As you read this chapter, use your journal to record information about economic activities and environmental issues in South Asia. Be sure to include details that illustrate each activity or issue.

Chapter Overview Visit the Glencoe World Geography Web site at tx.geography.glencoe.com and click on Chapter Overviews—Chapter 25 to preview information about South Asia today.
Guide to Reading

Consider What You Know
South Asia is world-renowned for its many fine fabrics—soft pashminas and cashmeres, bright cottons, and finely spun silks. What other items from South Asia might you find in stores in your community?

Read to Find Out
• How does agriculture provide a living for most of South Asia’s people?
• What role do fisheries and mines have in South Asian economies?
• Where in South Asia is rapid industrial development taking place?
• What issues are raised by tourism in South Asia?

Terms to Know
• cash crop
• jute
• green revolution
• biomass
• cottage industry
• ecotourism

Places to Locate
• Bangalore
• Chittagong
• Hyderabad

Living in South Asia

A Geographic View

Ancient Rhythms
Despite signs of change, much of Bhutan remains as it has always been, an unspoiled land of farmers and herders of yaks and cattle. Some 90 percent of Bhutanese live as their ancestors did, following livestock through the high summer meadows, planting plots of rice and chiles in the valleys. People like a woman I met in the northern village of Soe still follow the ancient rhythms.

Together we watched pine smoke curl from her kitchen fire, sipped warm bowls of yak-butter tea, and talked about the sorts of things that concern farmers everywhere—the price of meat, the cost of clothing, and the health of the herd.


Throughout South Asia, agriculture is the most common occupation. More than 60 percent of the labor force in India and Bangladesh are employed in agriculture. In this section you will learn how South Asians today are using new agricultural methods to increase food production. You will also learn about other ways in which the peoples of South Asia earn a living.

Living From the Land
Most people in South Asia practice subsistence farming. Subsistence farmers often rely on labor-intensive farming methods. They may use digging sticks or hand plows to break up the soil, and they often sow...
seed by hand. To water their crops, farmers may hand-carry water for miles from a well or river, although some areas have irrigation systems.

Subsistence farmers also use animal power. Oxen and water buffalo pull wooden plows, carry heavy loads, and turn simple waterwheels for irrigation and mills for grinding grain. South Asians also use yaks, the long-haired cattle that flourish at high elevations; camels in desert areas; and elephants, which can do the heavy work of a tractor.

Farming depends on many changeable factors, such as rainfall, that are beyond the farmers’ control. A family can lose its entire food supply in one season of drought, or crops might be eaten by wild animals. Even with the risks, however, subsistence farming allows many South Asians to be economically independent.

**Agricultural Conditions**

Farms in South Asia vary widely in size and appearance, based on geographic, historic, and cultural factors. In the Himalayan highlands of Nepal and Bhutan, farmers practice terracing, making use of every available inch of arable land on the steep slopes. Fruit orchards line the fertile highland valleys of Pakistan. In most of Bangladesh’s delta region and along many of South Asia’s great rivers, farmers work in water above their knees to grow rice. Farms in India are generally very small, with over one-third of them covering less than an acre.

**History**

**Sri Lanka’s Plantations**

India’s tiny farm plots stand in sharp contrast to the huge tea, rubber, and coconut plantations where many Sri Lankans work. British and Dutch colonizers established these large, technically sophisticated agricultural operations. The British moved their tea plantations from India to Sri Lanka (then called Ceylon) when Indian workers demanded better working conditions.

Although the European planters left Sri Lanka when the country gained its independence from the United Kingdom in 1948, plantations continue to employ about three-fourths of Sri Lanka’s workers. The profitable plantations leave little land for growing crops to feed the country’s own people, however, so Sri Lanka must import large quantities of basic foods, such as rice.

**South Asian Crops**

Cash crops bring much-needed income to South Asia. The tea, rubber, and coconuts of Sri Lanka are cash crops, farm products grown for sale or export. India also grows large quantities of cashews, coffee, and tea for export. Tea plants grow well in northeastern India’s temperate highlands. However, balancing the physical needs of hungry people with the economic needs of growing countries is a challenge to the region.

