

varied body of religious belief, practice, and organization. In its widest sense, Hinduism encompasses all the religious and cultural systems originating in South Asia, and many Hindus actually accept the Buddha as an important sectarian teacher or as a rebel against or reformer of ancient Hindu culture. The medieval Arabs first used the term *Hindu* to describe the entire cultural complex east of the Sindhu, or Indus, River (in contemporary Pakistan). Hindu beliefs and practices in different regions claim descent from common textual sources, while retaining their regional individuality. In Sri Lanka, Hinduism is closely related to the distinctive cultural systems of neighboring Tamil Nadu.

Classical Hinduism includes as a central tenet of belief the concept of nonviolence (*ahimsa*), a concept that was of great importance to the Buddha and to such reformers as Mahatma Gandhi some 2,500 years later. Veneration of pure life, especially of the cow, has come to be intimately associated with orthodox Hinduism of all sects. The cow is regarded as, among other things, the sacred embodiment of motherhood and fruitfulness. The deliberate killing of a cow is scarcely less terrible than the killing of a Brahman. For the miscreant it results in immediate and irrevocable outcasting; even the accidental killing of a cow requires elaborate purification ceremonies.

The earliest and most sacred sources of Hinduism are the Vedas, a compilation of hymns originating in northern India around 1,500 B.C. They are the oldest surviving body of literature in South Asia, created by the culture of the Arya (the "noble" or "pure" ones) in northwest India. Composed in an archaic form of the Sanskrit language, the Vedas were sung by a caste of priests (Brahmans) during sacrifices for the ancient gods. Families of Brahmans have passed down the oral recitation of these hymns for thousands of years, and Brahman claims to high status ultimately rest on their association with Vedic hymns. The vast majority of Hindus know almost nothing of Sanskrit or the Vedas, but even in the late twentieth century Brahmans frequently officiate at important ceremonies such as weddings, reciting ancient hymns and making offerings into sacred flames.

By the time of the Buddha, intellectual speculations gave rise to philosophical concepts that still influence all of South Asia. These speculations became books called Upanishads, originally written as commentaries on the Vedas but later viewed as sacred works in their own right. The Upanishads discuss *brahman*, an impersonal, eternal force that embodies all good and all knowledge. The individual "soul," or *atman*, partakes of the same qualities as *brahman* but remains immersed in ignorance. Action (*karma*—see

Glossary) is the cause of its ignorance; reason continually searches for meaning in the material world and in its own mental creations, instead of concentrating on *brahman*, the one true reality. The individual soul, immersed in action, migrates from life to life, until it achieves identity with *brahman* and is released. There is a close relationship between the Buddha's understanding of suffering and enlightenment, and the ideas of atman, karma, and *brahman* that became basic to Hindu philosophy. The Buddha, however, claimed that even the idea of the soul was a mental construct of no value, whereas Hindu thought has generally preserved a belief in the soul.

As India became a major center of civilization with extensive political and economic systems, Hinduism became associated with new visions of the gods and worship in temples. Tamil Nadu was a major center of this transformation. By about A.D. 1000, the Tamils had reworked Brahmanical culture into a southern Indian type of devotional (*bhakti*) religion. This religion claimed to be based on the Vedas and the philosophy of the Upanishads, but its roots lay just as deep in strong attachments to local deities and a desire for salvation (*moksha*) through their intercession.

Several gods predominate in the many myths, legends, and styles of worship. One of the main Hindu gods is Vishnu, often represented as a divine king accompanied by his beautiful wife, Lakshmi, the bestower of wealth and good fortune. Besides presiding as a divine monarch, Vishnu periodically descends to earth, assuming a physical form to help beings attain salvation. Vishnu has ten main incarnations, two of which—Rama and Krishna—are particularly popular. Rama was a great hero, whose exploits in rescuing his wife from the demon king of Lanka are recounted in the epic *Ramayana*. Vishnu's most popular incarnation is Krishna, who combines in a single divine figure the mythic episodes of a warrior prince and a rustic cowherd god. As warrior, Krishna figures prominently in what is perhaps the single most important Hindu text, the Bhagavad Gita, where he stresses the importance of doing one's duty and devotion to god. As divine cowherd, Krishna served as an inspiration for a vast body of religious poetry in Sanskrit and the regional South Asian languages. From the eighth to the twelfth centuries, Tamil devotees of Vishnu (*alvars*) composed poetry in praise of the god. These Tamil poems, collected in anthologies, are still recited during worship and festivals for Vishnu.

The second major Hindu deity, and by far the most important god among the Tamils in Sri Lanka, is Siva. He differs considerably from Vishnu. In many stories he reigns as a king, but often he appears as a religious ascetic, smeared with ashes, sitting on a tiger skin in the jungle, with a snake around his neck. He is the

lord of animals. Although he is an ascetic, he is also a sexual figure, married to the beautiful Parvati (the daughter of the mountain), and his image is often a single rock shaped like a phallus (*lingam*). He is often a distant figure whose power is destructive, but paradoxically he is a henpecked husband who has to deal with family squabbles involving his sons. His devotees enjoy retelling his myths, but worshipers visualize him as a cosmic creator who will save his creatures when they have abandoned themselves totally to his love. One of the most powerful expressions of his creative role is the image of Nataraja, "Lord of the Dance," who gracefully manifests the rhythm of the universe. Great Tamil devotees (*nayanmar*) of the early middle ages created a large collection of poems dedicated to Siva and his holiest shrines. These collections are still revered among the Tamils as sacred scriptures on the same plane as the Vedas.

Female deities are very important among the Hindu Tamils. At temples for Siva or Vishnu there are separate shrines for the god and for his consort, and in many cases the shrine for the goddess (*amman*) receives much more attention from worshipers. Hindu philosophy interprets the goddess as the Shakti, or cosmic energy, of the god in the world and therefore the most immediate creative or destructive force, to be thanked or placated. Many of the manifestations of the goddess are capricious or violent, and she is often seen as a warrior who destroys demons on her own or whom Siva himself has to defeat in combat. As Mariamman, she used to bring smallpox, and she is still held responsible for diseases of the hot season.

In addition to the main gods, there are a number of subordinate divine beings, who are often the most popular deities. Ganesha, or Pillaiyar or Ganapati, the elephant-headed son of Siva and Parvati, is the patron of good fortune and is worshiped at the beginning of a religious service or a new venture, such as a business deal or even a short trip. Murugan, his brother, is a handsome young warrior who carries a spear and rides a peacock. He is worshiped near hills or mountains, and his devotees are known for fierce vows and austerity that may include self-mutilation. Every village has its own protective deities, often symbolized as warriors, who may have their own local stories and saints.

