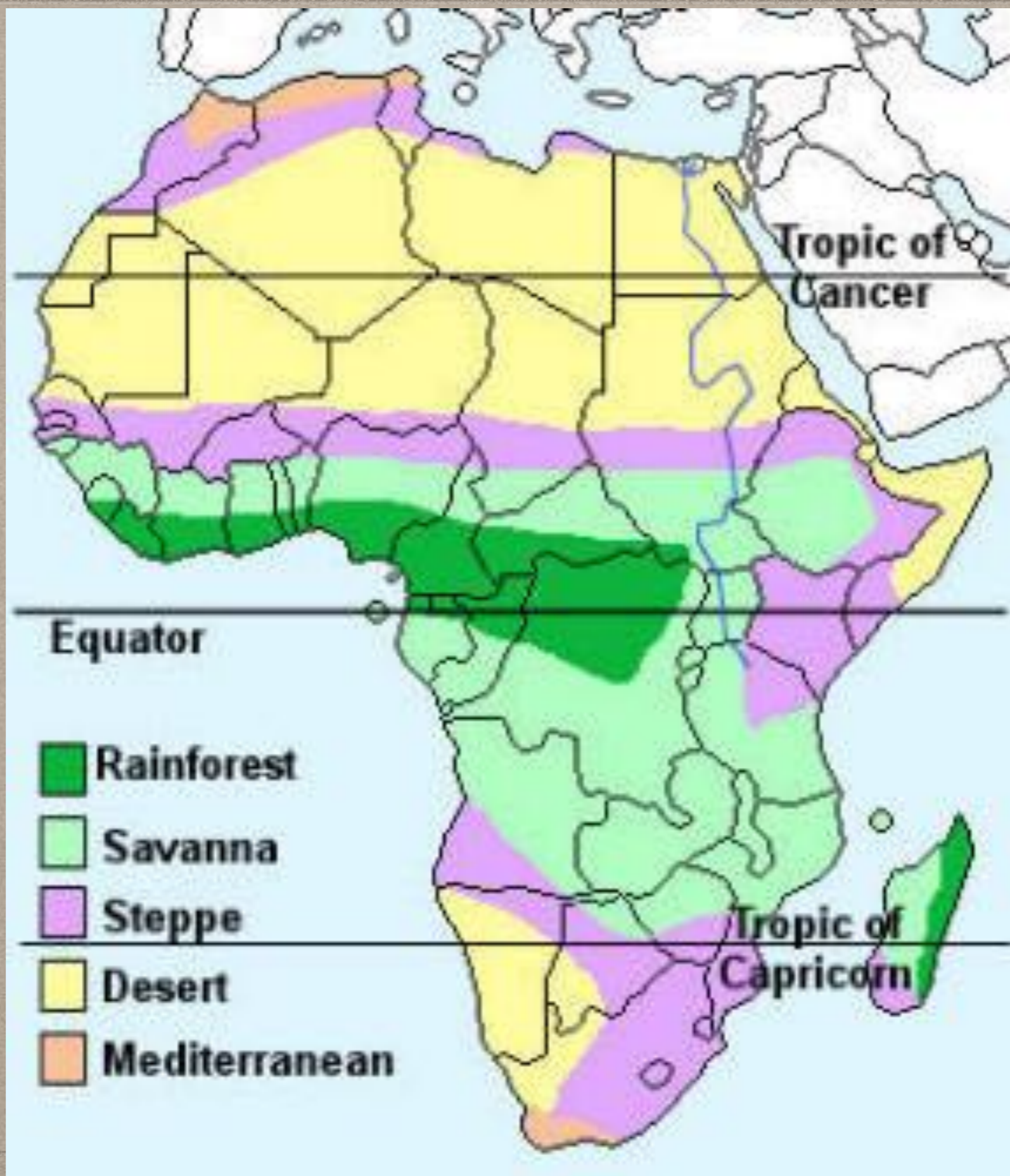


UNIT 5 AFRICA

