4,852.7

MALTA (MT)
Area (sq. km): 316
Population (million): 0.4
Capital: Valletta
Language: Maltese, English
Monetary Unit: Euro (EUR)
GDP (per capita US$): NA

MOLDOVA (MD)
Area (sq. km): 33,700
Population (million): 3.6
Capital: Chisinau
Language: Romanian, Ukrainian
Monetary Unit: Moldavian Leu (MDL)
GDP (per capita US$): 1,843.2



MONACO (MC)
Area (sq. km): 2
Population (million): 0.04
Capital: Monaco
Language: French, Monegasque
Monetary Unit: Euro (EUR)
GDP (per capita US$): NA

MONTENEGRO
Area (sq. km): 13,812
Population (million): 0.6
Capital: Podgorica
Language: Montenegrin
Monetary Unit: Euro (EUR)
GDP (per capita US$): 6,415.0

NETHERLANDS (NL)
Area (sq. km): 41,526
Population (million): 16.9
Capital: Amsterdam, The Hague
Language: Dutch, Frisian
Monetary Unit: Euro (EUR)
GDP (per capita US$): 44,433.4

NORWAY (NO)
Area (sq. km): 323,878
Population (million): 5.2
Capital: Oslo
Language: Norwegian
Monetary Unit: Norwegian Krone, (NOK)
GDP (per capita US$): 74,734.6

POLAND (PL)
Area (sq. km): 312,683
Population (million): 38.0
Capital: Warsaw
Language: Polish, German
Monetary Unit: New Zloty (PLL)
GDP (per capita US$): 12,494.5

PORTUGAL (PT)
Area (sq. km): 88,940
Population (million): 10.3
Capital: Lisbon
Language: Portuguese
Monetary Unit: Euro (EUR)
GDP (per capita US$): 19,222.9

ROMANIA (RO)
Area (sq. km): 237,500
Population (million): 19.8
Capital: Bucharest
Language: Romanian, Hungarian
Monetary Unit: Romanian Leu (ROL)
GDP (per capita US$): 8,972.9

SAN MARINO (SM)
Area (sq. km): 61
Population (million): 0.03
Capital: San Marino
Language:Italian
Monetary Unit: Euro (EUR)
GDP (per capita US$): NA

SERBIA (RS)
Area (sq. km): 88,361
Population (million): 7.1
Capital: Belgrade
Language:Serbian, Albanian
Monetary Unit: Serbian Dinar (CSD)
GDP (per capita US$): 5,143.9

SLOVAKIA (SK)
Area (sq. km): 49,035
Population (million): 5.4
Capital: Bratislava
Language: Slovakian, Hungarian
Monetary Unit: Slovak Koruna (SKK)
GDP (per capita US$): 15,962.6

SLOVENIA (SI)
Area (sq. km): 20,251
Population (million): 2.1
Capital: Ljubljana
Language: Slovenian, Croatian
Monetary Unit: Tolar (SIT)
GDP (per capita US$): 20,713.1

SPAIN (ES)
Area (sq. km): 504,782
Population (million): 46.4
Capital: Madrid
Language: Spanish, Castilian
Monetary Unit: Euro (EUR)
GDP (per capita US$): 25,831.6

SWEDEN (SE)
Area (sq. km): 449,964
Population (million): 9.8
Capital: Stockholm
Language: Swedish
Monetary Unit: Swedish Krona (SEK)
GDP (per capita US$): 50,272.9

SWITZERLAND (CH)
Area (sq. km): 41,293
Population (million): 8.3
Capital: Berne
Language: German, French
Monetary Unit: Swiss Franc (CHF)
GDP (per capita US$): 80,214.7

UKRAINE (UA)
Area (sq. km): 603,700
Population (million): 45.2
Capital: Kiev
Language: Ukrainian, Russian
Monetary Unit: Hryvnia (UAH)
Karbovanet (UAK)
GDP (per capita US$): 2,315.9

UNITED KINGDOM (GB)
Area (sq. km): 243,609
Population (million): 65.1
Capital: London
Language: English, Welsh
Monetary Unit: Pound Sterling (GBP)
GDP (per capita US$): 43,734.0

*XK: assigned as a temporary code to Kosovo under UN security council resolution 1244/99.

EUROPE

ALGERIA (DZ)
Area (sq. km): 2,381,741
Population (million): 39.7
Capital: Algiers
Language: Arabic, French
Monetary Unit: Alg. Dinar (DZD)
GDP (per capita US$): 4,206.0

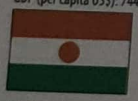
CAMEROON (CM)
Area (sq. km): 475,442
Population (million): 23.3
Capital: Yaoundé
Language: French English, Fang
Monetary Unit: CFA Franc (XAF)
GDP (per capita US$): 1,250.8

COTE D'IVOIRE (CI)
Area (sq. km): 322,464
Population (million): 22.7
Capital: Yamoussoukro
Language: French, Creole
Monetary Unit: CFA Franc (XAF)
GDP (per capita US$): 1,398.7

ETHIOPIA (ET)
Area (sq. km): 1,133,880
Population (million): 99.4
Capital: Addis Ababa
Language: Oromo, Amharic
Monetary Unit: Eth. Birr (ETB)
GDP (per capita US$): 619.1

KENYA (KE)
Area (sq. km): 582,646
Population (million): 46.1
Capital: Nairobi
Language:Kiswahili, English
Monetary Unit: Ken. Shilling (KES)
GDP (per capita US$): 1,376.7

MALI (ML)
Area (sq. km): 1,240,140
Population (million): 17.6
Capital: Bamako
Language: French, Bambara
Monetary Unit: CFA Franc (XAF) Malian Franc (MLF)
GDP (per capita US$): 744.3



NIGER (NE)
Area (sq. km): 1,267,000
Population (million): 19.9
Capital: Niamey
Language:French, Hausa
Monetary Unit: W. A.Franc (XOF) CFA Franc (XAF)
GDP (per capita US$): 359.0

SEYCHELLES (SC)
Area (sq. km): 455
Population (million): 0.1
Capital: Victoria
Language:English, French
Monetary Unit: Sey. Rupee (SCR)
GDP (per capita US$): 15,476.0

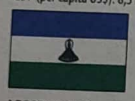
NZANIA (TZ)
a (sq. km): 945,087
ulation (million): 53.5
tal: Dodoma
uage:Swahili, English
tary Unit: Tan. Shilling (TZS)
per capita US$): 864.9

ANGOLA (AO)
Area (sq. km): 1,246,700
Population (million): 25.0
Capital: Luanda
Language: Portuguese, Bantu
Monetary Unit: New Kwanza (AON)
GDP (per capita US$): 4,102.1

CAPE VERDE (CV)
Area (sq. km): 4,033
Population (million): 0.5
Capital: Praia
Language: Portuguese, Creole
Monetary Unit: C. V. Escudo (CVE)
GDP (per capita US$) 3,131.1

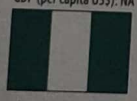
DEMOCRATIC REPUBLIC OF THE CONGO
Area (sq. km): 2,345,410
Population (million): 77.3
Capital: Kinshasa
Language:English, Hausa
Monetary Unit: Congolese Franc (CDF)
GDP (per capita US$): 456.1