Worship of the gods is known as *puja*. Worship can occur mentally or in front of the most rudimentary representations, such as stones or trees. Most people assemble pictures or small statues of their favorite deities and create small shrines in their homes for daily services, and they make trips to local shrines to worship before larger and more ornate statues. Public temples (*kovil*) consist of a central shrine containing images of the gods, with a surrounding

courtyard and an enclosing wall entered through ornately carved towers (*gopuram*). During worship, the images become the gods after special rituals are performed. Worshipers then offer them presents of food, clothing, and flowers as they would honored guests. The gifts are sanctified through contact with the gods, and worshipers may eat the sacred food or smear themselves with sacred ash in order to absorb the god's grace. In public temples, only consecrated priests (*pujari*) are allowed into the sanctum housing the god's image, and worshipers hand offerings to the priests for presentation to the god. Most of the time, worship of the gods is not congregational, but involves offerings by individuals or small family groups at home or through temple priests. During major festivals, however, hundreds or thousands of people may come together in noisy, packed crowds to worship at temples or to witness processions of the gods through public streets.

Islam

The religion of Islam began, like Buddhism, with the experience of a single man, but the religious environment of early Islam was the Judeo-Christian world of Arabia. Many of the basic premises and beliefs of Islam are thus quite different than those of Buddhism or Hinduism and more closely resemble the systems of Judaism or Christianity. During the last 1,000 years, however, Islam has played a major part in the cultures of South and Southeast Asia, including Sri Lanka. Islam in Sri Lanka has preserved the doctrines derived from Arabia, while adapting to the social environment of South Asia.

During the early seventh century A.D., Muhammad experienced a series of messages from God in the city of Mecca, a trading center in western Arabia. He became a prophet, one of the line of biblical prophets including Abraham, Moses, and Jesus Christ (in Arabic, Ibrahim, Musa, and Isa), and he conveyed to the people of Mecca the last and greatest of the revelations given by God to the world. The message was simple and powerful: "submission" (Islam) to the mercy of a single, all-powerful God (Allah). God exists for eternity, but out of love he created the world and mankind, endowing both men and women with immortal souls. Human beings have only one life, and when it ends their souls go to either heaven or hell according to their behavior on earth. Correct behavior is known through the revelation of prophets inspired by God, and Muhammad is the last of these prophets. To believe in Islam, to become "one who submits" (a Muslim), one must accept the will of the one true God and the message of Muhammad, which is encapsulated in the *shahada*: "There is no God but God, and

Muhammad is His Prophet.” His message is immortalized in the Quran, a series of revelations conveyed by the angel Gabriel, and in the hadith, the sayings and example of the prophet Muhammad.

Muhammad described some of the most important actions necessary for a believer who wished to submit to God’s love and will. In addition to commandments against lying, stealing, killing, and other crimes, the moral code includes prayer five times daily, fasting, giving alms to the poor, pilgrimage to Mecca if financially possible, abstention from gambling and wine, and dietary restrictions similar to those of Judaism. The Prophet linked behavior to salvation so closely that bodies of Islamic law (*sharia*) grew up in order to interpret all human activity according to the spirit of the Quran. In practice, to be a Muslim requires not simply a belief in God and in Muhammad’s status as the final prophet, but acceptance of the rules of Islamic law and following them in one’s own life. Islam thus encompasses a rich theology and moral system, and it also includes a distinctive body of laws and customs that distinguish Muslims from followers of other faiths. Islam is theoretically a democratic union of all believers without priests, but in practice scholars (*ulama*) learned in Islamic law interpret the Quran according to local conditions, legal officials (*qazi*) regulate Muslim life according to Islamic law, and local prayer leaders coordinate group recitation of prayers in mosques (*masjid*, or *palli*).

By the fifteenth century, Arab traders dominated the trade routes through the Indian Ocean and Southeast Asia. Some of them settled down along the coasts of India and Sri Lanka, married local women, and spoke Arabized Tamil rather than pure Arabic. Their families followed Islam and preserved the basic doctrines and Islamic law, while also adopting some local social customs (such as matrilineal and matrilocal families) that were not part of early Islamic society in the Arabian Peninsula. When the Portuguese took control in the sixteenth century, they persecuted the Muslim traders of the southwest coast, and many Muslims had to relocate in the Central Highlands or on the east coast (see *European Encroachment and Dominance, 1500–1948*, ch. 1). They retained their separate religious identity, but also adopted some aspects of popular religion. For example, pilgrimage sites, such as Kataragama, may be the same for Muslims as for Hindus or Buddhists, although Muslims will worship at mosques rather than reverence the Buddha or worship Hindu gods (see *Buddhism*, this ch.).

The growth in ethnic consciousness during the last two centuries has affected the Muslim community of Sri Lanka. Muslim revivalism has included an interest in the Arabic roots of the community, increased emphasis on the study of Arabic as the basis for

understanding the Quran, and an emphasis on separate schools for Muslim children. Whether there should be an independent Islamic law for Muslims, preserving the distinct moral culture passed down from Muhammad, is a continuing issue. On a number of occasions, agitation has developed over attempts by the Sri Lankan government to regulate Muslim marriage and inheritance. In order to prevent further alienation of the Muslim community, in the 1980s the government handled its dealings with Muslims through a Muslim Religious and Cultural Affairs Department.

Christianity

According to Christian traditions, the Apostle Thomas was active in Sri Lanka as well as southern India during the first century A.D. Small Christian communities existed on the coasts of Sri Lanka during the succeeding centuries, flourishing on the edges of the Indian Ocean trade routes as Islam did in later times. Christianity made significant inroads only after the fifteenth century, as aggressive Portuguese missionary efforts led to many conversions, especially among the Karava and other low-country castes. When the Dutch took control of Sri Lanka, they encouraged their own missionaries of the Dutch Reformed Church. Under their patronage, 21 percent of the population in the low country was officially Christian by 1722. The British, in turn, allowed Anglican and other Protestant missionaries to proselytize.

The relative number of Christians in Sri Lanka has declined steadily since the end of colonial rule. In 1900 a reported 378,859 people, or 10.6 percent of the population, were officially Christians. Although in 1980, the number of Christians had increased to 1,283,600, the percentage of Christians in the total population had declined to approximately 8 percent. This decline occurred primarily because the non-Christian population expanded at a faster rate. Emigration abroad, conversions of some Christians to Buddhism and fewer conversions to Christianity among Buddhists, Hindus, or Muslims also were reasons for the decline. In the 1980s, Christians still were concentrated heavily in the low country in the southwest. They comprised 30 percent of the population in Colombo.