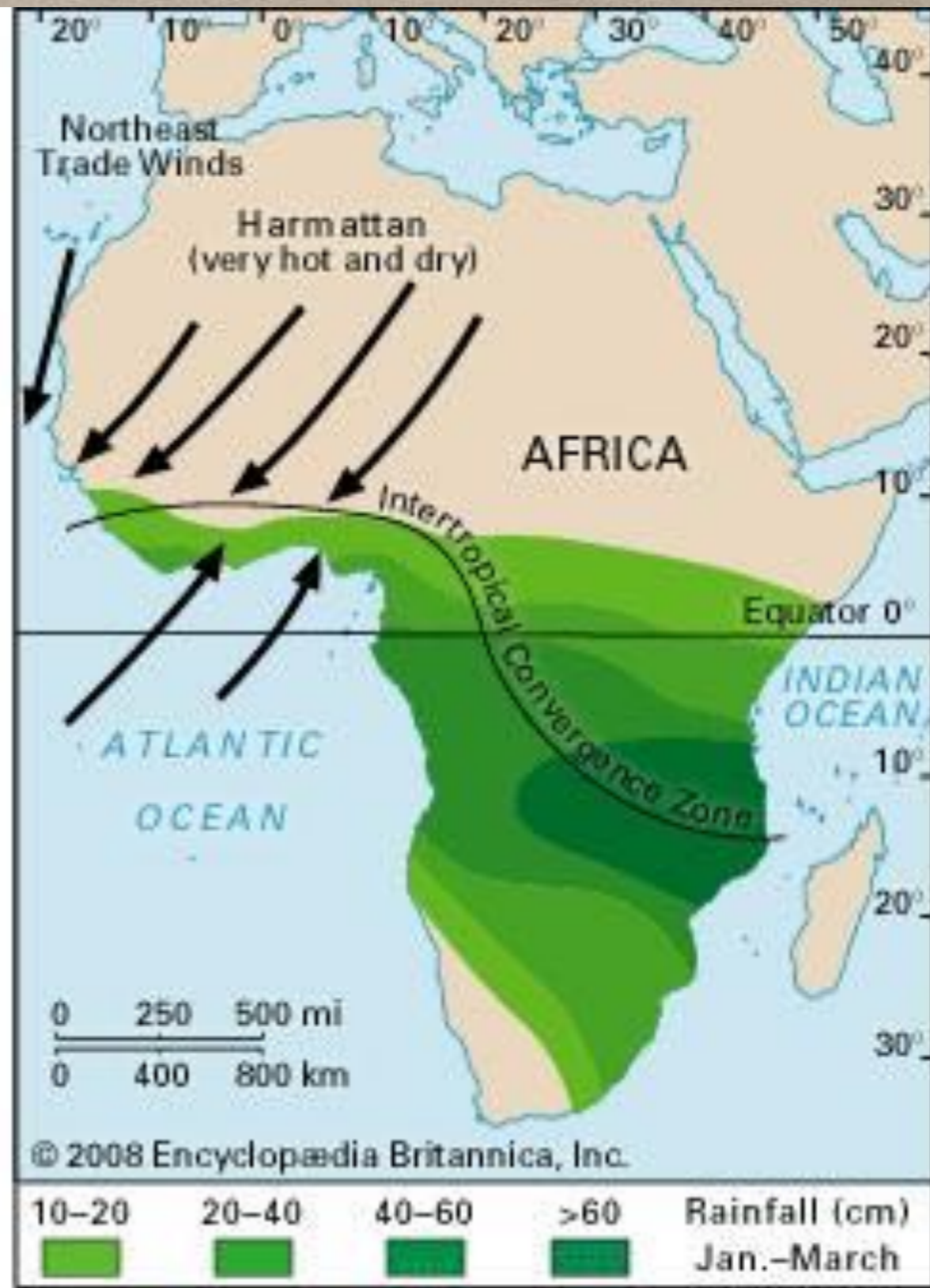
