

**Describe South Asia's
weather and climate patterns.**

SOUTH ASIA : CLIMATES



Types Of Climate Of The Region

	Tropical Rainy Climates
	Dry Climates
	Subtropical Climates
	Temperate Climates
	Boreal Climates
	Polar Climates

South Asia: Climate and Vegetation

A HUMAN PERSPECTIVE Every April and May, much of [South Asia](#) bakes in the heat. People endure temperatures that regularly top 100°F. Dust fills the air, and streams dry up. People walk for miles looking for water. Then—when it seems that no one can survive another day—the [clouds](#) roll in. The skies open up, and the rains come. People celebrate when the land turns green.

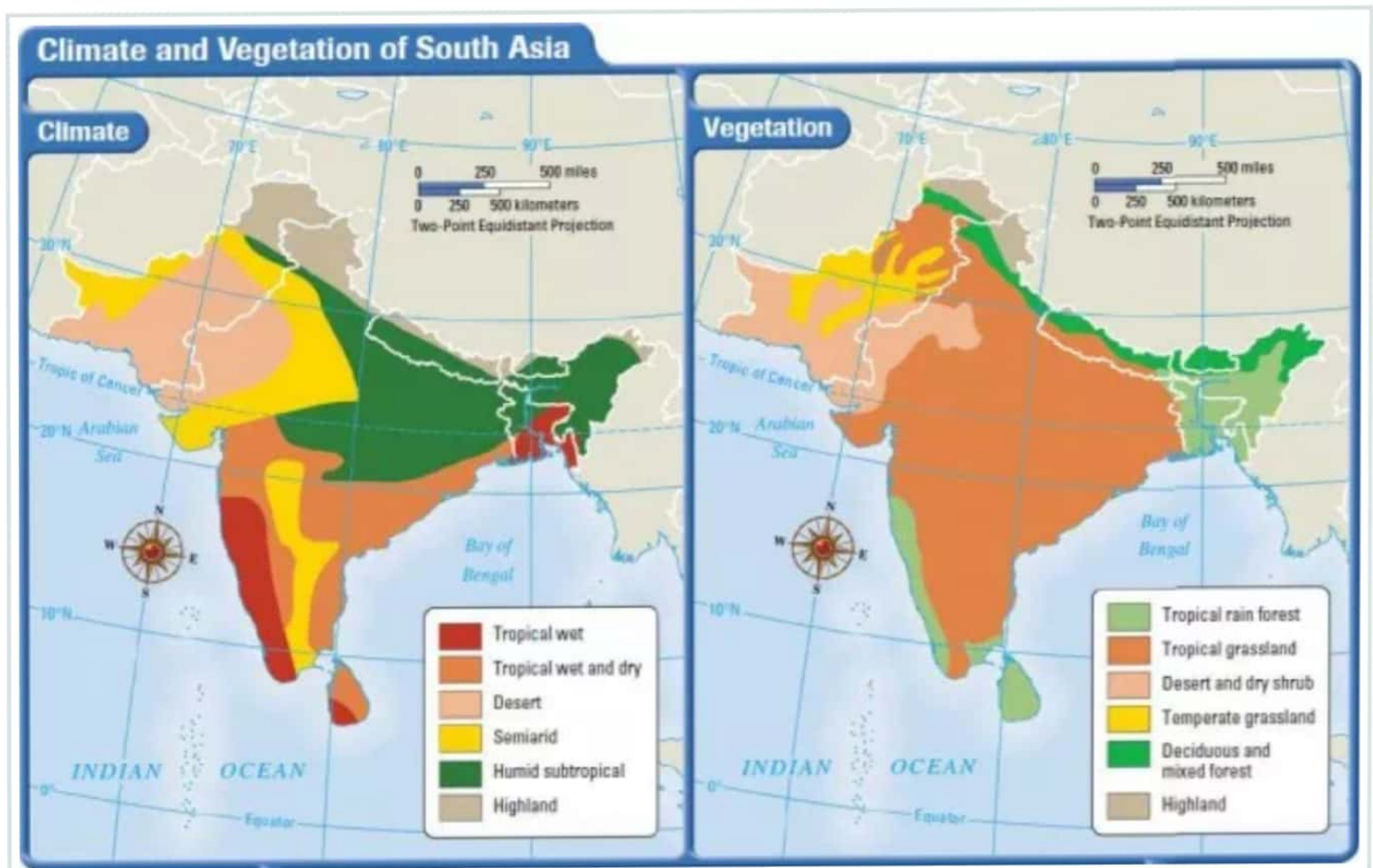
But their celebration is short-lived, as the downpour continues. Soon, the ground can hold no more water. Rivers overflow their banks. Families are forced from their homes as towns and cities are flooded. Thousands may die before the waters eventually recede, and the land dries out. South Asians see this cycle repeat itself each year.