Some 88 percent of the Christians were Roman Catholics who traced their religious heritage directly to the Portuguese. The Roman Catholic Church has a well-established organization that encompasses the entire island. In 1985 there were 9 dioceses comprising 313 parishes, 682 priests, and 15 bishops (including two archbishops and a cardinal). The remainder of Christians were almost evenly split between the Anglican Church of Ceylon (with

two dioceses) and other Protestant faiths. The Dutch Reformed Church, now the Presbytery of Ceylon, consisted mostly of Burghers, and its numbers were shrinking because of emigration. Other Christian communities—Congregationalists, Methodists, and Baptists—were small in number. Since the 1970s, there has been a movement of all Protestant Churches to join together in a united Church of Sri Lanka. The Sinhalese community, however, has strenuously opposed this movement.

Social Services

Education

Traditional and Colonial Systems

The education system of Sri Lanka until colonial times primarily was designed for a small elite in a society with relatively low technology. The vast majority of the population was illiterate or semiliterate. Among the Sinhalese, learning was the job of Buddhist monks. At the village level, literate monks would teach privileged students in the *pansal*, or temple school. The curriculum there, still taught to young children, included the Sinhala alphabet and memorization of elementary Buddhist literature—the *Nam potha* (Book of Names) of Buddhist shrines, the *Magul lakuna* (Book of Auspicious Symbols on the Buddha's body), and classic stories of the Buddha's life. The pursuit of higher education typically was reserved for men who became monks and took place at universities (*pirivena*) dedicated almost exclusively to memorization and commentary on the Pali scriptures. Among the Tamil population, village schools, which were located near temples, were run by literate Brahmans or educated Vellalas (see Glossary). Technical training was highly developed for students of the arts (such as architecture or sculpture); for engineers, who applied geometry to problems of irrigation; and for craftsmen in various trades. This training, however, was generally the preserve of closed corporations, castes, or families. Knowledge was often passed down from fathers to sons.

Although colonization brought European-style education to Sri Lanka, especially to prepare students for positions in the colonial administrations, few women went to school and most people remained uneducated. During the sixteenth century, Portuguese missionaries established up to 100 schools designed to foster a Roman Catholic culture among the growing Christian community in the low country. When the Dutch took over in 1656, they set up a well-organized system of primary schools to support the missionary efforts of the Dutch Reformed Church. By 1760 they had 130

*Sinhalese twins near
Hikkaduwa
Courtesy
Paige W. Thompson*



schools with an attendance of nearly 65,000 students. The British takeover led to the closing of many Dutch schools and a short-term contraction of European-style education in the low country. By the mid-nineteenth century, government-funded schools and Christian schools were again expanding; in 1870, however, their combined student bodies had fewer than 20,000 students. Because they were educated in English, the graduates of the European-style schools, a large portion of them Christians from the low country in the southwest, went on to fill lower and middle-level positions in the colonial administration. Apart from the European-style schools, education continued through the traditional system in Tamil and Sinhala.

In 1870 a series of events revolutionized the education system in Sri Lanka. The government began to expand the number of state-run schools and instituted a program of grants for private schools that met official standards. Medical and law colleges were established in Colombo. There was a big increase in the number of students (which totalled more than 200,000 by 1900), but the lopsided development that had characterized the early nineteenth century became even more apparent by the early twentieth century. Private schools taught in English, which offered the best road for advancement, were dominated by Christian organizations, remained concentrated in the southwest, and attracted a disproportionate number of Christian and Tamil students. Although institutions that

used Tamil and Sinhala continued to function as elementary schools, secondary institutions that taught exclusively in English attracted an elite male clientele destined for administrative positions. The education of women lagged behind; by 1921 the female literacy rate among the Christians was 50 percent, among the Buddhists 17 percent, among the Hindus 10 percent, and among the Muslims only 6 percent.

The colonial pattern began to change in the 1930s, after legislative reforms placed the Ministry of Education under the control of elected representatives. The government directly controlled an ever-larger proportion of schools (about 60 percent by 1947) and teacher-training colleges. As part of a policy to promote universal literacy, education became free in government schools, elementary and technical schools were set up in rural areas, and vernacular education received official encouragement. In 1942 with the establishment of the University of Ceylon, free education was available from kindergarten through the university level. When independence came in 1948, Sri Lanka had a well-developed education infrastructure. Although still hampered by gross ethnic, geographic, and gender inequalities, it formed the basis for a modern system.

The Modern Education System

Since independence in 1948, the government has made education one of its highest priorities, a policy that has yielded excellent results (see table 4, Appendix). Within a period of less than 40 years, the number of schools in Sri Lanka increased by over 50 percent, the number of students increased more than 300 percent, and the number of teachers increased by more than 400 percent. Growth has been especially rapid in secondary schools, which in 1985 taught 1.2 million students, or one-third of the student population. Teachers made up the largest government work force outside the plantation industry. The literate population has grown correspondingly, and by the mid-1980s over 90 percent of the population was officially literate (87 percent for those above ten years of age), with near universal literacy among the younger population. This is by far the most impressive progress in South Asia and places Sri Lanka close to the leaders in education among developing nations.

The government has taken an ever larger role in education. Because private institutions no longer receive grants from the government, they are forced to charge fees while competing with free state-run schools. The percentage of students in the state system has grown constantly, and by the 1980s, 99 percent of female students and 93 percent of male students at the primary school level were being trained in government-run schools. The government

did not have a monopoly over education because Buddhist *pansala* and *pirivena*, Muslim schools, and Christian schools still thrived (the Roman Catholic Church alone operated several hundred institutions from kindergarten to secondary level, teaching over 80,000 children). The education system of the state, however, had an overwhelming influence on the majority of the population, especially the Sinhalese.

The state has tried to change the language of instruction in its primary and secondary schools from English to Tamil or Sinhala. By the 1960s, the vernacular languages were the primary medium in all government secondary schools. In the 1980s, English remained, however, an important key to advancement in technical and professional careers, and there was still competition among well-to-do families to place members in private English-language programs in urban areas. Ethnic minorities long associated with European-style education still formed a large percentage of the English-speaking elite. In the 1980s, for example, almost 80 percent of the Burghers knew English, while among the Sinhalese the English-speakers comprised only 12 percent.