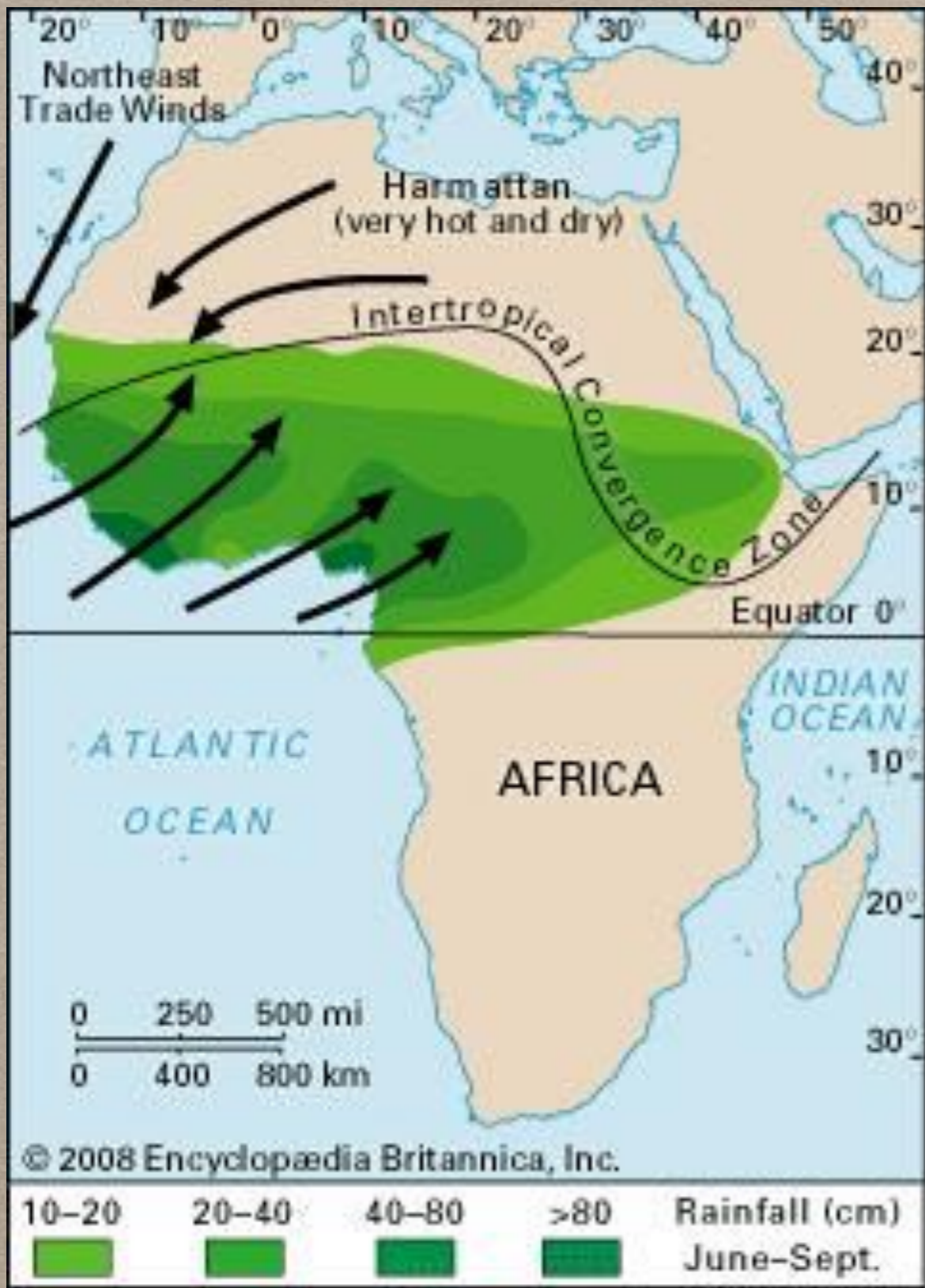
PHYSICAL GEOGRAPHY SG 1 - PART II