Cotton is a key cash crop in South Asia. India and Pakistan are among the world leaders in cotton production. Jute, a fiber used to make string, rope, and cloth, is the major cash crop of Bangladesh and is grown mainly in the western lowlands bordering India. Sales of this fiber, called the “golden crop” for its color and value, account for a large part of Bangladesh’s export income, although demand for jute is decreasing.
India is one of the world’s largest producers of bananas. Citrus fruits, chiles, and spices are grown for export in the steppe areas of India, Pakistan, and Bangladesh.

Grains provide South Asia with important food sources as well as profitable exports. Rice, the major food crop of South Asia, grows in the tropical rain forest climate of the Ganges Delta and along the peninsula’s western Malabar Coast. India is second only to China in rice production, and Bangladesh ranks fourth in the world. Wheat is the main crop in the western Ganges Plain (Indo-Gangetic Plain) and in Pakistan’s Indus River valley, but millet, corn, and sorghum also grow there. Peanuts grow along the Malabar Coast and the southern Deccan Plateau, and farmers grow sugarcane in most of India’s lowlands.

**Agricultural Improvements**

Even with some success in slowing the population growth, feeding South Asia’s people is an enormous challenge. Farmers are being trained to use modern technology and methods for irrigation, pest control, and fertilization to increase productivity. More planting cycles, for example, have been successful in Bangladesh, where farmers usually can harvest three rice crops per year. In Nepal’s Kathmandu Valley, farmers are planting and harvesting winter wheat following the rice harvest.

Educational and governmental efforts have increased agricultural productivity. Research stations in Bhutan, for example, have helped farmers establish fruit orchards, and government-funded irrigation systems and higher rice prices encourage Sri Lankan farmers to grow more food crops.

**The Green Revolution**

Since the 1960s, an effort known as the green revolution has sought to increase and diversify crop yields in the world’s developing countries. In India, as elsewhere, the green revolution has involved using carefully managed irrigation, fertilizers, and high-yielding varieties of crops. As a result, India’s wheat and rice production has greatly increased. India is now able to store—and even export—grain. Not all the new methods work everywhere in South Asia, however. In parts of the region, monsoon rains allow only one planting cycle per year. Modernization also has costs.

Irrigation and mechanization require expensive fuel, and in a region where not enough petroleum is available and many people burn biomass—plant materials and animal dung—as their only energy source, the costs are often too high.

**Mining and Fishing**

In addition to farming the soil, South Asians reap benefits from other natural resources in the region. Mining and fishing are profitable industries with the potential for growth in years to come.

**Mineral Wealth**

The Ganges Plain and parts of eastern India yield some of South Asia’s richest mineral deposits. Iron ore, low-grade coal, bauxite, and copper are all...
Foods in South Asia usually consist of a staple grain: rice in the south and east, wheat in the north and west. Seasonal vegetables are often part of meals throughout the region, while fruits are considered a dessert. Meat and fish are common but not usually eaten daily.

One of the most important ingredients in South Asian cooking is curry, a blend of spices added to fish, meat, vegetables, and grain dishes. Curry is made by mixing from 2 to 20 different spices, and can be sweet and mild or hot and tangy.

South Asian Industries

Industrialization has proceeded along very different time lines in various South Asian countries. In India, industrialization began under British rule and was funded by European companies. In contrast, Bhutan, closed off from the outside world until 1975, still remains relatively isolated. Bhutan’s government is moving ahead with industrial development slowly in order to preserve the country’s natural and cultural resources.

Economics

India’s Evolving Economy

After gaining independence in 1947, India introduced socialism, an economic policy that emphasized central planning. The government set goals for and closely regulated private industry. Many large industries were placed under direct government control, while others were partnerships between private owners and the government.

Wary of outside influences, India turned its back on foreign investment. It expanded home industries and reduced dependence on foreign trade to promote self-sufficiency. At first growth was steady, but by the 1960s the economy slowed, and India began to see the limitations of its policies in an increasingly global economy. Still, change came slowly. In the late 1980s, India’s government still regulated or operated mining, banking and insurance, transportation, manufacturing, and construction industries. Then, in 1991, a financial crisis
pushed India toward major economic reforms. It began moving toward a market economy.

“In 1991 India began opening its economy to wider trade, and the United States quickly became its primary trading and investment partner... Foreign companies were thrilled by sheer numbers—an estimated 150 million potential middle-income consumers... [Foreign companies have also brought] better job opportunities...”