Children from age five to ten attend primary school; from age eleven to fifteen they attend junior secondary school (terminating in Ordinary Level Examination); and from age sixteen to seventeen they attend senior secondary school (terminating in the Advanced Level Examination). Those who qualify can go on to the university system, which is totally state-run. In the late 1980s, there were 8 universities and 1 university college with over 18,000 students in 28 faculties, plus 2,000 graduate and certificate students. The university system included the University of Peradeniya, about six kilometers from Kandy, formed between 1940 and 1960; the universities of Vidyalandara and Vidyodaya, formed in the 1950s and 1960s from restructured *pirivena*; the College of Advanced Technology in Katubedda, Colombo District, formed in the 1960s; the Colombo campus of the University of Ceylon, created in 1967; the University of Ruhunu (1979); and Batticaloa University College (1981). There was also the Buddhist and Pali University of Sri Lanka, established in Colombo in 1982.

Among the major problems still facing the educational system in the late 1980s were a serious dropout rate in the primary grades and a continuing bias toward urban environments at the expense of the countryside. The median level of educational attainment in Sri Lanka was somewhere between grades 5 and 9, and almost 40 percent of the students dropped out of school after 9 years. The reasons were not hard to discern in a primarily agricultural society, where many young people were more urgently needed in the

fields or at home than in school once they had achieved an operational level of literacy and arithmetic skills. Many urban youth from low-income backgrounds also dropped out at an early age. This pattern provided two-thirds of the students with an education through grade 5 but less than 10 percent of the population with a high school diploma and less than 1 percent with a college degree. Despite government efforts in the 1980s to expand opportunities for youth from rural areas and more sparsely inhabited districts, the pressures for early dropout were more pressing in precisely those areas where illiteracy was most prevalent. In Colombo, for example, the overall literacy rate was 94 percent in 1988, while in Amparai District it was only 75 percent. Rural schools were more widely scattered, with poor facilities and inadequate equipment, especially in the sciences. Teachers preferred not to work in the countryside, and many rural schools did not even go up to the level of twelfth grade.

The most dynamic field in education during the 1970s and 1980s was technical training. In the late 1980s, the Ministry of Higher Education operated a network of twenty-seven technical colleges and affiliated institutes throughout the country. Courses led to national diplomas in accountancy, commerce, technology, agriculture, business studies, economics, and manufacture. Other government institutions, including the Railway, Survey, and Irrigation Departments, ran their own specialized training institutes. The Ministry of Labour had three vocational and craft training institutes. The number of students in all state-run technical institutes by the mid-1980s was 22,000. In addition, the government operated schools of agriculture in four locations, as well as practical farm schools in each district. A continuing problem in all fields of technical education was extreme gender differentiation in job training; women tended to enroll in home economics and teaching courses rather than in scientific disciplines.

Education and Ethnic Conflict

During the first fifteen years after independence, students sought a university degree primarily to qualify for service in government, which remained by far the major employer of administrative skills. Liberal arts, leading to the bachelor of arts degree, was the preferred area of study as a preparation for administrative positions. Because the university exams were conducted in English—the language of the elite—the potential pool of university applicants was relatively small, and only 30 percent of all applicants were admitted. By the mid-1960s, the examinations were conducted in Sinhala and Tamil, opening the universities to a larger body of applicants, many of

Sinhalese boy with flowers
Courtesy
Paige W. Thompson



whom were trained in the vernacular languages in state-run secondary schools. At the same time, university expansion slowed down because of lack of funds, and it became impossible to admit the increasing numbers of qualified candidates; by 1965 only 20 percent of applicants were admitted, and by 1969 only 11 percent. Those students who did manage to enter the university followed the traditional road to a bachelor's degree, until neither the government nor private enterprises could absorb the glut of graduates. In this way, the direction of educational expansion by the late 1960s led to two major problems surrounding the university system: the growing difficulty of admissions and the growing irrelevance of a liberal arts education to employment. The big losers were members of the Sinhalese community, who were finally able to obtain high school or university degrees, but who found further advancement difficult. Frustrated aspirations lay behind the participation of many students in the abortive uprising by the People's Liberation Front (Janatha Vimukthi Peramuna—JVP) in 1971 (see Independence, ch. 1).

During the colonial period and the two decades after independence, the Sri Lankan Tamil community—both Hindu and Christian—outstripped the Sinhalese community in the relative percentage of students in secondary schools and university bachelor of arts degree programs. As the government increasingly fell into the hands of the Sinhalese, however, possibilities for government

service declined for Tamil students. Tamil secondary schools then used their strength in science curriculums to prepare their students in science and medicine, and by the 1960s Tamils dominated the university student bodies in those fields. Thus, at precisely the time when Sinhalese bachelor of arts candidates found their careers thwarted by changes in the job market, Tamil science students were embarking on lucrative professional careers. Sinhalese agitation aimed at decreasing the numbers of Tamil students in science and medical faculties became a major political issue.

Overt political favoritism did not eliminate the dominance of well-trained Tamil students until 1974, when the government instituted a district quota system of science admissions. When each district in the country had a number of reserved slots for its students, the Sinhalese community benefited because it dominated a majority of districts. Tamil admissions ratios remained higher than the percentage of Tamils in the population, but declined precipitously from previous levels. In the 1980s, 60 percent of university admissions were allocated according to district quotas, with the remaining 40 percent awarded on the basis of individual merit. This system guaranteed opportunity for all ethnic groups in rough approximation to their population throughout the country.

Although the admissions controversy and the quota system resulted in a more equitable distribution of opportunities for Sri Lankans in general, they damaged the prospects of many excellent Tamil students coming out of secondary schools. The education policies of the government were perceived by educated members of the Tamil community as blatant discrimination. Many Tamil youths reacted to the blockage of their educational prospects by supporting the Tamil United Liberation Front and other secessionist cells (see *The Political Party System*, ch. 4; *The Tamil Insurgency*, ch. 5). Large-scale improvements in education had, paradoxically, contributed to ethnic conflict.

Health

Sri Lanka has one of the most effective health systems among developing nations. The crude death rate in the early 1980s was 6 per 1,000, down from 13 per 1,000 in 1948 and an estimated 19 per 1,000 in 1871. The infant mortality rate registered a similar decline, from 50 deaths per 1,000 births in 1970 to 34 deaths per 1,000 births in the early 1980s. These figures placed Sri Lanka statistically among the top five Asian countries. Improvements in health were largely responsible for raising the average life span in the 1980s to sixty-eight years.