III. CLIMATE & VEGETATION

- **A. The four main climate zones are tropical wet, tropical wet/dry (split into monsoon & savanna), semiarid, and arid. Other climate zones include marine west coast, humid subtropical, and highland, which covers the smallest area.**



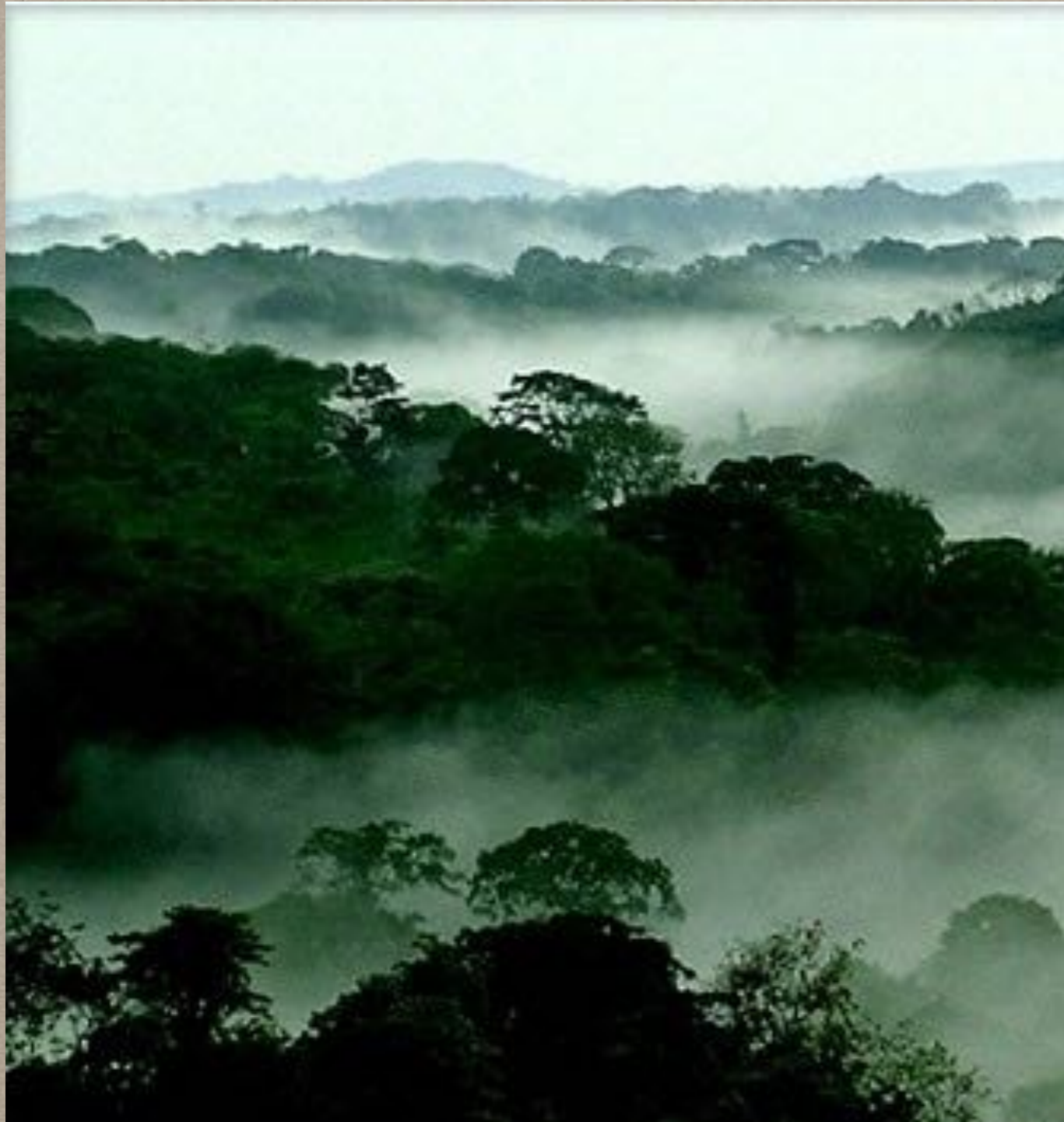
- **1. The Sahara Desert is dominated by high pressure due to its latitude at about 30°N of the equator.**
- **2. The ITCZ produces heavy rainfall near the equator year round and causes seasonal monsoons along the central east coast of a Africa.**
 - **a. The ITCZ brings the rainy season north of the equator in April & south of the equator in October making summer the main rainy season in Africa.**