The government also deregulated many industries and turned over government-run companies to private ownership. These changes sparked economic growth that helped expand the middle class, which was believed to make up 20 to 25 percent of India’s population by the late 1990s. As a result, the demand for consumer goods from shoes to luxury cars has expanded rapidly. Today India, along with the rest of South Asia, struggles to balance national interest and global interdependence.

**Light Industry**

Many South Asians work in light industry, producing consumer goods. Textiles are a major part of South Asia’s manufacturing base, as they have been in India for hundreds of years. India’s 25 million textile workers manufacture cotton, silk, and wool fabrics in a dazzling variety of patterns, colors, and styles. India’s textile industry, centered in Mumbai, Nagpur, and Sholapur, also produces garments for export. Bangladesh entered the textile industry in 1979, and sales of finished garments provide the country with export income.

Some of the world’s most prized wools—cashmere and pashmina—come from a rare breed of goat found only in the Jammu and Kashmir region. Used in high-quality, high-fashion garments, these wools are in great demand.

Other light industries throughout South Asia manufacture shoes, carpets, bicycles, and bicycle parts. These small industries are generally housed in factories employing fewer than 100 people, and they use traditional production techniques.

South Asia’s broad involvement in light industry grows out of its history of **cottage industries**, businesses that employ workers in their homes. Indian villagers weave textiles and make shoes, jewelry, woodcarvings, furniture, and bowls. Cottage industries in India, Nepal, and Bhutan provide jobs, encourage traditional crafts, and supply needed export income.

Mohandas Gandhi, the leader of India’s independence movement, chose the spinning wheel as a symbol of the strength India could draw from its cottage industries. In his later years, Gandhi dressed only in simple robes of **khadi** (KAW•dee), traditional homespun cotton fabric.
and was often pictured sitting at the spinning wheel where he spun khadi thread. Gandhi urged the Indian people to maintain their traditional, family-centered industries even as the country developed.

**Heavy Industry**

South Asia’s industrial base includes heavy industries geared toward mass production. India manufactures iron, steel, cement, and heavy machinery in Bhadravati and Bangalore. Bangladesh also produces iron, steel, and cement.

India, Pakistan, and Bangladesh also recycle iron and steel in a unique industry called “ship breaking.” In Bangladesh’s port of Chittagong, thousands of workers use sledgehammers and blowtorches to dismantle aging or damaged ships from around the world. Melted-down parts are reforged into new iron and steel. In Bangladesh alone, ship breaking and related industries employ more than 1.3 million people.

**Service Industries**

Since the late 1990s, service industries—transport, real estate, banking and insurance, and public administration—have become increasingly important in South Asia. India and, to a lesser extent, Pakistan have benefited the most. In India wholesale and retail trade and government services rank as the leading contributors to the country’s service economy. The Indian government provides a variety of social services to its people, especially in health, education, and public administration.

**The High-Technology Sector**

High technology—including the manufacture of equipment for the computer, communications, and aerospace industries and the creation of computer software—is a growing industry in South Asia. Millions of Indians use the Internet, and Indian computer professionals are in high demand around the world. The southern Indian cities of Bangalore and Hyderabad are called “India’s Silicon Valley,” a reference to the part of California where many computer industries flourish. Software manufacturing in these cities has helped make India the world’s second-largest exporter of software. In 2000 the software trade between India and the United States alone yielded $5 billion in income for India, with a projected growth rate of about 60 percent per year.

India also has strong potential to be a developer of computer hardware. The increasing use of copper rather than aluminum in microchip manufacturing benefits India because of its abundant copper deposits. India already has a strong and growing industry in the manufacture of televisions and other communications equipment.

**Tourism**

Tourism income is important in several South Asian countries. Nepal draws tourists to hike and climb the Himalayan slopes and to hunt or photograph wild animals. India’s temples and festivals attract more than 2 million visitors each year.
Continuing conflicts may discourage tourists, however. Sri Lanka’s lush rain forests and tropical beaches once drew many tourists, but since the 1980s, violence between Hindu Tamils and Buddhist Sinhalese has emptied luxury hotels. Ongoing border disputes between India and Pakistan have all but eliminated tourism in Kashmir. Sporadic violence among religious groups in India also has discouraged foreign visitors.