Traditional medicine (*ayurveda*—see Glossary) is an important part of the health system in Sri Lanka. The basis of traditional medicine is the theory of “three humors” (*tridhatu*), corresponding to elements of the universe that make up the human body: air appears as wind, fire as bile, and water as phlegm. Imbalances among the humors (the “three ills,” or *tridosha*) cause various diseases. The chief causes of the imbalances are excesses of heat or cold. Treatment of disease requires an infusion of hot or cold substances in order to reestablish a balance in the body. The definition of “hot” or “cold” rests on culturally defined norms and lists in ancient textbooks. For example, milk products and rice cooked in milk are cool substances, while certain meats are hot, regardless of temperature. Treatment may also involve a variety of herbal remedies made according to lore handed down from ancient times. Archaeological work at ancient monastic sites has revealed the antiquity of the traditional medical system; for example, excavations have revealed large tubs used to immerse the bodies of sick persons in healing solutions. Literate monks, skilled in *ayurveda*, were important sources of medical knowledge in former times. Village-level traditional physicians also remained active until the mid-twentieth century. In the late 1980s, as part of a free state medical system, government agencies operated health clinics specializing in *ayurveda*, employed over 12,000 *ayurvedic* physicians, and supported several training and research institutes in traditional medicine.

Western-style medical practices have been responsible for most of the improvements in health in Sri Lanka during the twentieth century. Health care facilities and staff and public health programs geared to combat infectious disease are the most crucial areas where development has taken place. The state maintains a system of free hospitals, dispensaries, and maternity services. In 1985 there were more than 3,000 doctors trained in Western medicine, about 8,600 nurses, 490 hospitals, and 338 central dispensaries. Maternity services were especially effective in reaching into rural areas; less than 3 percent of deliveries took place without the assistance of at least a paramedic or a trained midwife, and 63 percent of deliveries occurred in health institutions—higher rates than in any other South Asian nation. As is the case for all services in Sri Lanka, the most complete hospital facilities and highest concentration of physicians were in urban areas, while many rural and estate areas were served by dispensaries and paramedics. The emergency transport of patients, especially in the countryside, was still at a rudimentary level. Some progress has been made in controlling infectious diseases. Smallpox has been eliminated, and the state has been cooperating with United Nations agencies in programs to eradicate

malaria. In 1985 Sri Lanka spent 258 rupees (for value of rupee—see Glossary) per person to fight the disease. Although the number of malaria cases and fatalities has declined, in 1985 more than 100,000 persons contracted the disease.

Sri Lanka had little exposure to Acquired Immune Deficiency Syndrome (AIDS) during the 1980s. As late as 1986, no Sri Lankan citizens had contracted the disease at home, but by early 1988 six cases had been diagnosed, including those of foreigners and of Sri Lankan citizens who had traveled abroad. Government regulations in the late 1980s required immediate expulsion of any foreigner diagnosed as an AIDS carrier, and by 1988 the government had deported at least one foreign AIDS victim. Government ministers have participated in international forums dealing with the problem, and the government formed a National Committee on AIDS Prevention in 1988.

Mortality rates in the late 1980s highlighted the gap that remained between the urban and rural sectors and the long way good medical care still had to go to reach the whole population. Over 40 percent of the deaths in urban areas were traced to heart or circulatory diseases, a trend that resembled the pattern in developed nations. Cancer, on the other hand, accounted for only about 6 percent of deaths, a pattern that did not resemble that of developed nations. Instead, intestinal infections, tuberculosis, and parasitic diseases accounted for 20 percent of urban deaths and over 12 percent of rural deaths annually. The leading causes of death in rural environments were listed as “ill-defined conditions” or “senility,” reflecting the rather poor diagnostic capabilities of rural health personnel. Observers agreed that considerable work needed to be done to reduce infectious diseases throughout the country and to improve skilled medical outreach to rural communities.

Living Conditions

In the late 1980s, vast differences remained in the wealth and life-styles of citizens in Sri Lanka. In urban areas, such as Colombo, entire neighborhoods consisted of beautiful houses owned by well-off administrators and businessmen. This elite enjoyed facilities and opportunities on a par with those of middle- and upper-middle-class residents of Europe or North America. In the countryside, families that controlled more extensive farms lived a rustic but healthy life, with excellent access to food, shelter, clothing, and opportunities for education and employment. In contrast, at lower levels in the class pyramid, the vast majority of the population experienced a much lower standard of living and range of opportunities. A sizable minority in both the cities and rural villages led a

marginal existence, with inadequate food and facilities and poor chances for upward mobility.

Intervention by successive governments has had marginal success in decreasing the differences between income groups. In the rural sector, legislation has mandated a ceiling on private land-ownership and has nationalized plantations, but these programs have provided extra land to relatively few people (see Agriculture, ch. 3). Although resettlement programs have benefitted hundreds of thousands of people, they have not kept pace with population growth. In rural environments, most people remained peasants with smallholdings, agricultural laborers working for small wages on the lands of others, or landless plantation workers. Migration to the cities often did not lead to a great improvement in people's lifestyles because most immigrants had little education and few skills. As a result, urban slums have proliferated; by the 1980s almost half the people in greater Colombo were living in slums and shanties. Because economic growth has not kept pace with these population changes, double-digit unemployment continued with the poorest sections of the urban and rural population suffering the most. A hard-core mass of poor and underemployed people, totaling between 20 and 25 percent of the population, remained the biggest challenge for the government.

Cramped and insufficient housing detracted from the quality of life in Sri Lanka. In the 1980s, most housing units in Sri Lanka were small: 33 percent had only one room, 33 percent two rooms, and 20 percent three rooms. More than five persons lived in the average housing unit, with an overcrowding rate (three or more persons per room) of 40 percent. In urban areas, permanent structures with brick walls, tiled roofs, and cement floors constituted 70 percent of houses, but in the countryside permanent houses made up only 24 percent of the units. The rural figures included a large number of village dwellings built of such materials as thatch, mud, and timber, designed according to traditional styles with inner courtyards, or verandas, and providing ample room for living and sleeping in the generally warm climate. The rates of overcrowding were declining in the 1980s, as the government sponsored intensive programs for increasing access to permanent housing.

Many of the infectious diseases that caused high mortality in Sri Lanka were water-borne, and improvements in water facilities occupied a high priority in government welfare programs of the 1980s and planning for the 1990s. In urban areas, about half the drinking water was piped and half came from wells, while in the countryside 85 percent of the water came from wells and 10 percent from unprotected, open sources. Almost one-third of the well water

was also unprotected against backflows that could cause leakage of sewage. Only about one out of three houses had toilets. With help from United Nations Children's Fund (UNICEF), United States Agency for International Development (AID), Britain, the Federal Republic of Germany (West Germany), and the Netherlands, the government of Sri Lanka set a goal of clean, piped water and sewage facilities for the entire urban population and for at least half the rural population by 1990. Observers doubted, however, that this goal could be reached in the northern and eastern districts torn by ethnic conflict.