Climate—Wet and Dry, Hot and Cold

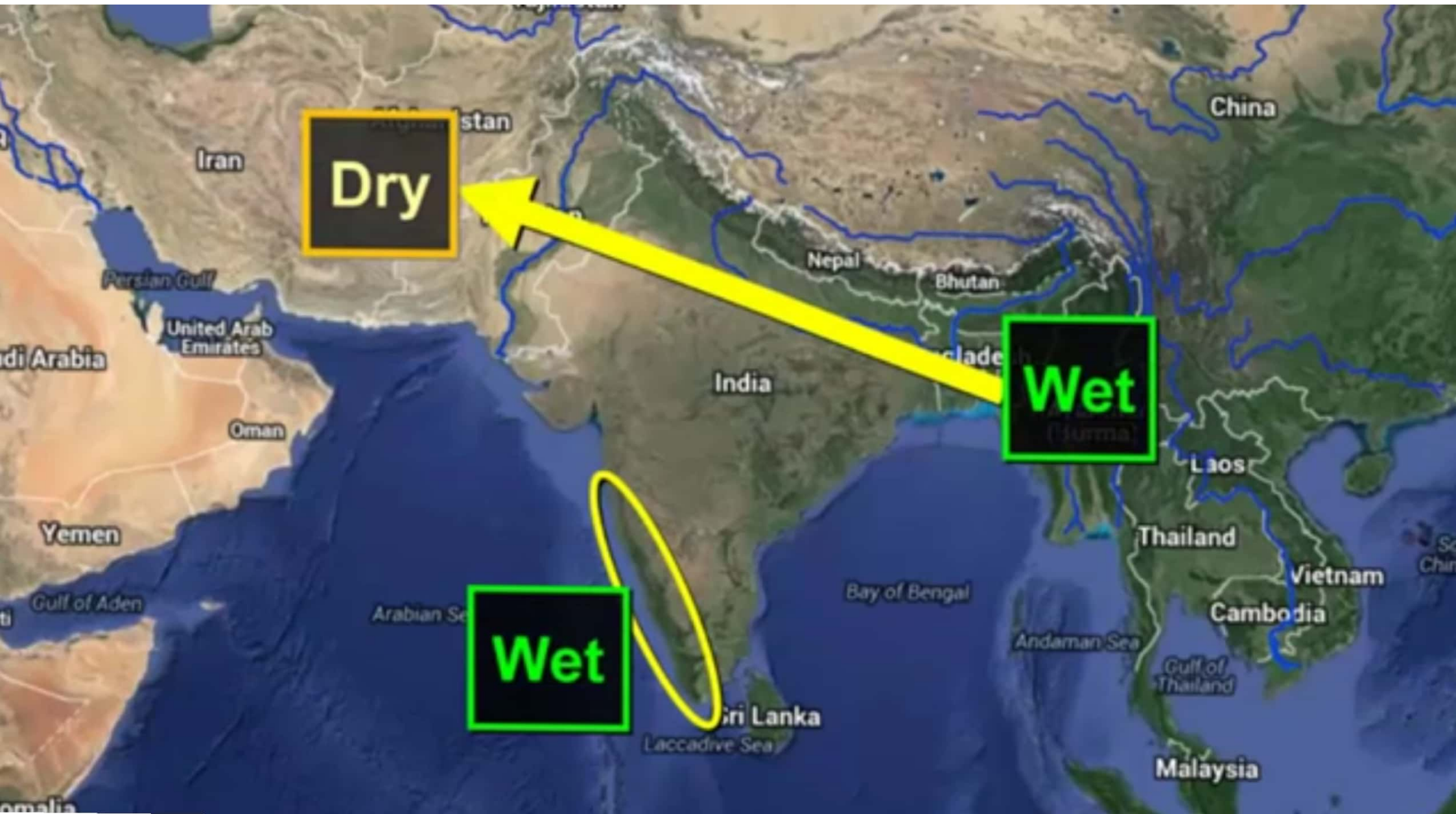
Half of the [climate zones](#) that exist on Earth can be found in South Asia. This means that South Asians must adapt to widely varying conditions.

CLIMATE ZONES

South Asia has six main climate zones, as you can see on the map on page 557. The highland zone has the coldest climate. This is the area of the Himalayas and other northern mountains, where snow exists year-round. The lower elevations, which include the lush foothills and valleys of Nepal, Bhutan, and northern India, are much warmer. They are in the humid subtropical zone that stretches across South Asia. The Indo-Gangetic Plain also occupies much of this region.



