**A HUMAN PERSPECTIVE**   April & May heat 100ºF streams dry up then towns & cities are flooded.. S. Asians see this cycle repeat itself each yr.   
**Climate—Wet & Dry, Hot & Cold**   
Half of the climate zones that exist on earth can be found in S. Asia. must adapt to widely varying conditions.   
**CLIMATE ZONES**  6 main climate zones

* highland zone has the coldest climate. Himalayas & other N.ern mts, where snow exists yr-round.
* lush foothills & valleys of Nepal, Bhutan, & N.ern India r humid subtropical zone that stretches across S. Asia. The Indo-Gangetic Plain also occupies much of this region.
* semiarid zone—a region of high temperatures & light rainfall—W.ern end of the Plain & in parts of the Deccan Plateau.
* desert zone lower Indus Valley, in the borderlands of W.ern India & S.ern Pakistan. The driest part of  this area, Thar Desert, averaging 10 inches rain a yr.
* tropical wet zone is found along the W.ern and E.ern coasts of India and in Bangladesh. Temperatures are high, and rainfall is heavy. Cherrapunji in N.E.ern India world's record for rainfall in a month—366 inches.
* S.ern Sri Lanka also has a tropical wet climate, while the N. is tropical wet and dry.  
  **MONSOONS & CYCLONES**  climate varies in. as a whole affected by [**monsoons**](javascript:openFootnoteWindow('http://images.classwell.com/mcd_xhtml_ebooks/2002_world_geo/footnotes/wg03_m.html');),/ seasonal winds.
* October thru February, dry winds blow across S. Asia from the N.E..
* June thru September, the winds blow in from the S.W., bringing moist ocean air. Heavy rains fall, especially in the S.W.ern & Ganges Delta portions of S. Asia.
* crucial to life on the subcontinent. cause severe hardship for millionsliving in the lowlands of India & Bangladesh.
* highly unpredictable. Some areas may get too little/too much. sometimes beneficial, sometimes difficult feature of life
* most extreme weather pattern **cylclone,** a violent storm w/ fierce winds & heavy rain.
* most destructive in Bangladesh, a low-lying coastal region where high waves can swamp large parts
* cause widespread damage & kill thousands of ppl.

**Vegetation: Desert to Rain Forest**   
Plant life varies according to climate & altitude. ranges from desert shrub & temperate grasslands to dense forests in the wettest areas.  
**VEGETATION ZONES**

* forested parts of S. Asia lie w/in the tropical wet zone W.ern coast of India & S.ern Bangladesh. rain forests of teak, ebony, & bamboo are found, mangroves in the delta areas
* highland zone: N.ern India, Nepal, & Bhutan, there are forests of pine, fir, & other evergreens.
* riv valleys & foothills of the humid subtropical zone have forests of sal, oak, chestnut, & various palms.
* deforestation problem everywhere less than1/5 of India's/iginal forests remain
* soil erosion, flooding, climate changes, & lost wildlife habitats.
* semiarid areas: Deccan Plateau & the Pakistan-India border, less vegetation. mainly desert shrubs & grasses.
* driest areas, Thar Desert, have little plant life, & few ppl live there. The tropical wet & dry climate of N.ern Sri Lanka both grasses & trees.

Bengal Tiger nearing extinction in the early 1970s. killed for sport & skins & as a source of traditional medicine. about 1,800 remained.  
   thru the efforts of conservationists & govs, the Bengal Tiger is a protected species. #s are on the rise. 3,250 to 4,700 Bengal Tigers roam in protected jungle & grassland areas mainly in India & Bangladesh, but also in parts of Nepal, Bhutan, & Myanmar. Several hundred are found in zoos around the world.

**A HUMAN PERSPECTIVE**  [**Hinduism**](javascript:openFootnoteWindow('http://images.classwell.com/mcd_xhtml_ebooks/2002_world_geo/footnotes/wg03_h.html');): religion of most Indians. Hindu religious festival, millions of Indians gather near the city of Allahabad, where the Ganges & Yamuna rivs meet. A temporary tent city goes up, complete w/ markets, temples, & teahouses. Ppl visit the market stalls & pray at the temples, watch plays based on Hindu myths & legends.  
will wade into the Ganges & wash their sins away in its holy h20s. To Hindus, [**Ganges Riv**](javascript:openFootnoteWindow('http://images.classwell.com/mcd_xhtml_ebooks/2002_world_geo/footnotes/wg03_g.html');) important h20 resource, sacred riv earthly home of the Hindu goddess Ganga.  
**Living Along the Ganges**   
Ganges is the most well-known of all the S. Asian rivs. flows more than 1,500 miles from its source in a Himalayan glacier to the Bay of Bengal. drains area nearly X3 the size of France. home to about 350 million ppl. shorter than both the Indus & Brahmaputra rivs, the impact of the Ganges on human life in the region is enormous.  
**A SACRED riv.** important for the livelihood of Indians.