Food was another major issue. Beginning in the 1940s, the government ran a food subsidy program that paid farmers a minimum price for their crops and also operated a rationing system that allowed people to obtain rice at a guaranteed low price. The importance of this program to the people was dramatically demonstrated in 1953, when the state's attempt to reduce subsidies led to food riots and the fall of the government (see United National Party "Majority" Rule, 1948-56, ch. 1). Since 1979 when the subsidy program was abolished, the government has operated a food stamp scheme that allows people in lower-income brackets to obtain free rice, wheat flour, sugar, milk powder, condensed milk, dried fish, and kerosene for cooking. This program has reached almost half the population, accounting for approximately 7 percent of the state budget. The government also operated supplementary feeding programs, including a School Biscuit Programme designed to reach malnourished children and a Thripasha Programme to provide for 600,000 needy infants, preschool children, and pregnant mothers. (*Thripasha* is a precooked, protein-fortified cereal food supplement.)

Despite government intervention in the food market, malnutrition continued to be a problem among the poor, the bottom 60 percent of the population who earned less than 30 percent of the national income. As in so many other sectors, the problem remained worse in rural areas, although urban slums possessed their own share of misery. In Colombo city and district, 1 or 2 percent of preschool children experienced severe symptoms of malnutrition, while the rate was 3 or 4 percent in Puttalam District. Mild forms of malnourishment, resulting in some stunted growth, affected around 33 percent of the young children in Colombo but up to 50 percent in rural Vavuniya or Puttalam districts. Malnutrition also affected adults: one out of three agricultural laborers consumed less than 80 percent of recommended calories daily. This problem became worse after the inflation of the early 1980s that reduced the real value of food stamps by up to 50 percent (see Finance,



*Coastal village south of Colombo
Courtesy Paige W. Thompson*

ch. 3). Observers doubted that poverty and malnutrition would be alleviated during the 1980s or early 1990s, while the country experienced economic uncertainty and the government was forced to spend more on security matters (see The Defense Budget, ch. 5).

* * *

An excellent short survey of Sri Lanka's geology, topography, and climate is found in *Sri Lanka: A Survey*, edited by K.M. de Silva. A more detailed study is J.W. Herath's *Mineral Resources of Sri Lanka*.

The authoritative source for population statistics is *Population and Housing, 1981: General Report* published by the Sri Lanka Ministry of Plan Implementation. Beginning with basic population data, the Central Bank of Sri Lanka's *Economic and Social Statistics of Sri Lanka* also includes useful data on health, education, and welfare. Basic texts for ethnic, caste, and family topics are *Caste in Modern Ceylon* by Bruce Ryan and *Under the Bo Tree* by Nur Yalman. Michael Robert's more recent *Caste Conflict and Elite Formation* concentrates on the dominant low-country castes. *Muslims of Sri Lanka*, edited by M.A.M. Shukri, is a collection of essays dealing with the history and culture of the different groups within the Muslim community.

Heinz Bechert, Hans Dieter-Evers, Richard Gombrich, and Gananath Obeyesekere are major figures in the study of Sinhalese religion. Bechert and Gombrich have edited *The World of Buddhism*, with contributors discussing all world areas; the sections on Indian and Sinhalese Buddhism are excellent introductions. Gombrich's *Precept and Practice* is a scholarly investigation of popular Sinhalese religion and its relationship to Buddhist doctrines. For the basic ideas of Hinduism, Thomas J. Hopkins's *The Hindu Religious Tradition* is useful. Kamil Zvelebil's *The Smile of Murugan* and *Hymns of the Tamil Saivite Saints* by F. Kingsbury and G.E. Phillips provide more detailed information on Tamil Hindu traditions. Expositions of the basic doctrines of Islam are found in H.A.R. Gibb's *Mohammedanism* and Fazlur Rahman's *Islam*.

Education in Colonial Ceylon by Ranjit Ruberu describes the precolonial and colonial education systems. Chandra Richard de Silva and Daya de Silva give a detailed description of the postindependence education system in *Education in Sri Lanka*. The relationship between education and ethnic conflict are discussed in chapters by K.M. de Silva and Chandra Richard de Silva in *From Independence to Statehood: Managing Ethnic Conflict in Five African and Asian States*. Health and welfare conditions, and government

programs addressing them, are summarized in Piyasiri Wickramasekara's long article in *Strategies for Alleviating Poverty in Rural Asia*. A more detailed study of rural conditions is Rachel Kurian's *Women Workers in the Sri Lanka Plantation Sector*. (For further information and complete citations, see Bibliography.)

Chapter 3. The Economy



*Economic activity in Sri Lanka: rubber tapper, tea picker,
rice cultivator, and handicraft worker*

THE DOMINANT SECTOR of the Sri Lankan economy historically has been wet rice (paddy) cultivation. Its importance in ancient times is demonstrated by the extensive irrigation works constructed in the north-central region of the island in the first millennium A.D. In the thirteenth century, the civilization based on these reservoirs began to decline, and population shifted to the wet zone of the southern and southwestern areas, where irrigation was less necessary to grow rice. Cinnamon and other spices which were valuable in the European market became important export commodities in the sixteenth century, when Europeans, first the Portuguese and then the Dutch, established control over the coastal areas of the island.

Commercial agriculture came to dominate the economy during the British period (1796–1948). Extensive coffee plantations were established in the mid-nineteenth century. Coffee failed when a leaf disease ravaged it in the 1870s and 1880s, but it was quickly replaced by the important commercial crops of tea, rubber, and coconut. Although wet rice cultivation remained important, Sri Lanka had to import more than one-half of the rice it needed during the late nineteenth and early twentieth centuries because of the land and labor devoted to the commercial crops. At independence in 1948, almost all of the island's foreign exchange earnings were derived from commercial agriculture.

The fundamental economic problem since the 1950s has been the declining terms of trade. The proceeds from the traditional agricultural exports of tea, rubber, and coconut have had less and less value in the international marketplace. Beginning in the early 1960s, governments responded by intervening directly in the largely free-market economy inherited from the colonial period. Imports and exports were tightly regulated, and the state sector was expanded, especially in manufacturing and transportation. This trend accelerated between 1970 and 1977, when a coalition headed by the Sri Lanka Freedom Party nationalized the larger plantations and imposed direct controls over internal trade.