The semiarid zone—a region of high temperatures and light rainfall—is found at the western end of the Plain and in parts of the [Deccan Plateau](#). The desert zone covers much of the lower [Indus Valley](#), in the [borderlands](#) of western India and southern [Pakistan](#). The driest part of this area, the [Thar Desert](#), gets very little rain—averaging 10 inches a year. The tropical wet zone is found along the western and eastern coasts of India and in [Bangladesh](#). Temperatures are high, and rainfall is heavy. In fact, Cherrapunji in northeastern India holds the world's record for rainfall in a month—366 inches. Southern [Sri Lanka](#) also has a tropical wet climate, while the north is tropical wet and dry.



MONSOONS AND CYCLONES

Although climate varies in South Asia, the region as a whole is greatly affected by monsoons, or seasonal winds. Each year, from October through February, dry winds blow across South Asia from the northeast. From June through September, the winds blow in from the southwest, bringing moist ocean air. Heavy rains fall, especially in the southwestern and Ganges Delta portions of South Asia.

This rainfall is crucial to life on the subcontinent. Yet, the monsoons can cause severe hardship for millions, especially those living in the lowlands of India and Bangladesh. The monsoons also are highly unpredictable. Some areas may get too little rain, while others get too much. The monsoons are a sometimes beneficial, sometimes difficult feature of life in South Asia.

The most extreme weather pattern of South Asia is the cyclone, a violent storm with fierce winds and heavy rain. Cyclones are most destructive in Bangladesh, a low-lying coastal region where high waves can swamp large parts of the country. A severe cyclone can cause widespread damage and kill thousands of people.