GABON (GA)
Area (sq. km): 267,667
Population (million): 1.7
Capital: Libreville
Language: French, Fang
Monetary Unit: CFA Franc (XAF)
GDP (per capita US$): 8,311.5



LESOTHO (LS)
Area (sq. km): 30,355
Population (million): 2.1
Capital: Maseru
Language:Sesotho, English
Monetary Unit: LSL, LSM, ZAR
GDP (per capita US$): NA

MAURITANIA (MR)
Area (sq. km): 1,030,700
Population (million): 4.1
Capital: Nouakchott
Language:Arabic, French
Monetary Unit: Ouguiya (MRO)
GDP (per capita US$): NA



NIGERIA (NG)
Area (sq. km): 923,768
Population (million): 182.2
Capital: Abuja
Language:English, Hausa
Monetary Unit: Naira (NGN)
GDP (per capita US$): 2,640.3

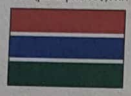
SOMALIA (SO)
Area (sq. km): 637,657
Population (million): 10.8
Capital: Mogadishu
Language:Somali, Arabic
Monetary Unit: S. Shilling (SOS)
GDP: 551.9

TOGO
Area (sq. km): 56,785
Population (million): 7.3
Capital: Lomé
Language:English, Hausa
Monetary Unit: CFA Franc (XOF)
GDP (per capita US$): 548.0

BENIN (BJ)
Area (sq. km): 112,620
Population (million): 10.9
Capital: Porto-Novo
Language: French, Fon
Monetary Unit: CFA Franc (XAF)
GDP (per capita US$): 779.1

CENTRAL AFRICAN REP. (CF)
Area (sq. km): 622,436
Population (million): 4.9
Capital: Bangui
Language: French, Sangho
Monetary Unit: CFA Franc (XAF)
GDP (per capita US$): 306.8

DJIBOUTI (DJ)
Area (sq. km): 23,200
Population (million): 0.9
Capital: Djibouti
Language: Somali, Afar
Monetary Unit: Djib. Franc (DJF)
GDP (per capita US$): NA



GAMBIA (GM)
Area (sq. km): 11,295
Population (million): 2.0
Capital: Banjul
Language:English, Mandinka
Monetary Unit: Dalasi (GMD)
GDP (per capita US$): NA

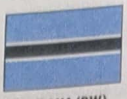
LIBERIA (LR)
Area (sq. km): 111,369
Population (million): 4.5
Capital: Monrovia
Language: English, Creole
Monetary Unit: Lib. Dollar (LRD)
GDP (per capita US$): 455.9

MAURITIUS (MU)
Area (sq. km): 2,040
Population (million): 1.3
Capital: Port Louis
Language: English, Creole
Monetary Unit: Mau. Rupee (MUR)
GDP (per capita US$): 9,116.8

RWANDA (RW)
Area (sq. km): 26,338
Population (million): 11.6
Capital: Kigali
Language: Kinyarwanda, French
Monetary Unit: Rw. Franc (RWF)
GDP (per capita US$): 697.3

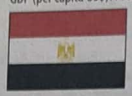
SOUTH AFRICA (ZA)
Area (sq. km): 1,219,090
Population (million): 55.0
Capital: Pretoria/Cape Town
Language: Afrikaans, English
Monetary Unit: Rand (ZAR)
GDP (per capita US$): 5,691.7

TUNISIA (TN)
Area (sq. km): 164,150
Population (million): 11.1
Capital: Tunis
Language:Arabic, French
Monetary Unit: Tunisian Dinar (TND)
GDP (per capita US$): 3,872.5



BOTSWANA (BW)
Area (sq. km): 581,370
Population (million): 2.3
Capital: Gaborone
Language: Yoruba, Adja
Monetary Unit: Pula (BWP)
GDP (per capita US$): 6,360.6

CHAD (TD)
Area (sq. km):1,284,000
Population (million): 14.0
Capital: N'Djamena
Language: Arabic, French
Monetary Unit: CFA Franc (XAF)
GDP (per capita US$): 775.7



EGYPT (EG)
Area (sq. km): 1,000,250
Population (million): 91.5
Capital: Cairo
Language: Arabic
Monetary Unit: Egyptian Pound (EGP)
GDP (per capita US$): 3,614.7

GHANA (GH)
Area (sq. km): 238,537
Population (million): 27.4
Capital: Accra
Language:English, Hausa
Monetary Unit: Cedi (GHC)
GDP (per capita US$): 1,381.4

LIBYA (LY)
Area (sq. km): 1,759,540
Population (million): 6.3
Capital: Tripoli
Language:Arabic, Berber
Monetary Unit: Libyan Dinar (LYD)
GDP (per capita US$): 4643.3

MOROCCO (MA)
Area (sq. km): 446,550
Population (million):34.4
Capital: Rabat
Language: Arabic, Berber
Monetary Unit: Mor. Dirham (MAD)
GDP (per capita US$): 2,871.5

SAO TOME AND PRINCIPE
Area (sq. km): 964
Population (million): 0.2
Capital: São Tomé
Language:English, Hausa
Monetary Unit: Dobra (STD)
GDP (per capita US$): NA

SOUTH SUDAN
Area (sq. km): 644,329
Population (million): 12.3
Capital: Juba
Language:English, Hausa
Monetary Unit: S. Sudanese Pound (SSP)
GDP (per capita US$): 730.6

UGANDA
Area (sq. km): 241,038
Population (million): 39.0
Capital: Kampala
Language:English, Hausa
Monetary Unit: Ugandan Shilling (UGX)
GDP (per capita US$): 675.6

BURKINA FASO (BF)
Area (sq. km): 274,200
Population (million): 18.1
Capital: Ouagadougou
Language: French, Moore
Monetary Unit: CFA Franc (XAF)
GDP (per capita US$): 613.0

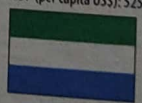
CONGO (CG)
Area (sq. km): 342,000
Population (million): 4.6
Capital: Brazzaville
Language: French, Kongo
Monetary Unit: CFA Franc (XAF)
GDP (per capita US$): 1,851.2

EQUATORIAL GUINEA
Area (sq. km): 28,051
Population (million): 0.8
Capital: Malabo
Language:English, Hausa
Monetary Unit: CFA Franc (XAF)
GDP (per capita US$): 11,120.9

GUINEA-BISSAU
Area (sq. km): 36,125
Population (million): 1.8
Capital: Bissau
Language:English, Hausa
Monetary Unit: W. A. CFA Franc (XOF)
GDP (per capita US$): 573.0

MADAGASCAR (MG)
Area (sq. km): 587,041
Population (million): 24.2
Capital: Antananarivo
Language: Malagasy, French
Monetary Unit: Malagasy Franc (MGF)
GDP (per capita US$): 411.8

MOZAMBIQUE (MZ)
Area (sq. km): 799,380
Population (million): 28.0
Capital: Maputo
Language: Portuguese, Makhuwa
Monetary Unit: Metical (MZM)
GDP (per capita US$): 525.0



SIERRA LEONE
Area (sq. km): 71,740
Population (million): 6.5
Capital: Freetown
Language:English, Hausa
Monetary Unit: Leone (SLL)
GDP (per capita US$): 693.4

SUDAN (SD)
Area (sq. km): 1,886,068
Population (million): 40.2
Capital: Khartoum
Language: Arabic, Dinka
Monetary Unit: S. Pound (SDG)
GDP (per capita US$): 2,089.4