The United National Party (UNP) contested the 1977 general election with a platform calling for less regulation of the economy. After its electoral victory, the new UNP government made some effort to dismantle the state sector in agriculture and manufacturing. At the same time, it encouraged private enterprise, welcomed foreign investment and slackened import controls. It also shifted

spending away from subsidies and social welfare to investment in the nation's infrastructure, most notably a massive irrigation project, the Mahaweli Ganga Program, which was expected to make Sri Lanka self-sufficient in rice and generate enough hydroelectric power to fill the nation's requirements. These policies resulted in higher rates of economic growth in the late 1970s and early 1980s, but at the cost of a mounting external debt. Foreign aid from the United States, Western Europe, Japan, and international organizations kept the economy afloat.

Sri Lanka's economy became more diverse in the 1970s and 1980s, and in 1986 textiles surpassed tea for the first time as the country's single largest export. Nonetheless, the performance of the traditional agricultural exports remained essential to the country's economic health. Other important sources of foreign exchange included remittances from Sri Lankans working overseas, foreign aid, and tourism.

Nature of the Economy

Sri Lanka's economic prospects in early 1988 were linked at least in part to the political and security situation. If political violence could be brought under control, the government had commitments from foreign investors and donors to finance a reconstruction program that would ensure economic growth in the short term. If the violence were to continue, the diversion of resources into defense and the negative impact on tourism and foreign investment appeared likely to result in economic stagnation.

Structure of the Economy

Agriculture, both subsistence and commercial, has played a dominant role in Sri Lanka's economy for many centuries. The Portuguese and Dutch, who ruled the coastal regions of the island from the sixteenth through the eighteenth centuries, were primarily interested in profiting from cinnamon and other spices (see *European Encroachment and Dominance, 1500-1948*; *The Dutch*, ch. 1). Trade with India, Sri Lanka's nearest neighbor, was also important during this period. Sri Lanka exported pearls, areca nuts, shells, elephants, and coconuts, and in return received rice and textiles.

The island's economy began to assume its modern form in the 1830s and 1840s, when coffee plantations were established in the Central Highlands. Coffee soon became the dominant force in the economy, its proceeds paying for increasingly large imports of food, especially rice. When coffee fell victim to a leaf disease in the 1870s, it was quickly replaced by tea, which soon covered more land than

had coffee at its height. Coconut plantations also expanded rapidly in the late nineteenth century, followed by rubber, another cash crop introduced in the 1890s. Stimulated by demand generated by the development of the automobile industry in Western Europe and North America, rubber soon passed coconuts in importance. These three products—tea, coconuts, and rubber—provided the export earnings that enabled Sri Lanka to import food, textiles, and other consumer goods in the first half of the twentieth century. At independence in 1948, they generated over 90 percent of export proceeds.

Wet rice was grown extensively as a subsistence crop throughout the colonial period. In the nineteenth century, most of it was consumed in the villages where it was grown, but in the final decades of British rule the internal market in rice expanded. Nonetheless, more than half of the rice consumed was imported, and the island depended on the proceeds of plantation crops for its food supply.

The economy gradually became more diverse after the late 1950s, partly as a result of government policies that encouraged this trend. The main reason successive administrations tried to reduce the country's dependence on tea, rubber, and coconuts was the long-term decline in their value relative to the cost of imports. Even when Sri Lanka increased the production of its major cash crops, the amount of imports that could be bought with their proceeds declined.

Much of the diversification of the economy, especially in the 1960s and the early 1970s, took the form of import substitution, producing for the local market goods that the island could no longer afford to import. Sri Lanka also had some success in diversifying exports after 1970. The proportion of exports linked to the three traditional cash crops fell from over 90 percent in the late 1960s to 71 percent in 1974 and 42 percent in 1986. Textiles, which made up only 0.7 percent of exports in 1974, accounted for over 28 percent in 1986 (see table 5, Appendix A).

In 1986 agriculture, forestry, and fishing made up 27.7 percent of the gross national product (GNP—see Glossary), down from 39.4 percent in 1975 (see table 6, Appendix A). In 1986 wholesale and retail trade accounted for 19.9 percent of GNP, and manufacturing for 15.6 percent. Transport, storage, and communications stood at 11.2 percent of GNP, and construction at 7.7 percent. The relative importance of the various sectors of the economy was fairly stable during the 1980s.

Role of Government

The role of government in the economy during the final decades of British colonial rule was considerable. The plantation economy

required extensive infrastructure; the colonial state developed and owned railroad, electrical, postal, telegraphic, telephone, and water supply services. Quasi-state financial institutions served the colony's commercial needs, and during World War II the government set up production units for plywood, quinine, drugs, leather, coir, paper, ceramics, acetic acid, glass, and steel. Welfare policies also began during colonial rule, including a network for free and subsidized rice and flour established in 1942. Free education, relief for the poor, and subsidized medical care were introduced in the late British period. Moreover, after 1935 the government took an active role in the planning and subsidizing of colonization schemes. This policy was designed to remove landless peasants from heavily populated areas to newly irrigated tracts in the dry zone.

Economic policy since independence is divided into two periods. During the first, which lasted from 1948 to 1977, government intervention was often seen as the solution to economic problems. The expansion of government participation in the economy was fairly steady, resulting in a tightly regulated system. This trend was especially marked during the period of S.R.D. Bandaranaike's second government, from 1970 to 1977, when the state came to dominate international trade and payments; the plantation, financial, and industrial manufacturing sectors; and the major trade unions outside the plantation sector. It also played a major role in the domestic wholesale and retail trade.

The trend toward greater government involvement was largely a response to the deteriorating terms of trade. The plantation economy had financed social programs such as subsidized food in the late colonial period, but when the value of exports declined after 1957, the economy's capacity to support these programs was strained. When the foreign exchange reserves of the early 1950s dwindled, import-substituting industrialization was seen as a solution. Because the private sector viewed industrial development as risky, the government took up the slack. When balance of payment deficits became chronic, some nationalizations were justified by the need to stem the drain of foreign exchange. Similar concerns led to the tighter regulation of private business and the establishment of state-owned trading corporations. When there were shortages of necessities, governments expanded state control over their distribution in order to make them available at low prices.

The 1977 elections were largely a referendum on the perceived failures of the closed economy. The UNP, which supported a deregulated, open economy, won decisively. The new government rejected the economic policies that had evolved over the previous twenty years. Some observers believed that the economy had been



Villagers and cart in rural Sri Lanka, circa 1910
Courtesy Library of Congress

shackled by excessive regulation, an excess of consumption expenditure over investment, and wasteful state enterprises. Under the UNP, market forces were to play a greater role in allocating resources, and state enterprises were to compete with the private sector (see *The United National Party Returns to Power*, ch. 1).