Cherrapunji, India: the wettest place on earth

Annual precipitation: 463.7 inches

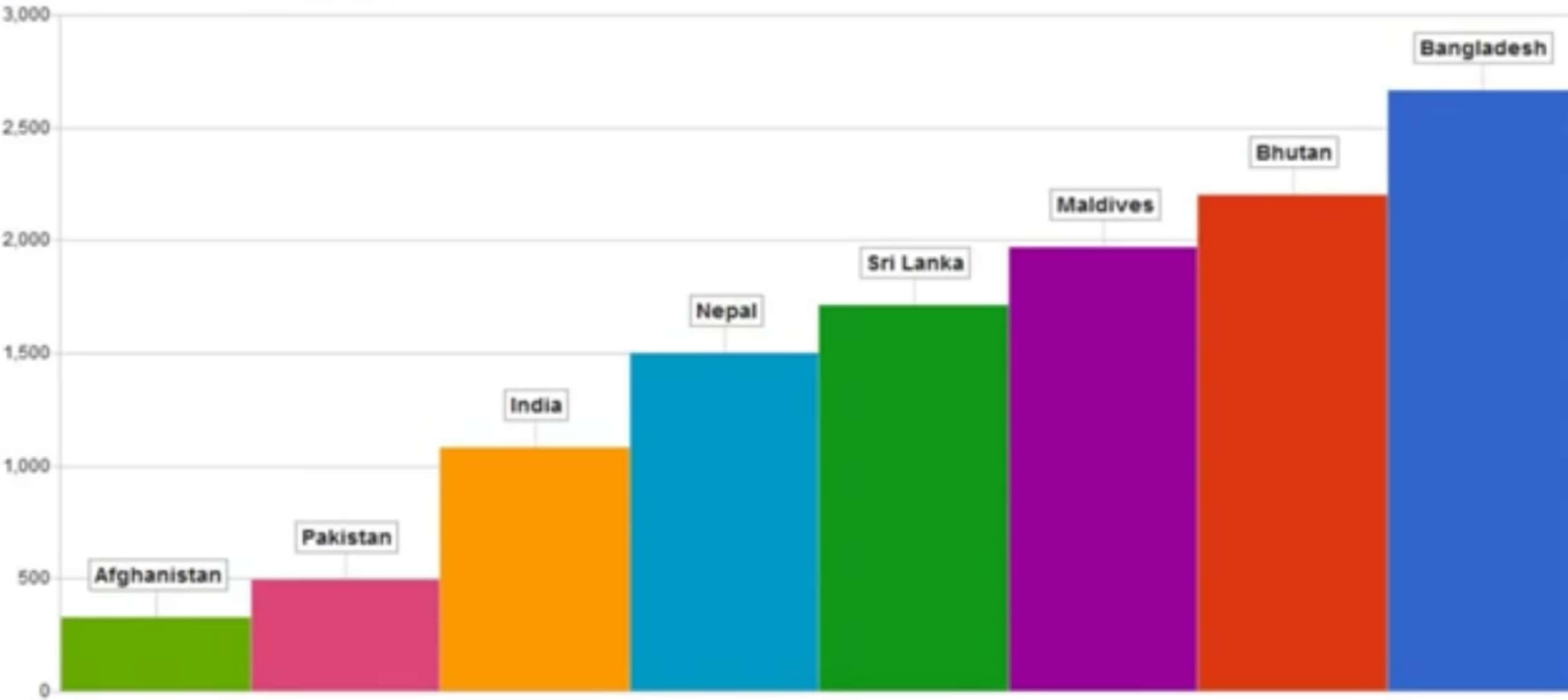


Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Precipitation mm (inches)	18 (0.71)	53 (2.09)	240 (9.45)	938 (36.93)	1280 (50.39)	2695 (106.1)	3272 (128.82)	1781 (70.12)	1352 (53.23)	549 (21.61)	72 (2.83)	29 (1.14)	12,279 (483.43)
Avg. precipitation days	1	3	7	16	22	25	27	26	19	9	2	0.7	157.7

Comparison: St. Louis annual precipitation: 38.75 inches

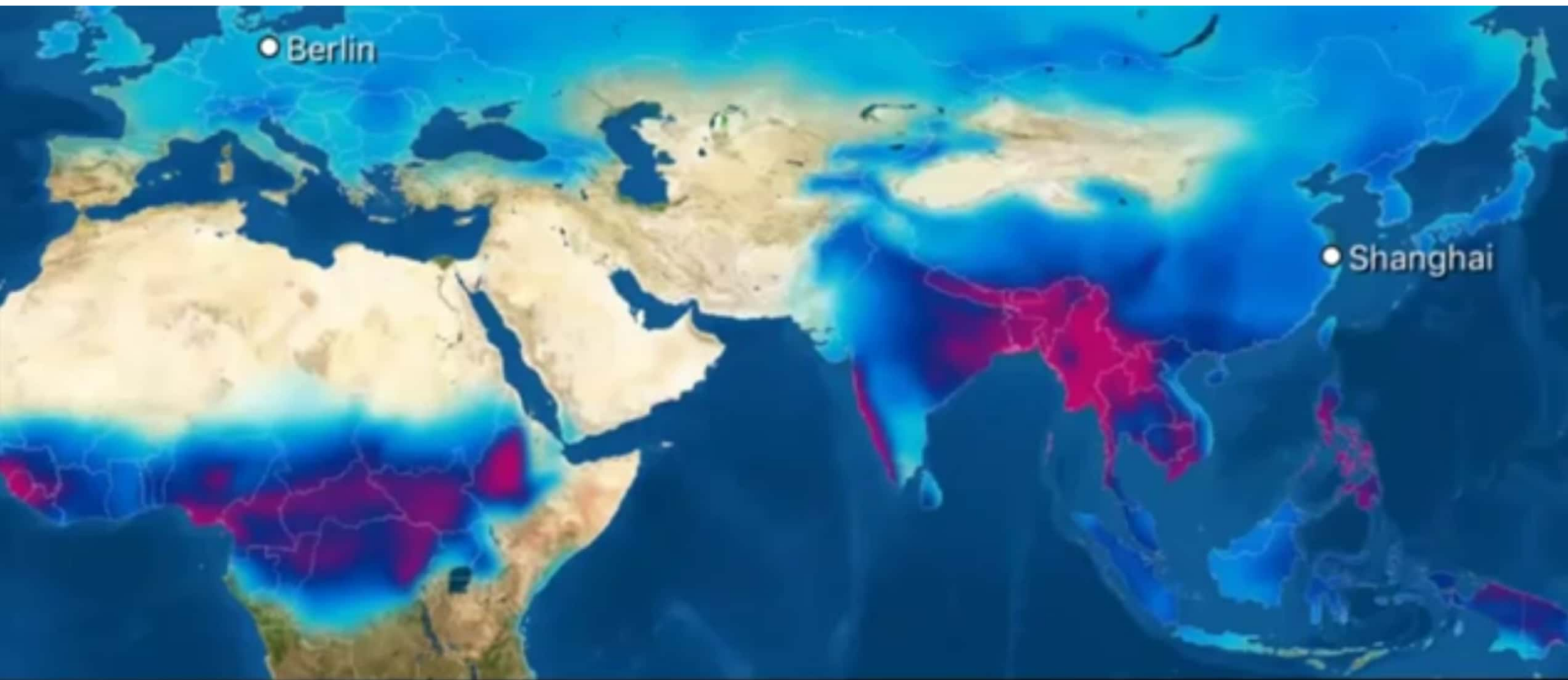
Average precipitation in depth (mm per year) ?