ZAMBIA (ZM)
Area (sq. km): 752,614
Population (million): 16.2
Capital: Lusaka
Language: English, Bemba
Monetary Unit: Zam. Kwacha (ZMK)
GDP (per capita US$): 1,307.8

BURUNDI (BI)
Area (sq. km): 27,835
Population (million): 11.2
Capital: Bujumbura
Language: Kirundi (Hutu, Tutsi)
Monetary Unit: Bur. Franc (BIF)
GDP (per capita US$): 276.0

COMOROS
Area (sq. km): 2,236
Population (million): 0.8
Capital: Moroni
Language: Comorian, Arabic, French
Monetary Unit: Comorian Franc (KMF)
GDP (per capita US$): NA

ERITREA (ER)
Area (sq. km): 117,400
Population (million): NA
Capital: Asmara
Language:Tigrinya, Tigre
Monetary Unit: E. Nakfa (ERN, ETB)
GDP (per capita US$): NA

GUINEA (GN)
Area (sq. km): 245,857
Population (million): 12.6
Capital: Conakry
Language: French, Fulani
Monetary Unit: G. Syli (Franc) (GNS)
GDP (per capita US$): 531.3

MALAWI (MW)
Area (sq. km): 118,484
Population (million): 17.2
Capital: Lilongwe
Language:Chichewa, English
Monetary Unit: M. Kwacha (MWK)
GDP (per capita US$): 381.4

NAMIBIA (NA)
Area (sq. km): 824,292
Population (million): 2.5
Capital: Windhoek
Language:English, Afrikaans
Monetary Unit: Namibian Dollar (NAD)
GDP (per capita US$): 4,695.8

SENEGAL (SN)
Area (sq. km): 196,720
Population (million): 15.1
Capital: Dakar
Language:French, Wolof
Monetary Unit: CFA Franc (XAF)
GDP (per capita US$): 910.8

SWAZILAND (SZ)
Area (sq. km): 17,364
Population (million): 1.3
Capital: Mbabane
Language:Swazi, English
Monetary Unit: Lilangeni (SZL)
GDP (per capita US$): 3,154.8

ZIMBABWE (ZW)
Area (sq. km): 390,759
Population (million): 15.6
Capital: Harare
Language: English, Shona
Monetary Unit: Zimbabwean Dollar (ZWD)
GDP (per capita US$): 890.4

NORTH AMERICA
SOUTH AMERICA
OCEANIA

NORTH AMERICA

ANTIGUA & BARBUDA (AG)
Area (sq. km): 442
Population (million): 0.1
Capital: St John's
Language: English, Creole
Monetary Unit: East C. Dollar (Xcd)
GDP (per capita US$): 14,128.9

BAHAMAS (BS)
Area (sq. km): 13,939
Population (million): 0.4
Capital: Nassau
Language: English, Creole
Monetary Unit: Bah. Dollar (Bsd)
GDP (per capita US$): 22,896.9

BARBADOS (BB)
Area (sq. km): 430
Population (million): 0.3
Capital: Bridgetown
Language: English, Creole
Monetary Unit: Bar. Dollar (BBD)
GDP (per capita US$): 15,660.7

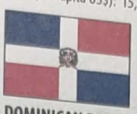
BELIZE (BZ)
Area (sq. km): 22,965
Population (million): 0.4
Capital: Belmopan
Language: English, Spanish
Monetary Unit: Belize Dollar (BZD)
GDP (per capita US$): 4,906.9

CANADA (CA)
Area (sq. km): 9,984,670
Population (million): 35.9
Capital: Ottawa
Language: English, French
Monetary Unit: Can. Dollar (CAD)
GDP (per capita US$): 43,248.5

COSTA RICA (CR)
Area (sq. km): 51,100
Population (million): 4.8
Capital: San José
Language: Spanish
Monetary Unit: C. R. Colón (CRC)
GDP (per capita US$): 10,629.8

CUBA (CU)
Area (sq. km): 110,860
Population (million): 11.4
Capital: Havana
Language: Spanish
Monetary Unit: Cuban Peso (CUP)
GDP (per capita US$): NA

DOMINICA (DM)
Area (sq. km): 750
Population (million): 0.1
Capital: Roseau
Language:English, Creole
Monetary Unit: East C. Dollar (XCD)
GDP (per capita US$): 7,399.3



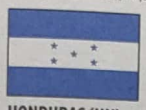
DOMINICAN REP. (DO)
Area (sq. km): 48,442
Population (million): 10.5
Capital: Santo Domingo
Language: Spanish, Creole
Monetary Unit: Dom. Rep. Peso (DOP)
GDP (per capita US$): 6,373.6

EL SALVADOR (SV)
Area (sq. km): 21,041
Population (million): 6.1
Capital: San Salvador
Language:Spanish
Monetary Unit: US Dollar (USD)
GDP (per capita US$): 4,219.4

GRENADA (GD)
Area (sq. km): 378
Population (million): 0.1
Capital: St George's
Language: English, Creole
Monetary Unit: East C. Dollar (XCD)
GDP (per capita US$): 9,156.5

GUATEMALA (GT)
Area (sq. km): 108,890
Population (million): 16.3
Capital: Guatemala City
Language:Spanish
Monetary Unit: Quetzal (GTQ)
GDP (per capita US$): 3,903.5

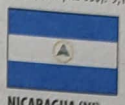
HAITI (HT)
Area (sq. km): 27,750
Population (million): 10.7
Capital: Port-au-Prince
Language:French, Creole
Monetary Unit: Gourde (HTG)
GDP (per capita US$): 828.8



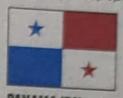
HONDURAS (HN)
Area (sq. km): 112,088
Population (million): 8.1
Capital: Tegucigalpa
Language: Spanish
Monetary Unit: Lempira (HNL)
GDP (per capita US$): 2,495.6

JAMAICA (JM)
Area (sq. km): 10,991
Population (million): 2.7
Capital: Kingston
Language: English, Creole
Monetary Unit: Jam. Dollar (JMD)
GDP (per capita US$): 5,137.9

MEXICO (MX)
Area (sq. km): 1,972,545
Population (million): 127.0
Capital: Mexico City
Language: Spanish
Monetary Unit: M. New Peso (MXN)
GDP (per capita US$): 9,009.3



NICARAGUA (NI)
Area (sq. km): 130,000
Population (million): 6.1
Capital: Managua
Language:Spanish
Monetary Unit: Córdoba (NIC)
GDP (per capita US$): 2,086.9



PANAMA (PA)
Area (sq. km): 77,082
Population (million): 3.9
Capital: Panama City
Language:Spanish, English
Monetary Unit:Balboa (PAB)/US Dollar (USD)
GDP (per capita US$): 13,268.1

ST KITTS & NEVIS (KN)
Area (sq. km): 261
Population (million): 0.1
Capital: Basseterre
Language:English, Creole
Monetary Unit: East Car. Dollar (XCD)
GDP (per capita US$): 16,589.1

ST LUCIA (LC)
Area (sq. km): 616
Population (million): 0.2
Capital: Castries
Language:English, Creole
Monetary Unit: East Car. Dollar (XCD)
GDP (per capita US$): 7,764.3