IV. NATURAL RESOURCES

- **A. Tropical forests - the world's second-largest expanse of humid equatorial rain forest, the Ituri, lies in the Congo Basin of central Africa;**
- **1. Conditions are constantly warm to hot –precipitation falls year-round;**
- **a. Commercial logging and agricultural clearing have degraded the western and southern fringes of the Ituri**





- **B. Savannas (tropical grasslands) - surrounding the Central African rain-forest belt is an arc of tropical wet and dry savannas**
 - **1. North of the equator rain generally falls from May to October, with rainfall decreasing northward; climatic conditions south are reversed;**
 - **2. Savannas are critical habitat for region's large fauna (examples: elephants, rhinos, giraffes, lions, wildebeests)**
 - **3. The most famous savanna, is the Serengeti Plain.**







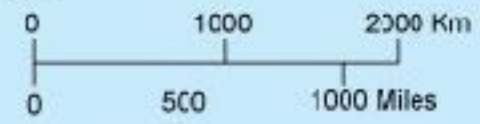
- **C. Soils - Africa lacks an abundance of wide alluvial river plains (the Nile). These alluvial soils are very fertile. Africa's soils are not compared to other continents.**
 - **1. Most of Africa's soils are relatively infertile, but some areas are noted for natural soil fertility—and these areas support denser settlement. Fertile regions include:**
 - **a. the Nile River valley - the only significant alluvial flood plain**
 - **a. the Rift Valley—around Rwanda and Burundi (volcanic soil)**
 - **b. and the Ethiopian Highlands (volcanic soil)**

AFRICA

Arable Land



LEGEND	
Arable Land (%)	
40 - 50	
30 - 40	
20 - 30	
10 - 20	
0 - 10	
No Data	



V. ENVIRONMENTAL ISSUES

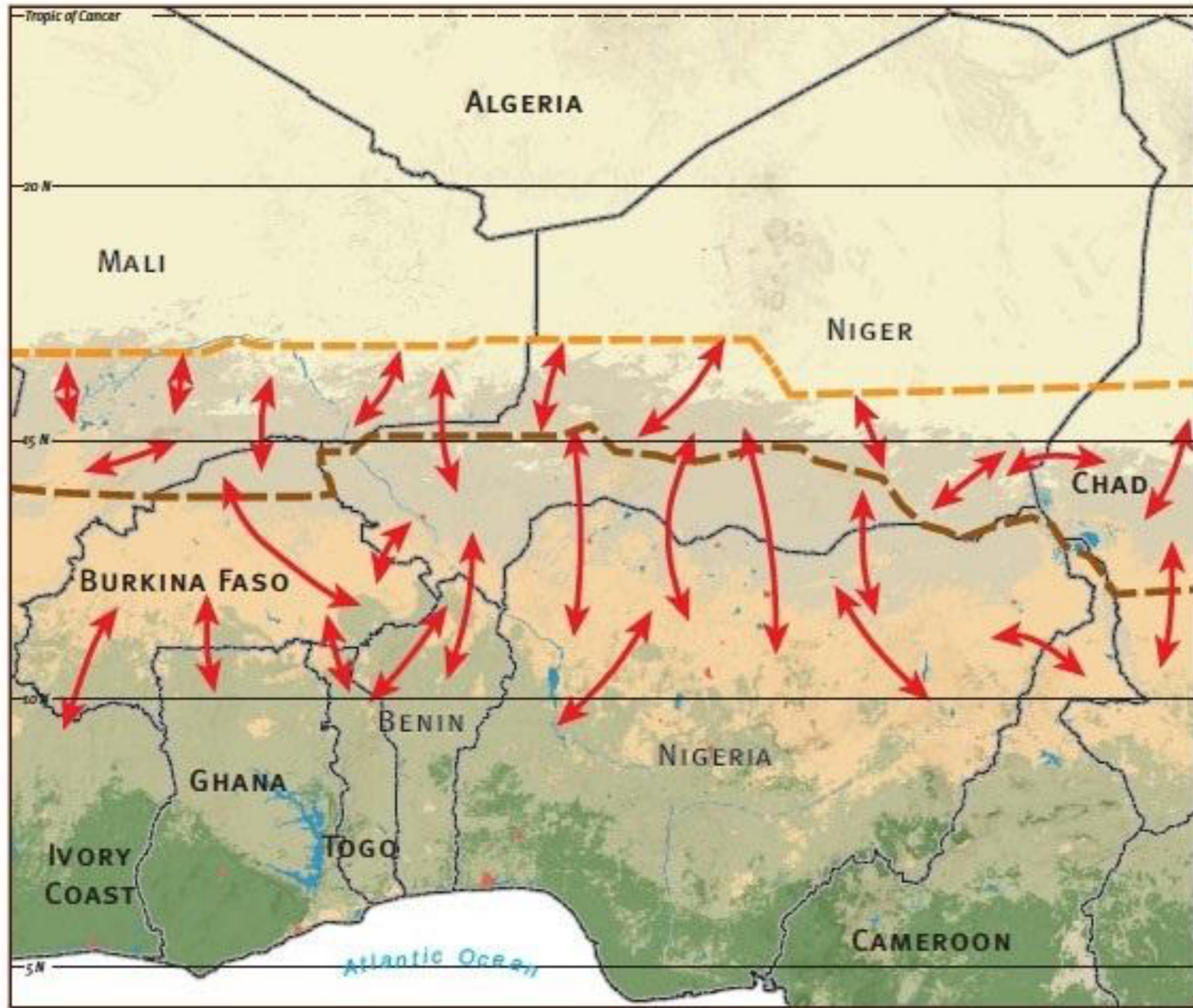
- **A. The Sahel is a zone of ecological transition between Sahara to the north and the wetter savannas and forests to the south & is going through a process of desertification**
- **Desertification is the process by which fertile land becomes desert, typically as a result of drought, deforestation, or inappropriate agriculture**
