Countries, South Asia - Ascending order ?



Data from World Bank Last updated: Jun 2, 2016

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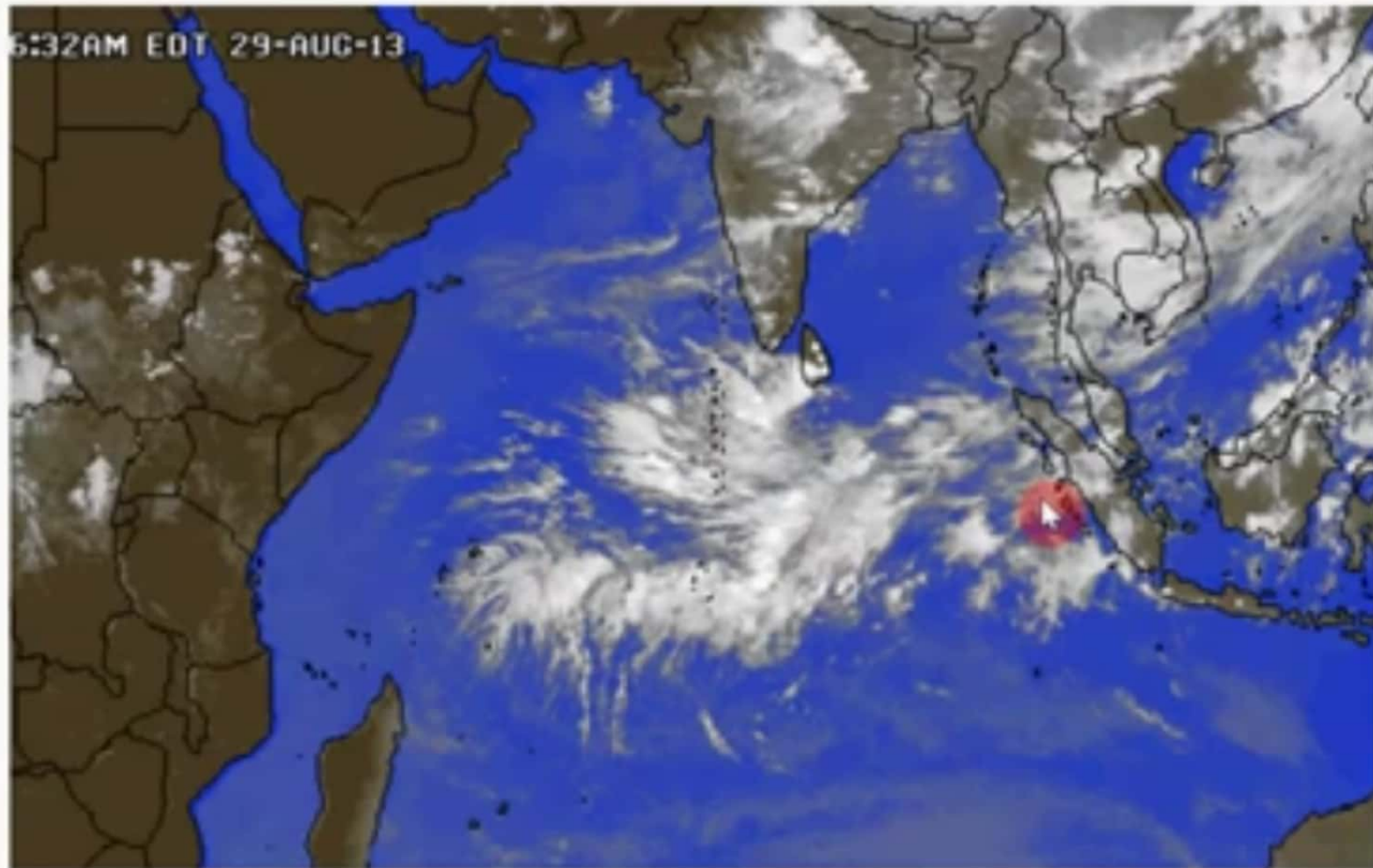


● Berlin

● Shanghai

JULY

Cyclones (Hurricanes): Northern Indian Ocean, the region with some of the world's deadliest cyclones