ST VINCENT & GRE. (VC)
Area (sq. km): 389
Population (million): 0.1
Capital: Kingstown
Language:English, Creole
Monetary Unit: East Car. Dollar (XCD)
GDP (per capita US$): 6,864.2

TRINIDAD & TOBAGO (TT)
Area (sq. km): 5,130
Population (million): 1.4
Capital: Port of Spain
Language:English, Creole, Hindi
Monetary Unit: Tri. & Tob. Dollar (TTD)
GDP (per capita US$): 20,444.1

U. S. OF AMERICA (US)
Area (sq. km): 9,826,635
Population (million): 321.4
Capital: Washington DC
Language:English, Spanish
Monetary unit: US Dollar (USD)
GDP (per capita US$): 55,836.8

SOUTH AMERICA

ARGENTINA (AR)
Area (sq. km): 2,766,889
Population (million): 43.4
Capital: Buenos Aires
Language: Spanish, Italian,
Monetary Unit: Argentine Peso (ARS)
GDP (per capita US$): NA

BOLIVIA (BO)
Area (sq. km): 1,098,581
Population (million): 10.7
Capital: La Paz/Sucre
Language: Spanish, Quechua
Monetary Unit :Boliviano (BOB)/Bol. Peso (BOP)
GDP (per capita US$): 3,095.4

BRAZIL (BR)
Area (sq. km): 8,514,879
Population (million): 207.8
Capital: Brasília
Language: Portuguese
Monetary Unit: Cruzeiro Real (BRR)
GDP (per capita US$): 8,538.6

CHILE (CL)
Area (sq. km): 756,945
Population (million): 17.9
Capital: Santiago
Language: Spanish
Monetary Unit: Chilean Peso (CLP)
GDP (per capita US$): 13,383.9

COLOMBIA (CO)
Area (sq. km): 1,141,748
Population (million): 48.2
Capital: Bogotá
Language:Spanish
Monetary Unit: Col. Peso (COP)
GDP (per capita US$): 6,056.1

ECUADOR (EC)
Area (sq. km): 272,045
Population (million): 16.1
Capital: Quito
Language: Spanish, Quechua
Monetary Unit: US Dollar (USD)
GDP (per capita US$): 6,248.1

GUYANA (GY)
Area (sq. km): 214,969
Population (million): 0.8
Capital: Georgetown
Language: English, Creole
Monetary Unit: Gu. Dollar (GYD)
GDP (per capita US$): 4,127.4

PARAGUAY (PY)
Area (sq. km): 406,752
Population (million): 6.6
Capital: Asunción
Language: Spanish, Guarani
Monetary Unit: Guaraní (PYG)
GDP (per capita US$): 4,160.6

PERU (PE)
Area (sq. km): 1,285,216
Population (million): 31.4
Capital: Lima
Language: Spanish, Quechua
Monetary Unit: Inti (PEI) New Sol (PEN)
GDP (per capita US$): 6,121.9

SURINAME (SR)
Area (sq. km): 163,820
Population (million): 0.5
Capital: Paramaribo
Language: Dutch, Surinamese
Monetary Unit: S. Guilder (SRG)
GDP (per capita US$): 8,983.6

URUGUAY (UY)
Area (sq. km): 176,215
Population (million): 3.4
Capital: Montevideo
Language: Spanish
Monetary Unit: Ur. New Peso (UYU)
GDP (per capita US$): 15,573.9

VENEZUELA (VE)
Area (sq. km): 912,050
Population (million): 31.1
Capital: Caracas
Language: Spanish, Amerindian
Monetary Unit: Bolivar Fuerte (VEF)
GDP (per capita US$): NA

OCEANIA

AUSTRALIA (AU)
Area (sq. km): 7,692,024
Population (million): 23.8
Capital: Canberra
Language: English
Monetary Unit: Aus. Dollar (AUD)
GDP (per capita US$): 56,327.7

FIJI (FI)
Area (sq. km): 18,330
Population (million): 0.9
Capital: Suva
Language: English, Fijian
Monetary Unit: Fiji Dollar (FJD)
GDP (per capita US$): 4,916.3

KIRIBATI (KI)
Area (sq. km): 717
Population (million): 0.1
Capital: Tarawa
Language:Gilbertese, English
Monetary Unit: Aus. Dollar (AUD)
GDP (per capita US$): 1,291.9

MARSHALL IS (MH)
Area (sq. km): 181
Population (million): 0.1
Capital: Majuro
Language: English, Marshallese
Monetary Unit: US Dollar (USD)
GDP (per capita US$): NA

MICRONESIA (FM)
Area (sq. km): 701
Population (million): 0.1
Capital: Palikir
Language: English, Chuukese
Monetary Unit: US Dollar (USD)
GDP (per capita US$): NA

NAURU (NR)
Area (sq. km): 21
Population (million): 0.01
Capital: Yaren
Language: Nauruan, English
Monetary Unit: Aus. Dollar (AUD)
GDP (per capita US$): NA

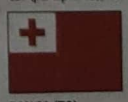
NEW ZEALAND (NZ)
Area (sq. km): 270,534
Population (million): 4.6
Capital: Wellington
Language: English, Maori
Monetary Unit: New Z. Dollar (NZD)
GDP (per capita US$): 37,808.0

PALAU
Area (sq. km): 458
Population (million): 0.02
Capital: Ngerulmud
Language: English, Palauan
Monetary Unit: US Dollar (USD)
GDP (per capita US$): 13,498.7

PAPUA NEW GUINEA (PG)
Area (sq. km): 462,840
Population (million): 7.6
Capital: Port Moresby
Language: English, Tok Pisin
Monetary Unit: Kina (PGK)
GDP (per capita US$): NA

SAMOA
Area (sq. km): 2831
Population (million): 0.2
Capital: Apia
Language:
Monetary Unit: tala
GDP (per capita US$): 3,938.5

SOLOMON IS (SB)
Area (sq. km): 28,370
Population (million): 0.6
Capital: Honiara
Language: English, Creole
Monetary Unit: Sol. Is. Dollar (SBD)
GDP (per capita US$): 1,982.3



TONGA (TO)
Area (sq. km): 748
Population (million): 0.1
Capital: Nuku'alofa)
Language: Tongan, English
Monetary Unit: Pa'anga (TOP)
GDP (per capita US$): NA

TUVALU (TV)
Area (sq. km): 25
Population (million): 0.01
Capital: Fenafuti
Language: Tuvaluan, English
Monetary Unit: Aus. Dollar (AUD)
GDP (per capita US$):

VANUATU (VU)
Area (sq. km): 12,190
Population (million): 0.3
Capital: Port Vila
Language: English, Bislama
Monetary Unit: Vatu (VUV)

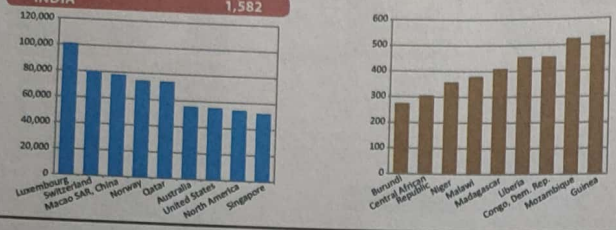
AMERICA AND OCEANIA

GDP per capita, 2015

Gross domestic product (GDP) in US$ per person, adjusted for the local cost of living