In some South Asian countries, governments regulate tourism to protect threatened natural and cultural resources. For example, to preserve the Himalayan environment and its traditional culture, Bhutan issues fewer than 5,000 tourist visas each year. The Maldives restricts tourists to certain islands so that tourists do not interact with Maldivians who follow strict Islamic customs. Ecotourism, a form of tourism that encourages responsible interaction with the environment and endangered species, can support preservation efforts while contributing to South Asian economies.

**Geography Online**

**Student Web Activity** Visit the Glencoe World Geography Web site at txgeography.glencoe.com and click on Student Web Activities—Chapter 25 for an activity about business and tourism in India.

**Beachside Paradise** Among the most beautiful islands in the world, the Maldives also supports a diverse marine life. **Place** Why does the Maldives restrict tourist access to some islands?

**TAKS Practice**

**Checking for Understanding**

1. **Define** cash crop, jute, green revolution, biomass, cottage industry, ecotourism.

2. **Main Ideas** Create a table like the one below, and fill in economic activities in South Asia and the challenges each represents.

<table>
<thead>
<tr>
<th>South Asian Economic Activity</th>
<th>Activity</th>
<th>Challenges</th>
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**Critical Thinking**

3. **Comparing and Contrasting** Compare and contrast cottage industries and commercial industries in the ways of operation, especially in regard to India’s economy.

4. **Categorizing Information** Which of the region’s industries focus on domestic needs, and which focus on exporting?

5. **Predicting Consequences** How might increased tourism affect life in the region?

**Analyzing Maps**

6. **Movement** Using the economic activity map on page 563, identify areas where nomadic herding is common. Explain why herding is the dominant economic activity in each of these areas.

**Applying Geography**

7. **Effects of Physical Geography** Think about farming methods in South Asia. Explain how farming methods are influenced by the region’s physical geography.
People and Their Environment

Guide to Reading

Consider What You Know
Tourism’s growth rate in India is higher than the world average, and the Indian government considers tourism a high-priority industry. What effects do you think increased tourism might have on India’s environment?

Read to Find Out
• How is South Asia handling the complex task of managing its rich natural resources?
• What environmental challenges does South Asia face in the years ahead?
• How do geographic factors impact the political and economic challenges of South Asia’s future?

Terms to Know
• sustainable development
• poaching
• Chipko
• nuclear proliferation
• Dalits

Places to Locate
• Narmada River
• Bay of Bengal

The tourism generated by trekking the Himalayan trails brings needed income to the kingdom of Nepal, but it also endangers the Himalayan ecosystem on which the entire Indian subcontinent depends. In this section you will learn about environmental and other challenges faced today by the countries of South Asia.

Managing Natural Resources
As you have learned, people and the environment interact and affect each other throughout the world. This interaction is especially significant in South Asia, where high population densities meet fragile ecosystems. As a result, South Asian countries seek to manage their resources wisely rather than just using them. A key to successful
resource management is **sustainable development**, or using resources at a rate that does not deplete them for future generations.

**Wildlife**

South Asia is home to an astonishing variety of wildlife. Elephants, water buffalo, and monkeys flourish in the rain forests of India and Sri Lanka. Crocodiles and Bengal tigers roam in Bangladesh. In the high mountain passes of the Himalaya, the elusive snow leopard hunts alone above fields crowded with blue sheep, exotic birds, and rare butterflies.

The Hindu, Buddhist, and Jain traditions of South Asia promote respect for all living things. However, many of South Asia’s animals have become endangered through contact with the region’s growing human population. Deforestation and irrigation have reduced animals’ natural habitats, driving them into areas where people live. Some animals have been overhunted by tourists or by farmers and herders seeking to protect their crops and flocks.

Governments in the region, assisted by international conservation organizations, are working to reverse some of South Asia’s wildlife losses. The creation of wildlife reserves—protected habitats—and the passage of laws controlling hunting and logging have begun to make a difference. Providing South Asians with economic incentives to cooperate in conservation efforts may also be effective. However, challenges still remain. Farmers’ crops often are threatened by foraging elephants, and poachers can realize huge profits by selling the hides of Bengal tigers. To eliminate poaching, or the illegal killing of protected animals, governments in the region need to find ways to encourage people to respect wildlife.