© Getty Images/AFP/F. Senna

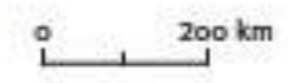
- **1. life in the Sahel depends on balance of limited rain, drought-resistant plants and patterns of animal *transhumance*, or pastoral nomadism, which is movement of animals between wet-season and dry-season pasture**



-  Main transhumance trail:
-  Northern boundary of the pastoral zone
-  Northern boundary of the crops (and southern boundary of the pastoral zone)
-  State borders

Land cover and use in 2000

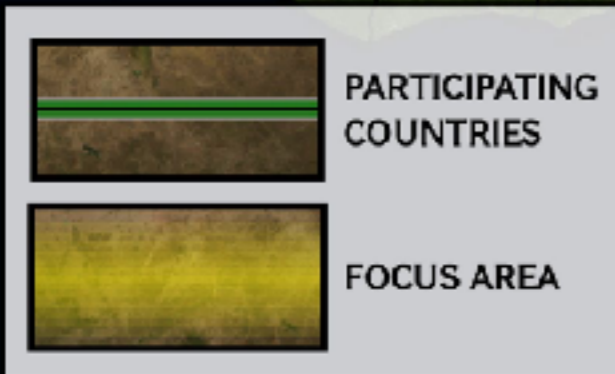
-  Deserts and seasonal steppes
-  Savanna grasslands including agriculture and steppes
-  Dominant agriculture
-  Savanna woodlands including agriculture
-  Forests
-  Water
-  Cities



- **2. Disagreement exists over basic causes of desertification and drought in the Sahel. However, some reasons are as follows:**
 - **a. Overpopulation – too many people in the region possibly due to unsound settlement patterns by European colonists in the 1800s and 1900s.**
 - **a. Overgrazing by cattle & other herbivores.**
 - **c. Over farming by farmers (including being inefficient).**