Highest GDP per capita	(in US $)
Luxembourg	101,450
Switzerland	80,215
Macao SAR, China	78,586
Norway	74,735
Qatar	74,667
Australia	56,328
United States	55,837
North America	54,580
Singapore	52,889
INDIA	1,582

Lowest GDP per capita	(in US$)
Burundi	276
Central African Republic	307
Niger	359
Malawi	381
Madagascar	412
Liberia	456
Congo, Dem. Rep.	456
Mozambique	525
Guinea	531



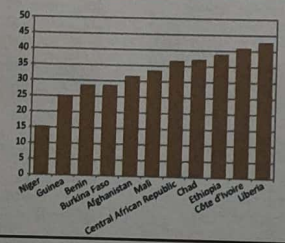
Data Source: World Bank

Literacy and Schooling, 2005-2013

Percentage of people aged 15 and above who can, with understanding, both read and write a short, simple statement on their everyday life

Highest literacy levels	
Norway	100.0
Australia	100.0
Switzerland	100.0
Denmark	100.0
Netherlands	100.0
Germany	100.0
Ireland	100.0
United States	100.0
Canada	100.0
New Zealand	100.0
Hong Kong, China (SAR)	100.0
Liechtenstein	100.0
Sweden	100.0
United Kingdom	100.0
Iceland	100.0
Korea (Republic of)	100.0
Israel	100.0
Luxembourg	100.0
Japan	100.0
Belgium	100.0
France	100.0
Austria	100.0
Finland	100.0
Czech Republic	100.0

Lowest literacy levels	
Niger	15.5
Guinea	25.3
Benin	28.7
Burkina Faso	28.7
Afghanistan	31.7
Mali	33.6
Central African Republic	36.8
Chad	37.3
Ethiopia	39.0
Côte d'Ivoire	41.0
Liberia	42.9
INDIA	62.8

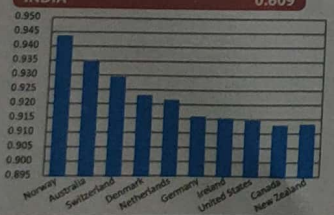


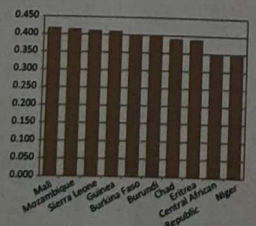
Human Development Index (HDI), 2014

HDI measures the relative social and economic progress of a country. It combines life expectancy, adult literacy, average number of years of schooling and purchasing power.

Highest HDI	
Norway	0.944
Australia	0.935
Switzerland	0.930
Denmark	0.923
Netherlands	0.922
Germany	0.916
Ireland	0.916
United States	0.915
Canada	0.913
New Zealand	0.913
INDIA	0.609

Lowest HDI	
Mali	0.419
Mozambique	0.416
Sierra Leone	0.413
Guinea	0.411
Burkina Faso	0.402
Burundi	0.400
Chad	0.392
Eritrea	0.391
Central African Republic	0.350
Niger	0.348





Fertility Rate, 2015 (births per woman)

Average number of children born to childbearing woman

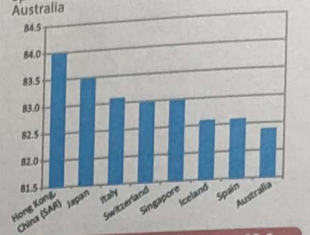
Largest families	
Niger	7.6
Mali	6.9
Somalia	6.6
Chad	6.3
Burundi	6.1
Nigeria	6.0
Congo (Democratic Republic of the)	6.0
Timor-Leste	5.9
Uganda	5.9
Angola	5.9
Gambia	5.8
Zambia	5.7
Burkina Faso	5.7
INDIA	2.5

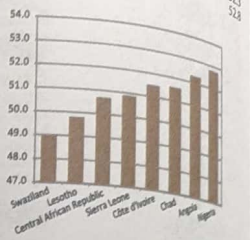
Life expectancy, 2014

Average expected lifespan of babies born in 2014 (years)

Highest life expectancy	
Hong Kong, China (SAR)	84.0
Japan	83.5
Italy	83.1
Switzerland	83.0
Singapore	83.0
Iceland	82.6
Spain	82.6
Australia	82.4
INDIA	68.0

Lowest life expectancy	
Swaziland	49.0
Lesotho	49.8
Central African Republic	50.7
Sierra Leone	50.9
Côte d'Ivoire	51.5
Chad	51.6
Angola	52.3
Nigeria	52.8



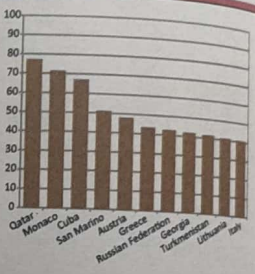


Health care, 2001 – 2013

Number of doctors per 10 000 people

Most doctors per 10 000 people	
Qatar	77.4
Monaco	71.7
Cuba	67.2
San Marino	51.3
Austria	48.3
Greece	43.8
Russian Federation	43.1
Georgia	42.4
Turkmenistan	41.8
Lithuania	41.2
Italy	40.9

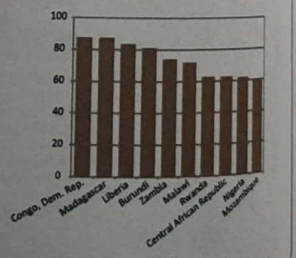
Fewest doctors per 10 000 people	
Tanzania (United Republic of)	0.1
Liberia	0.1
Malawi	0.2
Niger	0.2
Sierra Leone	0.2
Ethiopia	0.3
Burundi	0.3
Somalia	0.4
Chad	0.4
Mozambique	0.4
Burkina Faso	0.5
Central African Republic	0.5
Lesotho	0.5
INDIA	7.0



Population below income poverty line (PPP US$1.25 a day), 2002-2012

The proportion of the population with a standard of living below the national poverty line

Highest percentage of population	
Congo, Dem. Rep.	87.7
Madagascar	87.7
Liberia	83.8
Burundi	81.3
Zambia	74.3
Malawi	72.2
Rwanda	63.0
Central African Republic	62.8
Nigeria	62.0
Mozambique	60.7
INDIA	23.6

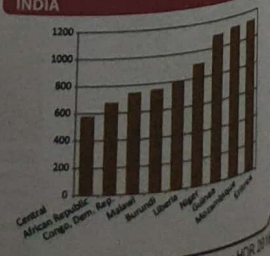


Gross National Income (GNI), 2014

The decent standard of living component of a country is measured by Gross National Inclome (GNI) per capita (2011 PPP US$).