Major cyclones on record in South Asia

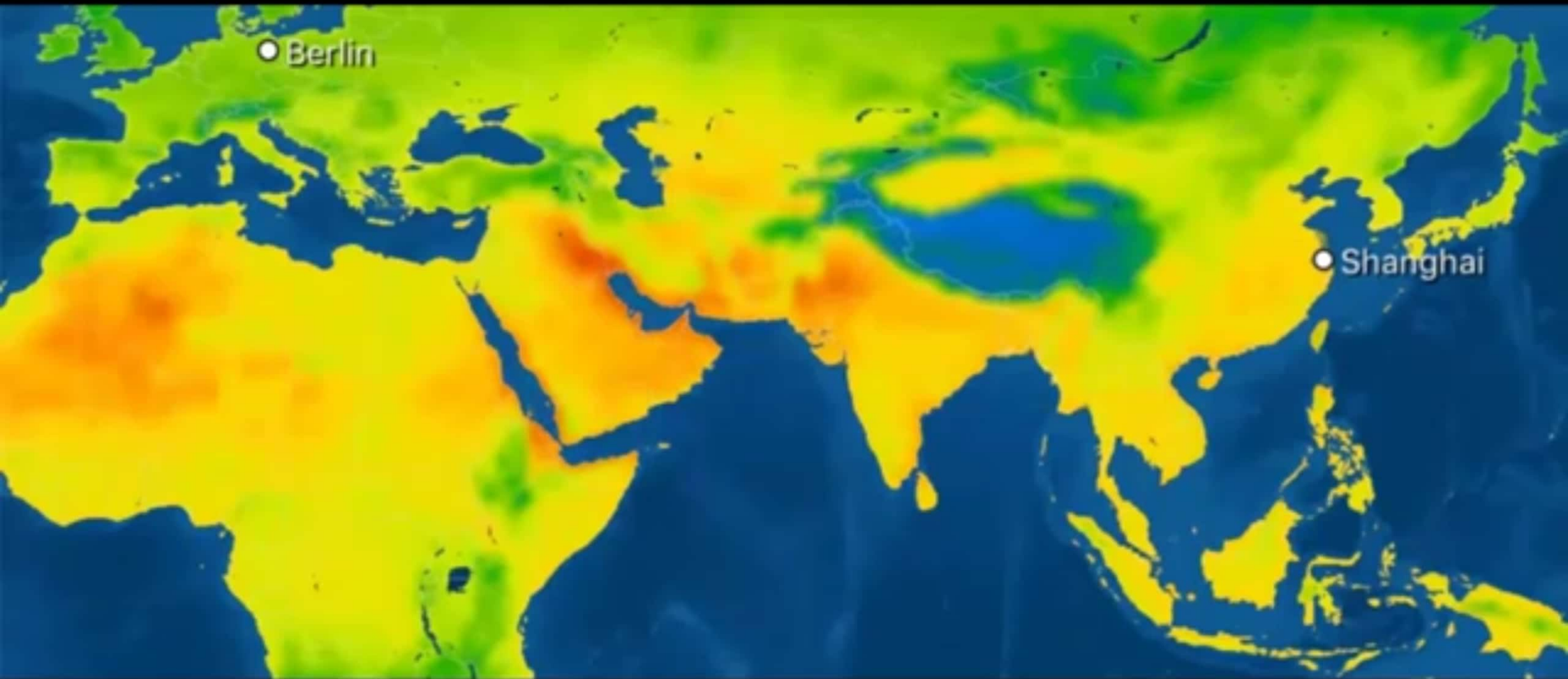
1737 Calcutta cyclone, caused death and destruction around Calcutta, India