THE GREAT GREEN WALL INITIATIVE



Satellite imagery: Reto Stöckli, NASA Earth Observatory

- **B. Deforestation - throughout history, local populations have relied on forests for daily needs such as wood to burn, wood is a type of biofuel, as is animal dung. Both are utilized in Africa.**
 - **1. It is significant issue in many parts of Africa**
 - **2. The destruction of tropical rain forests for commercial logging is most pronounced along fringes of the Ituri by way of slash-and-burn, sometimes called swidden agriculture, if the land is then used for farming or grazing.**
 - **3. Two smaller rain forests on the mainland have nearly disappeared.**

Extent of rainforest and deforestation in Central Africa

Annual deforestation rate

Percentage

1,2-

1,0-

0,8-

0,6-

0,4

0,2

0,0

Forest and deforestation extent

Thousands square kilometres

1

100

500

1 500

Forest cover, 2000

● FAO

○ University of Maryland (UMD)

Deforestation

● FAO, 2000-2010

○ University of Maryland
2000-2012

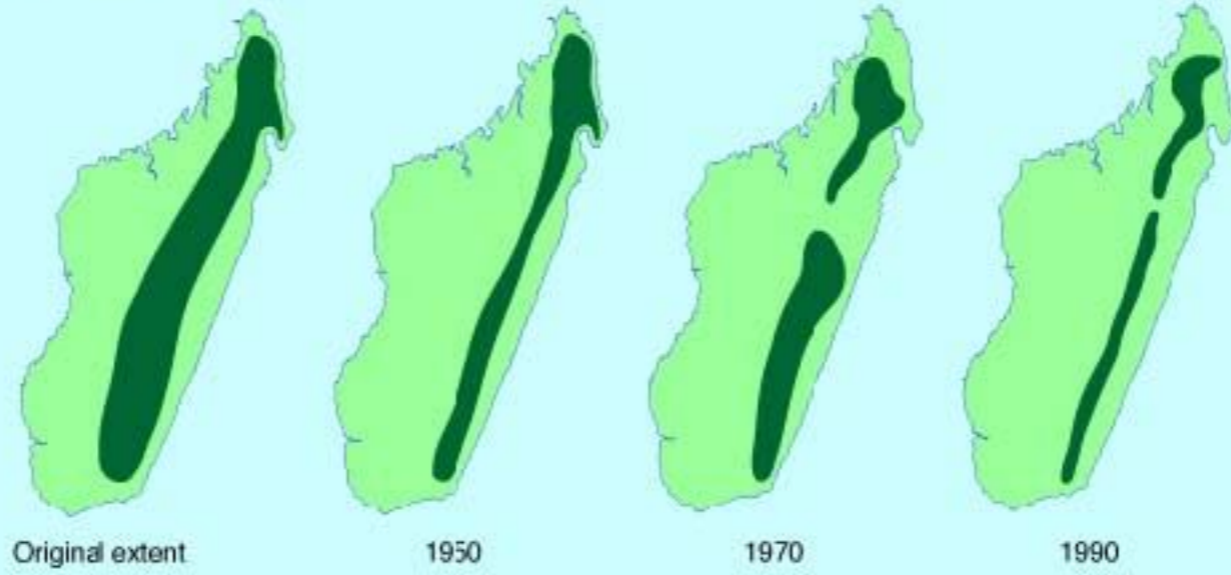
Note: Data sets from UMD and FAO have significant differences as different methods of quantifying forest extent and deforestation are used

Source: based on Hansen/UMD/Google/USGS/NASA; FAO



- **3. It is also a problem in Madagascar which has caused almost all of its rainforest to disappear.**
 - **a. This has called vast soil erosion, which in turn has caused massive flooding to occur during the rainy season.**

Loss of forest cover



- **C. Wildlife conservation - Africa is famous for its wildlife**
 - **1. A number of wildlife reserves have been established, mostly in southern Africa, these are vital for wildlife protection and tourism**
 - **a. Poaching is a major problem; the Convention on International Trade in Endangered Species (CITES) was imposed in 1989 to ban ivory trade**
 - **b. The ivory controversy shows how differences in animal distribution in the region, global markets, and international conservation policies are impacting long-term survival of elephants in the region**
 - **c. Rhinos are being hunted to extinction for their horns. In China powdered rhino horn is considered medicinal.**