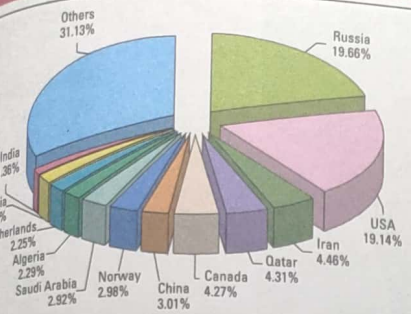
Highest GNI	
Qatar	123124
Kuwait	83961
Liechtenstein	79851
Singapore	76628
Brunei Darussalam	72570
Norway	64992
United Arab Emirates	60868
Luxembourg	58711
Switzerland	56431
Hong Kong, China (SAR)	53959
United States	52947
Saudi Arabia	52821

Lowest GNI	
Central African Republic	581
Congo, Dem. Rep.	680
Malawi	747
Burundi	758
Liberia	805
Niger	908
Guinea	1096
Mozambique	1123
Eritrea	1130
INDIA	3,285

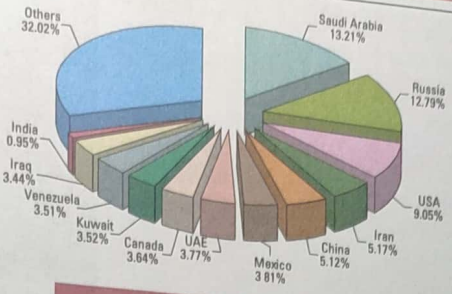


Data source: HDR 2014

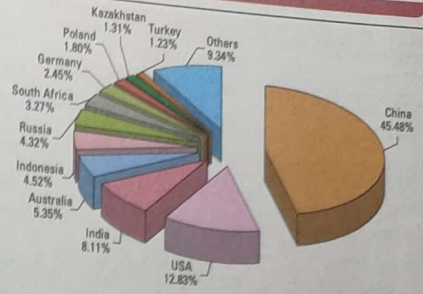
ENERGY (2014-15)



Natural gas: Production
World total: 3,403,000 million m^3

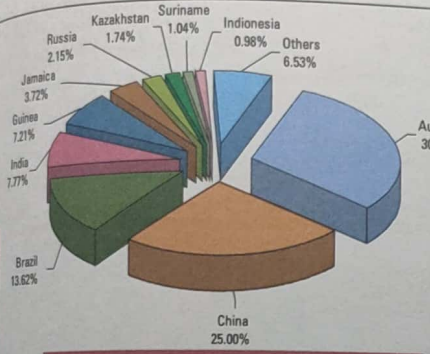


Crude petrolium: Production
World total: 3,980,000,000 tonnes

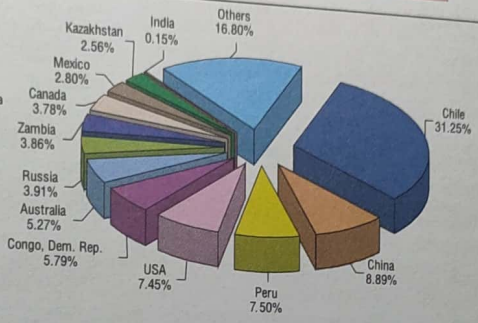


Coal: Production
World total: 7,739,000,000 tonnes

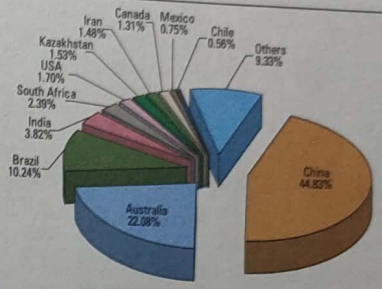
MINERALS (2014-15)



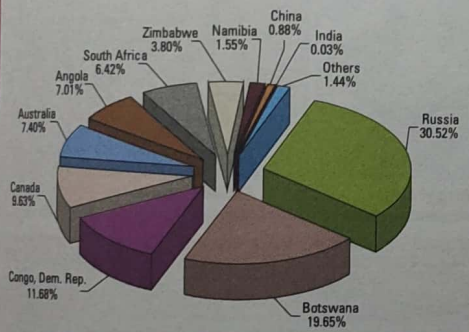
Bauxite: Production
World total: 260,000,000 tonnes



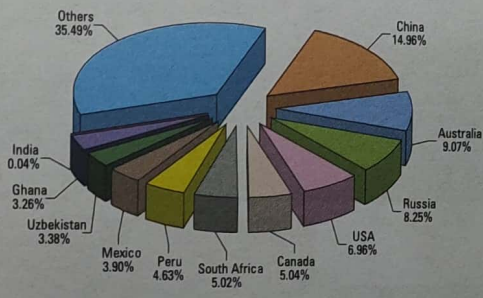
Copper: Production
World total: 18,400,000 tonnes



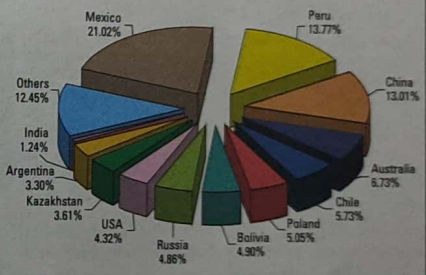
Iron ore: Production
World total: 3,378,000,000 tonnes



Diamond: Production
World total: 125,500,000 carats

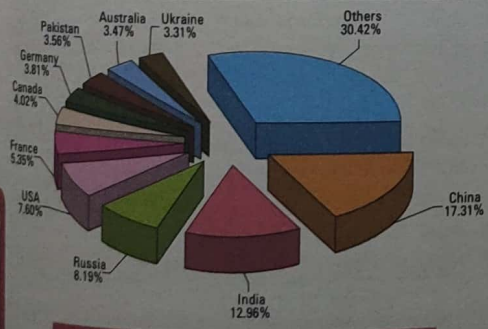


Gold: Production
World total: 3,020,000 kilograms

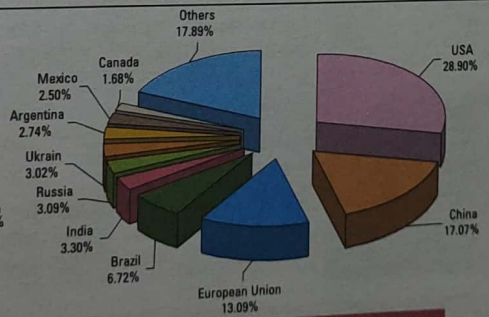


Silver: Production
World total: 27,427,000 kilograms

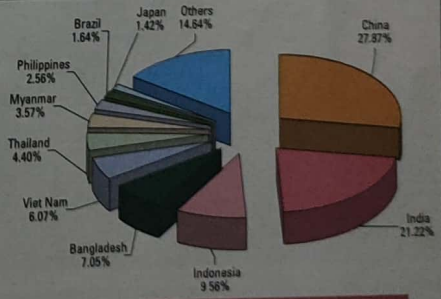
AGRICULTURE (2014-15)



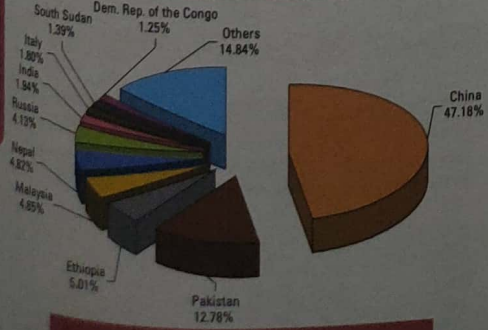
Wheat: Production
World total: 728.97 million metric tonnes



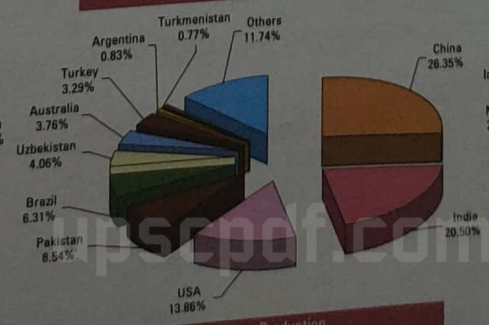
Coarse grains: Production
World total: 1,305.30 million metric tonnes



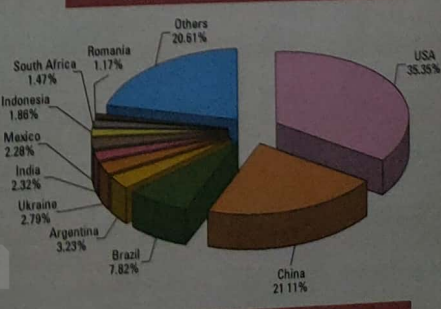
Rice: Production
World total: 465.81 million metric tonnes



Oilseeds: Production
World total: 3.77 million metric tonnes



Cotton: Production
World total: 25.97 million metric tonnes



Corn: Production
World total: 1021.62 million metric tonnes

WORLD

Data source - Energy and Minerals: British Geological Survey
Agriculture: Food and Agricultural Organization (FAO)

The figures in the graphs are in per cent.