**Water**

Water is one of the most precious resources on the planet. Lack of access to clean water is a persistent problem in South Asia. Even in India, the most developed country in the region, 80 percent of the population has no access to sanitation facilities and must rely on water that is polluted by human waste and chemical runoff. The situation is worse in parts of Pakistan and in Bangladesh.

Because South Asia’s climate varies greatly, the villagers of Rajasthan in northwestern India may be watching their crops and livestock perish from drought at the same time that farmers in Bangladesh are losing their homes to flooding. Building dams is one way to balance these extremes. Dams can change the course of rivers, reroute water for irrigation, and control flooding by holding water in reserve for times of drought.

Like many uses of technology, however, the building of dams has drawbacks as well as benefits. Dams trap silt that would otherwise flow downriver to enrich the soil. Reservoirs can trap bacteria, too, and become a source of disease. Also, building a dam usually results in the flooding of surrounding areas, displacing whole villages and disturbing the balance of wildlife and vegetation.
Government

The Narmada River Dilemma

The 25-year effort to build a dam in India’s Narmada River basin is a good example of the challenges of water management. Supporters of the project point out the benefits, including the irrigation of millions of acres of land currently subject to severe drought and the creation of hydroelectric power.

At the heart of the opposition to the project are environmentalists and the thousands of local peoples whose ancestral villages will be flooded as a result of the project. They point to other such projects in which farmers were uprooted and forced to resettle in cities or temporary camps. As work continues on the project, people on both sides of the controversy have begun talks to resolve their differences.

Forests

Centuries ago, much of South Asia was covered with forests. Today the region is in a state of environmental crisis because of deforestation. The problem has accelerated in recent years, driven by South Asia’s growing population and the increasing interaction of humans with their environment. Commercial timber operations, an industry that began under British rule, have destroyed many of South Asia’s old-growth forests. Other forest areas have been cleared to make way for human settlements.

Some deforestation is a result of traditional practices in South Asia. Slash-and-burn agriculture, no longer permitted in many places, is an ancient technique used by many hill peoples. In drought-stricken regions, villagers allow livestock to feed on leaves, slowly killing the trees. Most damaging of all is the widespread reliance on burning biomass, including the wood from trees, for fuel.

The effects of deforestation are devastating. The mangrove forests of Bangladesh’s Sundarbans region, the area of swamp land near the Ganges River Delta, have over the years provided a barrier against erosion caused by cyclones. As the mangrove trees are cut, however, much of this protection against storms vanishes. Losing tropical rain forests also has other damaging effects. Rain forests usually grow in poor soil, where the trees’ complex root systems efficiently absorb available nutrients and hold the topsoil in place. As rainfall filters slowly through layers of leafy branches, the surrounding air is cooled. When rain forests disappear, soil erodes, rains produce floods, and temperatures rise.
Culture

Protecting the Forests

Reforestation efforts, under way throughout South Asia, build on the region’s traditional respect for trees. India’s Chipko, or “tree-hugger,” movement was founded by Sunderlal Bahaguna, a follower of Gandhi. Bahaguna has succeeded by reminding villagers of the importance of trees. Chipko nurseries provide seedlings for reforestation. The government ban on timber production in the Himalayan forests of Uttar Pradesh, advocated by Bahaguna, was the first of many such government efforts in the region.

Protecting forests is at the heart of the region’s culture. As the poet Rabindranath Tagore wrote,

"India’s civilization has been distinctive in locating its source of regeneration, material and intellectual, in the forest, not the city. India’s best ideas have come when man is in communion with trees."

Rabindranath Tagore, quoted by Gita Mehta, Snakes and Ladders: Glimpses of Modern India, 1998

Seeking Solutions

As industrialization increases in South Asia, so does air pollution. Delhi, India, is now the world’s fourth most polluted city. Scientists are studying the region to try to solve this and other problems.

Meteorologists are studying monsoon patterns in the Bay of Bengal in the hopes of reducing the devastation caused by these storms. The ability to predict with some accuracy the coming of the monsoon rains and their intensity could make enormous differences to South Asia’s people.

Geographers are using satellite imaging to study the erosion in coastal deltas in Bangladesh. Millions of Bengali people live on thin, crusted islands formed from silt, which float on the surface of coastal waters. When the rains come, the rivers move silt—2 billion tons (1.8 billion metric tons) a year—into the Bay of Bengal. As a result, the average Bengali is displaced from his or her home seven times in a lifetime. If studies of silt erosion can identify solutions, scientists will be improving people’s lives.