1864 Calcutta cyclone, killed around 60,000 people in Calcutta, India

1970 Bhola cyclone, killed between 100,000 to 500,000 people in East Pakistan (now Bangladesh)

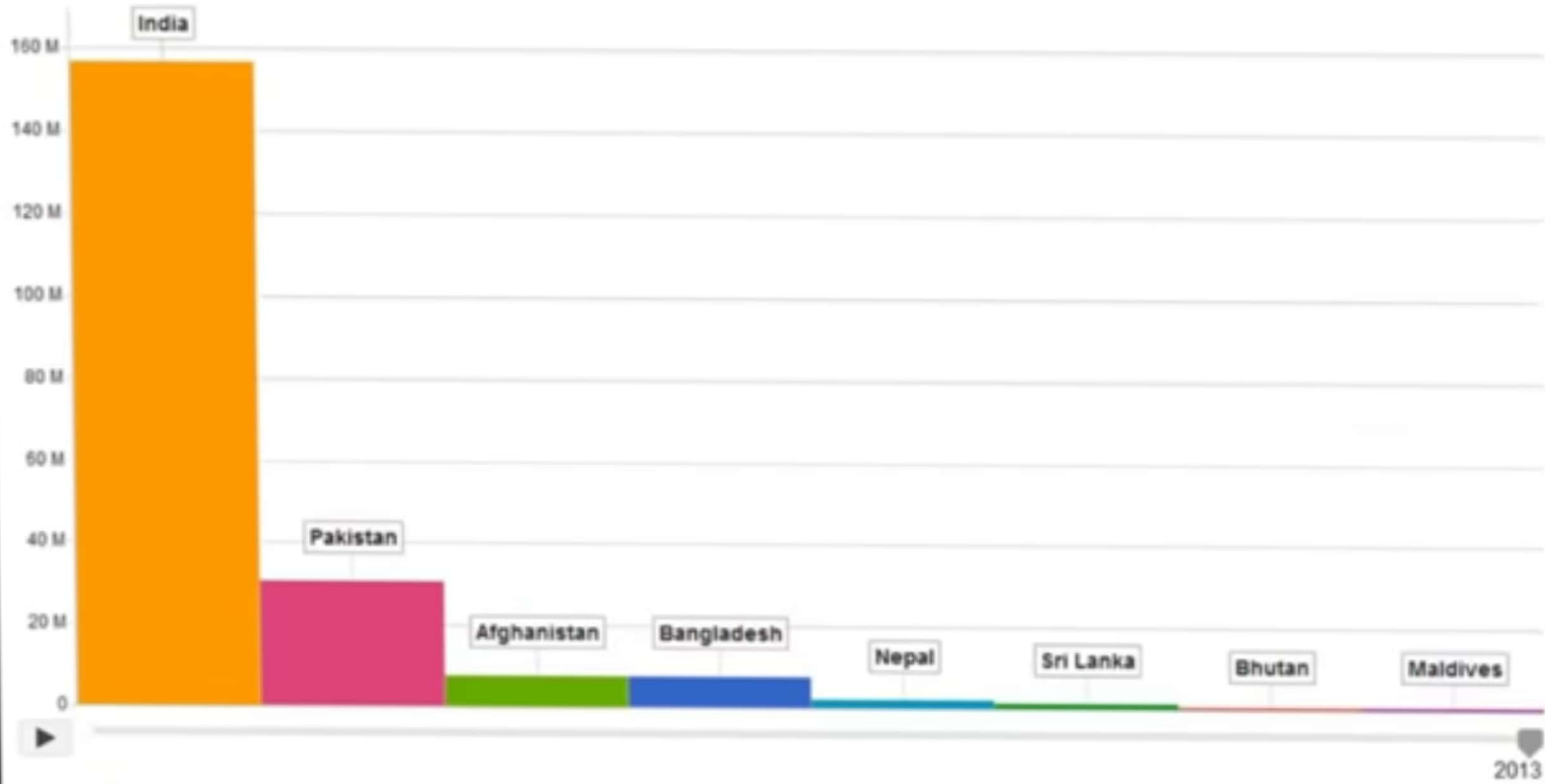
1991 Bangladesh cyclone, killed 138,000 people in the Chittagong region of Bangladesh

1999 Tropical Cyclone 05B, killed around 10,000 people in the Orissa state of India



JULY

Countries, South Asia - Descending order



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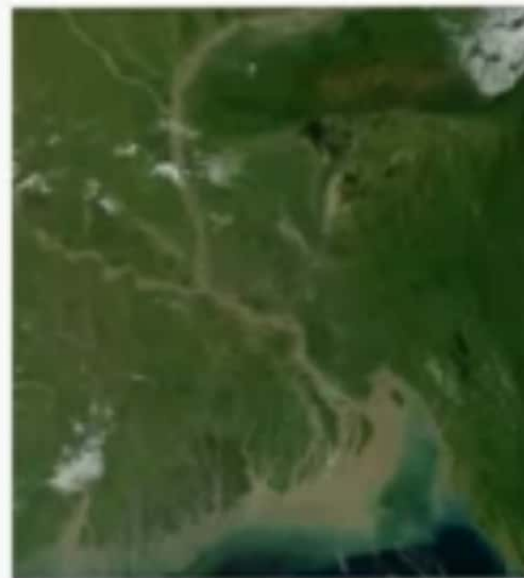
Major Environmental Issues

Natural hazards

Bangladesh

- Low-lying land
- 1/3 of land prone to flooding due to monsoon rains and cyclones
- Worst flooding in 1998, 2/3 of country underwater
- Arsenic contamination of groundwater

Low-lying Bangladesh and the Maldives threatened by rising water as a result of global warming