Earth-Fact File

Situation	Milky Way Galaxy	Orbital speed (around Sun)	29.79 km/sec.
Age	4.6 billion years	Period of revolution	365 days 5 hrs.
Mass	5,940,000,000,000,000,000,000 Metric tones	Axial tilt	23.45°
Equatorial circumference	40, 066 km	Average surface temperatures	13° C
Polar circumference	39,992 km	Surface area	510,100,500 sq km
Equatorial diameter	12,756 km	Land surface	148,950,800 sq km
Polar diameter	12,710 km	No. of satellites	1 (Moon)
Equatorial radius	6,376 km	Nearest star	Sun
Polar radius	6,355 km	Solar light reaches Earth in	8 min. 20 sec.
Distance from Sun	149 407 000 km	Escape velocity	11.2 km/sec.


Earth from Moon

Composition of the Earth and Moon

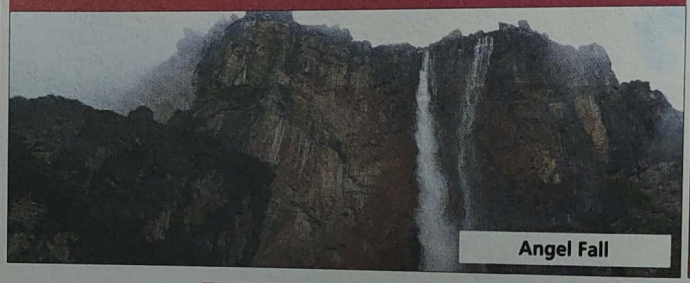
	Earth (in per cent)	Moon (in per cent)
Iron	34.6	9.3
Oxygen	29.5	42.0
Silicon	15.2	19.6
Magnesium	12.7	18.7
Carbon	1.1	4.3
Aluminum	1.1	4.2
Nickel	2.4	0.6
Sodium	0.6	0.07
Sulphur	1.9	0.3

World, Continents and Oceans

	Area - Sq. km	Area - Miles	%
World			
The World	484,510,420	207,934,764	
Land	148,800,420	57,412,764	30.71
Water	335,710,000	150,522,000	69.29
Continents			
Asia	45,036,492	17,388,686	30.27
Africa	30,343,578	11,715,721	20.39
North America	24,680,331	9,529,129	16.59
South America	17,815,420	6,878,572	11.97
Antarctica	12,093,000	4,669,133	8.13
Europe	9,908,599	3,825,731	6.66
Australia and Oceania	8,923,000	3,405,792	6.00
World Land	**148,800,420**	**57,412,764**	**100.00**
Oceans			
Pacific Ocean	166,241,000	64,186,000	49.52
Atlantic Ocean	86,557,000	33,420,000	25.78
Indian Ocean	73,427,000	28,350,000	21.87
Arctic Ocean	9,485,000	24,566,000	2.83
World Water	**335,710,000**	**150,522,000**	**100.00**

Highest Waterfalls of the World

Name(s)	Location	Source/River	Height (in metres)
Angel	Canaima National Park, Venezuela	Upper tributary of Rio Caroni	979
Tugela	NatalNat'l Park, South Africa	Tugela	947
Utigord	Norway	Glacier stream	800
Monge	Marstein, Norway	Mongebeck	774
Gocta Cataracts	Chachapoyas, Peru	--	771
Mutarazi	Nyanga National Park, Zimbabwe	Mutarazi	762
Yosemite	Yosemite National Park, California	Yosemite Creek	739


Angel Fall

World's largest deserts

Desert	Location	Sq. km
Sahara	North Africa	9,065,000
Gobi	Mongolia-China	1,295,000
Kalahari	Southern Africa	582,000
Great Victoria	Australia	338,500
Great Sandy	Australia	338,500