Finally, South Asia has the potential to help study global environmental issues. For example, an experimental station in the Maldives is measuring the possible effects of global warming on ocean levels.

Human-Environment Interaction

What factor makes erosion such a problem in Bangladesh?

Geography Skills for Life

Erosion

Severe flooding has eroded the bank near this woman’s home in Bangladesh.
South Asia’s Challenges

Geography holds a key to other challenges now facing South Asia. Conflict in the region has deep roots in issues of national autonomy and religious and ethnic concerns.

Conflict in Kashmir

Since 1947, India and Pakistan have disputed ownership of the largely Muslim territory of Kashmir. During the past 50 years, two of the three wars fought between India and Pakistan have focused on this territory. Today, Pakistan controls one-third of Kashmir; the remainder is held by India.

Indian and Pakistani troops patrol the Line of Control, the border between the two parts of Kashmir. Despite occasional peace talks, India and Pakistan accuse each other of violating this border. India also claims that Pakistan supports armed groups in Indian-ruled Kashmir that want an independent Kashmir.

The potential danger from this enduring conflict has escalated since 1998, when both India and Pakistan tested nuclear warheads.
world’s countries that have nuclear capability, including India and Pakistan. Both countries have spent huge sums to develop nuclear missiles. This new example of nuclear proliferation—the spreading development of nuclear arms—aroused international alarm. The costs of these nuclear programs hurt the people of both countries through the loss of much-needed funding for food and other human needs. In addition, economic sanctions leveled by the world’s economic powers against India and Pakistan intensified the hardships of South Asia’s people.

Internal Conflicts

Some South Asian conflicts occur within countries. The majority of people in Sri Lanka are Buddhist Sinhalese, who control the government. Tamils, who are Hindu, represent only about 20 percent of the population. Tamils accuse the government of discrimination, and some have taken up arms to create a separate Tamil state. In India differences between Hindu, Muslim, and Sikh militants often erupt into violence.

India also suffers from the legacy of its ancient system of social classes. Those traditionally assigned to the lowest social status—called the Dalits, or “oppressed”—continue to experience discrimination and even, in some areas, violent assault. Dalits are denied housing, educational opportunities, and jobs, even though India’s constitution outlaws such discrimination.

Promise and Possibility

South Asia’s history of conflict rests side-by-side with its long tradition of tolerance for diversity. On the fiftieth anniversary of his country’s independence, one Indian writer posed this challenge for the future. His comments could also apply to the rest of South Asia:

“In a country as diverse as India, the interests of various groups of Indians will tend to diverge, and political contention is inevitable. The major challenge for Indian democracy is therefore to absorb and resolve the clashes that may arise from contending interests, while ensuring the freedom, safety, and prosperity of all Indians.”

Shashi Tharoor, India: From Midnight to the Millennium, 1997

TAKS Practice

Checking for Understanding
1. Define sustainable development, poaching, Chipko, nuclear proliferation, Dalits.
2. Main Ideas Create a web like the one below on a sheet of paper. Use it to fill in the information about how natural resources and conflicts present challenges in South Asia.

Critical Thinking
3. Making Decisions Which of the region’s resource issues do you think should receive the most funding and attention? Explain your choice.
4. Comparing and Contrasting List examples from your reading to contrast the region’s tolerance for diversity with its ongoing religious and ethnic conflicts.

Analyzing Maps
6. Location Study the map of countries with nuclear capability on page 622. On which continent are the most nuclear warheads located? The most countries with nuclear capability?

Applying Geography
7. Writing a Letter Imagine you are a local official writing to a South Asian government about a village hard hit by floods or drought. Analyze the environmental impact and suggest ways to resolve the problem.
Several decades ago, India’s people were dying of starvation. Then came the green revolution. Hailed as the solution to India’s chronic food shortages, the green revolution was an international effort to increase food production in less-developed countries. Starting in the 1960s, Indian farmers planted high-yield varieties of crops and used large amounts of fertilizers and pesticides to help the plants grow. By the 1970s, India was producing record harvests. Yet India’s green revolution also has caused environmental damage and dependence on costly chemicals. Is India’s green revolution a success or a failure?
At India’s Rice Research Institute, scientists experiment with various methods of growing rice. The Institute’s research aids Indian farmers (left) by introducing them to green revolution agricultural techniques.