Land degradation

- Erosion
- Salinization
- Waterlogging
- Desertification



25% of Pakistan's land is saline



Extent of degradation of agricultural land in South Asia^a

Type of degradation	% total that is degraded	% total that is moderately or severely degraded
Water erosion	25	15
Wind erosion	18	13.9
Soil fertility decline	13	1.3
Waterlogging	2	1.5
Salinization	9	6.5
Lowering of water table	6	2.4
Total	73	40.6

a. Includes Afghanistan, Bangladesh, Bhutan, India, Iran, Nepal, Pakistan, and Sri Lanka.
Source: Young (1993) as summarized by Scherr (1999)

Deforestation and loss of biodiversity

- Most forests lost
- Remaining forest threatened

Wildlife preservation and protection

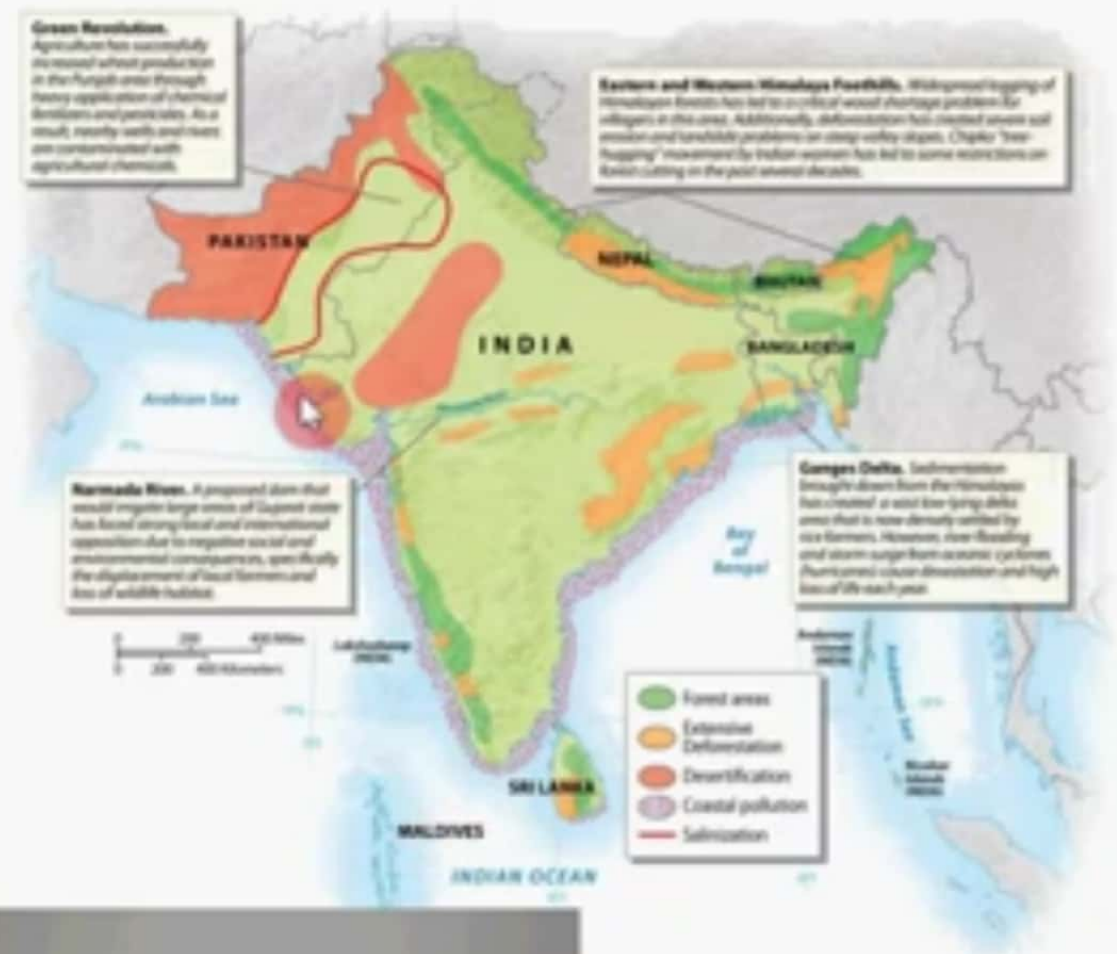
- Contains 15% of world's biodiversity
- Many unique species
- Threats from logging, farming, hunting, invasive species



Pollution

- Coastal
- Urban
- Rivers

9 out of the 10 world's most polluting cities are in South Asia



Pollution of the Ganges River



Air pollution in New Delhi