* h20 for drinking, farming, & transportation.
* spiritual significance of the riv. The Ganges is known in India as *Gangamai,* which means "Mother Ganges."
* Bangladesh, Ganges joins the Brahmaputra, the riv is called the Padma.
* Hindu beliefs, the Ganges is a sacred riv that brings life to its ppl. believe its h20s have healing powers.  
  temples & sacred sites at banks of the Ganges. wide stone steps lead down to the h20. Pilgrims come to drink & bathe in its h20s & scatter the ashes of deceased family members on the riv.
* At Varanasi one of the most sacred sites on the Ganges, thousands of ppl gather every day. As the sun rises, Hindu pilgrims enter the h20 for purification & prayer. float baskets of flowers & burning candles on the h20, as bells ring & trumpeters blow on conch shells. daily celebration of their faith in the Ganges & its sacred h20s. **A POLLUTED RIV**
* intense human use, become one of the most polluted rivs in the world. Millions of gallons of raw sewage & industrial waste flow into the riv every day. bodies of dead animals float on the h20. Even human corpses are thrown into the riv. h20 is poisoned w/ toxic chemicals & deadly bacteria. Thousands of ppl who bathe in the riv/ drink the h20 become ill w/ stomach/ intestinal diseases. develop life-threatening illnesses, such as hepatitis, typhoid,/ cholera.
* 1986: Indian gov tried to restore the health of the riv.
* called for a network of sewage treatment plants to clean up the h20 & for tougher regulations on industrial polluters. Slow progress. Few of the proposed treatment plants are in operation, & factories & cities are still dumping waste into the riv.
* an enormous problem. a great deal of time, effort, & money to clean up the riv. change in the way ppl view the riv. Hindu believers, the Ganges is too holy to be harmed by pollution. If there is a problem w/ the h20, they believe that "Mother Ganges" will fix it.

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| MOVEMENT Each yr, millions of Hindu pilgrims come to the city of Varanasi, in N.ern India, to bathe in the h20s of the Ganges—the sacred riv of their religion. |

**Controlling the Feni Riv**   
rivs of Bangladesh are crucial to survival. Rivs emerge from the Chittagong Hills in the S.E.. One riv called Feni, flows into the Bay of Bengal just E. of the huge delta that makes up most of the S.ern part of the country, begins as a small hill stream, becomes a wide, slow-moving riv by the time it enters the bay**A RIV OVERFLOWS**

* flows thru a low–lying coastal plain that borders the Bay of Bengal before it reaches the sea.
* flat, marshy area is subject to flooding during the wet season. monsoon rains swell the riv & may cause it to overflow its banks. \ cyclones that sweep across the Bay of Bengal bring high h20s—called [**storm surges**](javascript:openFootnoteWindow('http://images.classwell.com/mcd_xhtml_ebooks/2002_world_geo/footnotes/wg03_s.html');)—that swamp low–lying areas.
* Over the yrs, storm surges at the mouth of the Feni Riv have caused tremendous hardship. Sea h20 surges up the riv & onto the coastal flatlands. Villages & fields are flooded, great destruction.
* smaller streams, villagers sometimes build earthen dikes to block the h20 & protect their farmlands but not effective against the flooding of large rivs.  
   1980s: engineers in Bangladesh proposed building an earthen dam for the Feni. Closing the Feni to build the damd diffifult. mouth of the riv is nearly mi. wide, posing mjr problems for dam construction. Big cost of building for a poor country like Bangladesh ( limited financial & technological resources)  
    
  **USING PPL POWER**
* Bangladesh one key asset for project—abundant human resources.
* W/ large population, plenty of unskilled workers available for construction work.
* Bangladesh hired engineers from the Netherlands. Dutch have had great experience in flood control.
* 1984: emphasized the use of cheap materials & low-tech procedures.
* 1st step was to lay down heavy mats made of bamboo, & reeds weighted w/ boulders done to prevent erosion of the riv bottom. Workers piled more boulders on top & then covered them w/ clay-filled bags. 6 months of work, built a partial closure across the mouth of the Feni Riv.
* gaps in the wall still allowed h20 to flow in & out. Engineers had chosen Feb 28, 1985—the day of loW. tides—as the day to close the riv. tide went out, 15,000 workers rushed to fill in the gaps w/ clay bags. 7 hrs they laid down 600,000 bags. tide came back, the dam was closed.  
    
  **COMPLETING THE DAM**
* dump trucks & earthmovers added more clay to raise the dam to 30 ft.
* placed concrete & brick over the sides of the dam & built a road on top.
* Bangladesh now largest[**estuary**](javascript:openFootnoteWindow('http://images.classwell.com/mcd_xhtml_ebooks/2002_world_geo/footnotes/wg03_e.html');)(an arm of the sea at the lower end of a riv) dam in S. Asia.
* would the dam hold against a major storm? 3 months later, cyclone roared into the Bay of Bengal. storm surge hit the dam, but the dam held. lands & villages behind the dam were spared the worst effects of the storm. Feni Riv closure offers hope for similar solutions in other low-lying areas of Bangladesh & S. Asia.