The green revolution was designed to increase agricultural production and end hunger. In India, green revolution techniques encouraged farmers to turn more fields into cropland, raise more than one crop per year, and plant new high-yield variety (HYV) seeds—mainly wheat and rice.

India’s green revolution has worked as people hoped it would. Grain harvests have soared, and India no longer imports grain. Yet there are problems. Compared with older strains of wheat and rice, new high-yield varieties need far more water, fertilizer, and pesticides to flourish. Huge irrigation projects deliver water to thirsty HYV plants. In some places, this has led to a buildup of salt in the soil, damaging once-fertile fields. Poor Indian farmers often go into debt to pay for expensive chemicals. Overuse of pesticides has gradually poisoned the soil and water in some areas. The chemicals also have led to pesticide-resistant crop pests.

India’s growing population of one billion is the second-largest in the world. The country faces a critical decision: Should it continue to rely on green revolution technology?

Supporters of the green revolution point out that its techniques dramatically increased food production and alleviated hunger in India. They claim that new genetically engineered seeds will produce even higher yields. These new varieties will be resistant to pests, reducing the need for pesticides. Supporters also say that despite some exceptions, the green revolution has helped most farmers earn more money and raise their standards of living.

Opponents of the green revolution argue that the new methods caused much environmental damage and widened the gap between rich and poor. Excessive use of chemicals pollutes water, poses health hazards, and leads to pest resistance. Opponents point out that farmers get caught in a cycle of using more and more chemicals to achieve healthy crops. Furthermore, some scientists warn that genetically modified seeds carry unknown risks and may create new environmental problems.

What’s Your Point of View?
Should India continue to practice and improve upon green revolution techniques? Or should the country seek a new approach?
Predicting Consequences

Making educated guesses about the outcome or consequences of an event or situation is useful in almost every area of life. Making good educated guesses is essential for successful decision making, problem solving, and planning.

Learning the Skill

Consequences are the results of actions or choices we make. For example, scoring high on an exam is one likely consequence of studying the night before. Often, predicting consequences is not so straightforward. An action or decision can have far-reaching or unintended consequences. One country’s decision to provide aid to farmers, for instance, could lower the price of produce across an entire region. This would make it more difficult for farmers in other regions to compete.

Follow these steps to help you analyze information in order to predict consequences:

• Gather information about the decision or action.
• Use your knowledge of history and human behavior to identify what consequences could result.
• Analyze each of the consequences by asking: How likely is it that this will occur?
• Determine whether this consequence will have other important consequences.
• Make a prediction using the information you have gathered.

Practicing the Skill

Read and study the passage, and then answer the questions that follow.

1. What trend does the passage describe?
2. Do you think the trend the writer describes is likely to continue?
3. On what do you base this prediction?
4. What occurrences might have an effect on changing the trend?
5. What are three possible consequences or outcomes of this trend?
6. What are the possible benefits and drawbacks of the solution proposed by economists who study the issue?

“India is counting on information technology to create millions of new jobs and add billions of dollars to export earnings in the coming years. Yet it appears that unless more training and investment in education is made available, there may not be enough skilled workers to meet these ambitious goals. . . .

Most of the top schools producing computer and software workers send their graduates abroad to the United States and Europe, where Indian high technology professionals are in high demand. . . . Indian companies say they cannot compete with their counterparts abroad in salaries or benefits. . . . This is all happening while India’s unemployment rate among unskilled workers is soaring. Economists say the only answer is a massive investment in primary and secondary education. But, with the Indian budget deep in deficit for years to come, it is hard to see where the money is going to come from.”

—Daniel Lak, “India at Risk of Tech Worker Shortage,” BBC News (online), April 15, 2000

Find a newspaper or news magazine article that describes a political, economic, or social problem in South Asia. Analyze the article, and describe how the people of South Asia are trying to solve the problem. Predict three consequences of the actions described. On what do you base your prediction?
SUMMARY & STUDY GUIDE

SECTION 1  Living in South Asia (pp. 611–617)

Terms to Know
• cash crop
• jute
• green revolution
• biomass
• cottage industry
• ecotourism

Reviewing Key Points
• Agriculture provides a living for most of South Asia’s people, and it also provides cash crops for export.
• South Asia’s mines and fisheries contribute to its exports.
• South Asia is experiencing rapid growth in the high-tech sector and continues to develop light and heavy industries.
• Tourism offers both benefits and challenges to the South Asian economy.