Sahara Desert


Mount Everest

Highest Peaks and Longest Rivers in the World

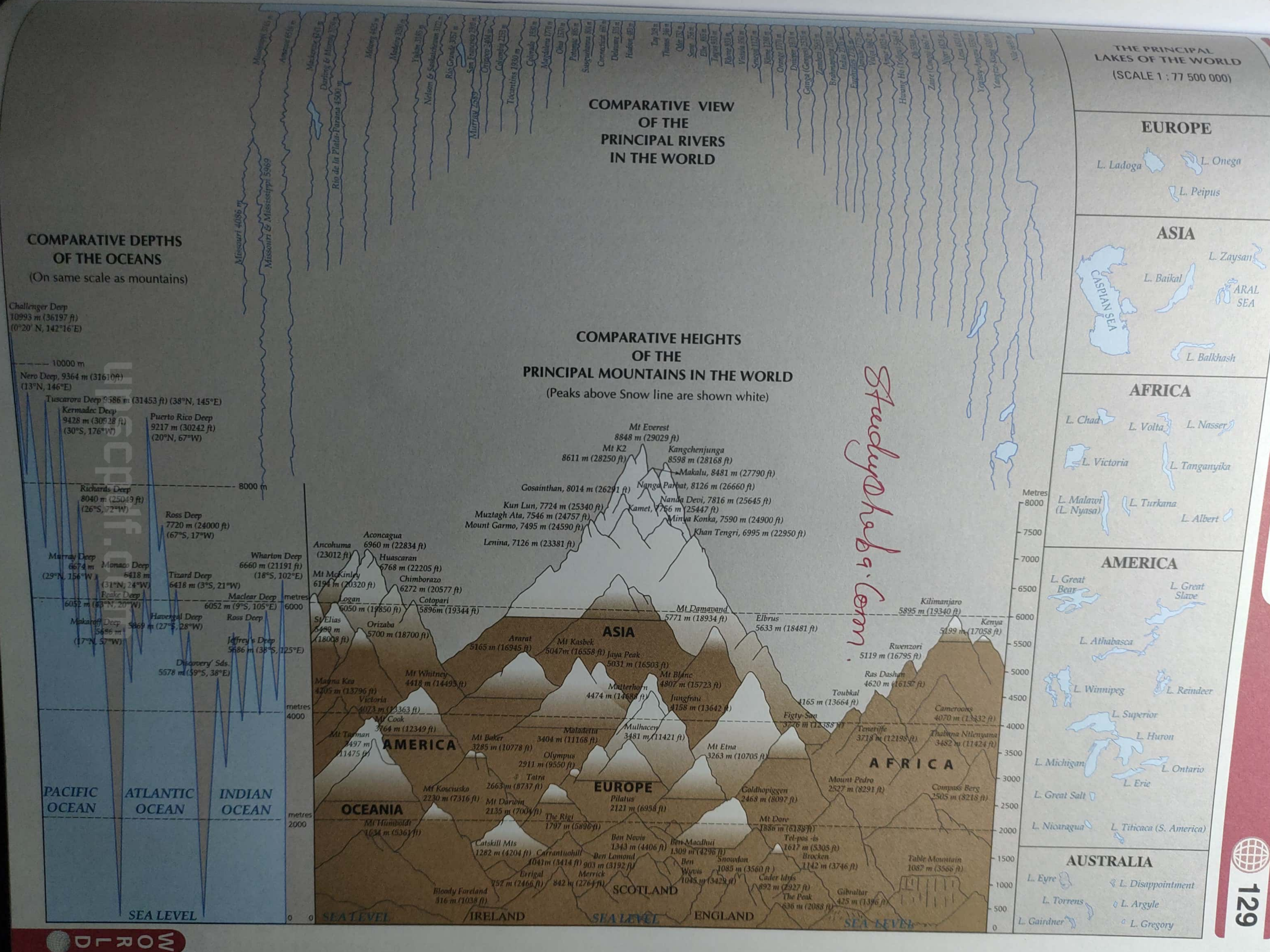
Peak	Location	Height (in meters / feet)	River	Country	Length (in kilometers)
Mount Everest	Nepal/China	8,848 / 29,029	Nile	Egypt/Africa	6,695
K2	India	8,611 / 28,251	Amazon	Brazil/South America	6,516
Kangchenjunga	India/Nepal	8,598 / 28,209	Chang Jiang (Yangtze)	China/Asia	6,380
Lhotse	Nepal	8,516 / 27,939	Mississippi-Missouri	USA/North America	5,969
Makalu	Nepal	8,463 / 27,765	Ob'-Irtysh	Asia	5,568
Cho Oyu	Nepal/China	8,201 / 26,906	Yenisei-Angara	Russia/Asia	5,550
Dhaulagiri	Nepal	8,167 / 26,794	Huang He (Yellow)	China/Asia	5,464
Manaslu	Nepal	8,163 / 26,781	Congo	Africa	4,667
Nanga Parbat	India	8,126 / 26,660	Parana (Rio de la Plata)	South America	4,500
Annapurna I	Nepal	8,091 / 26,545	Mekong	Asia	4,425

Continental extremes

Continent	Asia	Europe	North America	South America	Africa	Oceania	Antarctica
Area (in sq. km)	45,036,492	9,908,599	24,680,331	17,815,420	30,343,578	8,923,000	12,093,000
Estimated Population (in thousand)	3,679,737	727,986	315,915	349,510	795,671	31,043	--
No. of Countries	49	44	23	12	54	14	--
Highest Point	Mt Everest, Nepal/China; 29,035 ft (8,848 m)	Mt Elbrus, Russia/Georgia; 18,510 ft (5,642 m)	Mt McKinley, Alaska; 20,320 ft (6,194 m)	Mt Aconcagua, Argentina; 22,834 ft (6,960 m)	Mt Kilimanjaro, Tanz.; 19,340 ft (5,895 m)	Kosciusko, Australia; 7,316 ft (2,228 m)	Vinson Massif, Ellsworth Mts; 16,066 ft (4,897 m)
Lowest Point	Dead Sea; 1341 ft below sea level (409 m bsl)	Caspian Sea Shore; 92 ft below sea level (28 m bsl)	Death Valley; 282 ft below sea level (86 m bsl)	Valdes Peninsula; 131 ft below sea level (40 m bsl)	Lake Assal; 512 ft below sea level (156 m bsl)	Lake Eyre; 52 ft below sea level (16 m bsl)	8327 ft below sea level (2,538 m bsl)
Largest Island	Borneo; 745,561 sq. km	Great Britain; 218,476 sq. km	Greenland; 2,175,600 sq. km	Tierra del Fuego; 47,000 sq. km	Madagascar; 587,040 sq. km	New Guinea; 808,510 sq. km	--
Longest river	Chang Jiang (Yangtze); 6,380 km	Volga; 3,688 km	Mississippi-Missouri; 5,969 km	Amazonas (Amazon); 6,516 km	Nile; 6,695 km	Murray-Darling; 3,750 km	--
Largest lake	Caspian Sea; 371,000 sq. km	Lake Ladoga; 18,390 sq. km	Lake Superior; 82,100 sq. km	Lake Titicaca; 8,340 sq. km	Lake Victoria; 68,800 sq. km	Lake Eyre; 9, 000 sq. km	--

Tanz.: Tanzania

WORLD



SCALE 1:175 000 000

THE WORLD CLOCK: The earth is a globe which rotates and spins on its axis, and the sun and stars appear to revolve around it from east to west, because the earth is rotating from west to east. In twenty four hours the earth makes a complete rotation on its axis. The velocity of the earth's rotation is 360° in twenty four hours, or 15° in one hour, or 1° in four minutes. A clock is simply a machine to indicate the speed of the earth's rotation and inform us of the subdivisions of time. We see at a glance that at any place on the meridian 15° east of Greenwich the clock is one hour later than at Greenwich, because the sun has risen one hour earlier, and at any place 15° west of Greenwich the clock is an hour earlier, because the sun is an hour later in rising.

The 180° longitude is taken as the International Date Line where one calendar day ends and another begins. While crossing from east to west one gains a day and loses the same while travelling from west to east. The line is not straight in order to avoid the landmasses which would be divided in terms of time and add to the complexity of time zones.

Standard Time is the time kept on land. Countries may adopt a uniform or multiple time zones keeping in mind the extent of its boundaries longitudinally. Many countries also vary their time

How to use this Index

The place names or features in this index are arranged in alphabetical order. Each entry in the index starts with the name of the place or feature, followed by the name of the country or region in which it is located. This is followed by the number of the most appropriate page on which the name appears, usually the largest scale map. Next comes the coordinate reference i.e., latitude and longitude, which gives a more exact description of the position of a name or feature. For example, the index entry for Aachen is given as follows:

Aachen Germany (81) 50.47N 6.05E

Aachen is in Germany and appears on page 81. Its latitude is 50 degrees and 47 minutes north of the equator and its longitude is 6 degrees and 05 minutes east of the prime meridian.

Names of the physical features such as rivers, lakes, mountains, etc. are followed by a description, which has been shortened to one or two or three letters, e.g. Everest mountain is written as Everest, Mt The names of rivers have been indexed either according to their origins or according to their mouths.

Where there is more than one place with the same name, the country name is used to decide the order.

Abbreviations used in the index

Arch.	Archipelago	Pt	Point
C.	Cape	R.	River
E.	East	Ra.	Range
I.	Island	Rep.	Republic
Is	Islands	Res.	Reservoir
L.	Lake	S.	South
Mt	Mount	S.E.	South east
Mts	Mountains	Str.	Strait
N.	North	Terr.	Territory
N.W.	North West	UK	United Kingdom
N.S.W.	New South Wales	USA	United States of America
Pen.	Peninsular/Peninsula	Vol.	Volcano
Prov.	Province	W.	West

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