Organizing Your Notes
Create an outline, using the format below, to help you organize your notes for this section.

<table>
<thead>
<tr>
<th></th>
<th>Natural Resources</th>
<th>Solutions</th>
<th>Conflicts</th>
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<tr>
<td>I. Living From the Land</td>
<td></td>
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<td>A. Agricultural Conditions</td>
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SECTION 2  People and Their Environment (pp. 618–623)

Terms to Know
• sustainable development
• poaching
• Chipko
• nuclear proliferation
• Dalits

Reviewing Key Points
• South Asia faces the complex task of managing its rich and varied natural resources.
• South Asia is seeking scientific solutions to its environmental challenges.
• Conflict in South Asia stems from issues of nationalism, religion, and ethnicity.

Organizing Your Notes
Use a table like the one below to help you organize important details from this section.

Shopping district, New Delhi, India
Reviewing Key Terms
Write the key term that best completes each of the following sentences. Refer to the Terms to Know in the Summary & Study Guide on page 627.

1. The spread of nuclear weapons is called _____.
2. _____ is a type of tourism that encourages responsible interaction with the environment.
3. Using resources at a rate that does not deplete them is called _____.
4. _____ are India’s lowest social class.
5. People making products such as jewelry or textiles at home are working in a(n) _____.
6. The movement to increase food productivity through the use of experimental high-yield crops is called the _____.

Reviewing Facts

SECTION 1
1. What kinds of agricultural methods are used in South Asia?
2. How do mining and fishing contribute to the region’s economy?
3. What are the benefits and challenges of tourism to the region today?

SECTION 2
4. What are South Asia’s key natural resources, and where are they located?
5. What are the conflicting issues over India’s Narmada River dam?
6. What are the causes and effects of the Kashmir conflict?

Critical Thinking
1. **Making Generalizations** What would you say is the greatest challenge facing South Asia today?
Using the Regional Atlas
Refer to the Regional Atlas on pages 560–563.

1. **Place** Which major physical feature allows subsistence farming west of the Great Indian Desert?

2. **Human-Environment Interaction** What natural resource do Pakistan and Bangladesh have in common?

**Thinking Like a Geographer**
Think about the diverse cultures and physical geography of South Asia. What do you think contributes to some of the problems or conflicts in South Asia today? Based on your understanding of this region’s physical and human geography, what solutions might you propose?

**Problem-Solving Activity**

**Contemporary Issues Case Study** Prepare a case study on the use of the English language in South Asia. Gather data from print and electronic resources, and summarize the history and current status of English in the region. Also, consider why English today serves as a major international medium of communication.

**GeoJournal**

**Creative Writing** Referring to the notes you made in your journal, choose one economic activity. Imagine that you are employed in this activity, and write a description of a typical work day. If necessary, conduct additional research to add details to your account. Make your description as detailed as possible to capture the sense of what your job is like.

**Technology Activity**

**Using E-Mail** Choose an environmental issue in South Asia that you have read about in your text or in other news sources. List the important points about the issue, and then compose an e-mail letter to the editor of your local newspaper to bring the issue to the attention of others.

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**TAKS Test Practice**

Read the passage and answer the question that follows. If you have trouble answering the question, use the process of elimination to narrow your choices.

South Asia is taking several steps to increase food production in the region’s agricultural areas. Steps include increased planting cycles in Bangladesh and the use of technology such as modern irrigation techniques, pest control, soil fertilization, and new varieties of grain that increase crop yields. Farmers in Nepal now plant winter wheat in fields that used to lie fallow after the rice harvest. Research stations in Bhutan have helped farmers establish fruit orchards, and government-funded programs in Sri Lanka have encouraged farmers to grow more food crops.

1. Which of the following reasons explains why South Asian countries are changing agricultural methods and using modern technology?

   F South Asia is taking steps to increase manufacturing production.
   
   G Countries want to raise more food for their people.
   
   H Nepal does allow its agricultural fields to lie fallow.

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Never rely on your memory to answer questions derived from a passage. If you refer to the passage before you choose the correct answer, you will be less likely to make careless errors.