The main elements of the new policy were investment incentives for foreign and domestic capital, a shift in the composition of public spending from subsidies to infrastructure investment, and a liberalized international trade policy designed to encourage export-led growth. Employment creation was a central objective, both through encouragement of domestic and foreign capital investment, and through an ambitious public works program, including the Accelerated Mahaweli Program, which aimed to bring new land under irrigation and substantially increase hydroelectric generating capacity (see *Government Policies*, this ch.). Two other policies that sought to create employment were the establishment of investment promotion zones (free trade zones) and extensive government investment in housing.

The role of government during the decade after 1977 remained significant; the public investment program, for instance, was implemented on a greater scale than anything attempted previously, and in early 1988 the state remained heavily involved in many areas of economic activity. But while the government increased its efforts

to develop the nation's infrastructure, it reduced its role in regulation, commerce, and production. Its initiatives received the enthusiastic support of the international development community. As a result, Sri Lanka received generous amounts of foreign aid to finance its post-1977 development program. This foreign assistance was integral to the government's economic strategy. Because budget deficits were large even before 1977, external financial resources were necessary to pay for the increased spending on infrastructure and to make up for the revenue lost as a result of the tax incentives given business. Similarly, relaxing import controls put pressure on the balance of payments, which could be relieved only with the help of foreign aid.

Development Planning

During the early years of independence, successive governments placed little emphasis on development planning, in part because the immediate economic problems appeared to be manageable. The National Planning Council was established in 1956 as part of the Ministry of Finance. Between 1957 and 1959, the council and the Central Bank of Sri Lanka invited a number of foreign economists to visit Sri Lanka and offer the government both their diagnoses of the country's economic problems and their prescriptions for the planning and implementation of recommended remedies. These studies provided many of the rationales for economic policies and planning in the 1960s.

In 1959 the National Planning Council issued a Ten-Year Plan, the most ambitious analysis of the economy and projection of planning that had yet been officially published. This plan sought to increase the role of industry in the economy. Unfortunately, its forecasts were based on faulty projections of population and labor force growth rates. Moreover, attempts to implement it collided with the exchange and price crunch of 1961 and 1962, and the plan became increasingly out of touch with the changing economic situation.

A new Ministry of Planning and Economic Affairs (no longer in existence) was established in 1965. The ministry decided not to draft another single long-term plan involving a five- or ten-year period. Instead, it drew up a number of separate, detailed, well-integrated, five-year plans involving different ministries. The government targeted agriculture, especially wet rice, as the area in which growth could best be achieved.

The UNP government that came to power in 1970 shifted toward a more formal and comprehensive state direction of the economy. The Five-Year Plan for 1972-76 had two principal aspects. First,

it sought to remove disparities in incomes and living standards. Second, the plan sought to promote economic growth and to reduce unemployment. It envisioned rapid growth in agriculture, not only in the traditional crops of wet rice, tea, rubber, and coconut, but in such minor crops as sunflower, manioc, cotton, cashew, pineapple, and cocoa. Like the Ten-Year Plan of 1959, this plan proved to be based on overly optimistic assumptions, and it soon ceased to exercise influence on the government's economic policy. In 1975 it was replaced by a Two-Year Plan that placed even greater emphasis on agricultural growth and less on industrial development.

After 1977 the government continued to accept the principle of state direction of economic activity, but in contrast to the 1970-77 period the government encouraged the private sector to participate in the economy. Its first Five-Year Plan (1978-83) included an ambitious public investment program to be financed largely by overseas grants and loans. Its immediate objective was to reduce unemployment, which had risen during the tenure of the previous government.

A series of five-year rolling investment plans was set in motion by the Ministry of Finance and Planning in the 1980s. The plan for the 1986-90 period envisaged investment of Rs268 billion (for value of the rupee—see Glossary) with the emphasis on infrastructure projects such as roads, irrigation, ports, airports, telecommunications, and plantations. Of this total, 50 percent was to be spent by the state sector. Foreign sources were to supply Rs69 billion. The target annual average growth for the gross domestic product (GDP—see Glossary) was 4.5 percent, a decrease from the 5.2 percent envisaged by the plan for the 1985-89 period and the 6 percent actually achieved between 1977 and 1984.

The Economy in the Late 1980s

Growth in GDP was estimated at 3 percent in 1987, down from 4.3 percent in 1986, and the lowest level in a decade (see table 7, Appendix A). By 1987 it was clear that the ongoing civil unrest was causing serious economic difficulties, mainly because rapidly increasing defense outlays forced the government to cut back capital expenditure and to run a large budgetary deficit. Concern over the decline in foreign investment and extensive damage to infrastructure mounted as sectors such as tourism, transportation, and wet rice farming suffered production losses directly related to the decline in security.

By early 1988, the ethnic conflict had resulted in extensive property damage. Infrastructure damage in Northern and Eastern provinces was estimated at Rs7.5 billion in August 1987 and was

expected to be revised upwards to include the widespread destruction in the Jaffna Peninsula (see fig. 1). In the predominantly Sinhalese areas, riots against the 1987 Indo-Sri Lankan Accord caused damage to government property estimated at Rs4.8 billion (see Foreign Relations, ch. 4).

In early 1988, future economic prospects were closely linked to the security situation (see Primary Threats to National Security, ch. 5). Late the previous year, the government succeeded in obtaining commitments from foreign nations and international organizations to finance an extensive reconstruction program for the 1988–90 period (see Foreign Aid, this ch.). If there were a pronounced ebb in the political violence plaguing the island nation, it would be probable that the official target of Rs80 billion foreign aid over this three-year period would be reached. Aid on this scale, which would be a substantial increase on the already generous levels received, would not only enable the rebuilding of infrastructure destroyed by the violence but also fuel growth and allow the large trade and budget deficits to continue. Accordingly, the 1988 budget foresaw a sharp decline in defense spending and an increase in capital expenditure. These economic plans, however, depended on a peaceful solution to the country's political problems. If political violence escalated in subsequent years, not only would the government have to shift its spending back to defense, but some of the expected foreign aid probably would be suspended.

Agriculture

Agriculture—including forestry and fishing—accounted for over 46 percent of exports, over 40 percent of the labor force, and around 28 percent of the GNP in 1986. The dominant crops were paddy, tea, rubber, and coconut. In the late 1980s, the government-sponsored Accelerated Mahaweli Program irrigation project opened a large amount of new land for paddy cultivation in the dry zone of the eastern part of the island (see fig. 7). In contrast, the amount of land devoted to tea, coconut, and rubber remained stable in the forty years after independence. Land reforms implemented in the 1970s affected mainly these three crops. Little land was distributed to small farmers; instead it was assumed by various government agencies. As a result, most tea and a substantial proportion of rubber production was placed under direct state control.

Changing Patterns

Since the beginning of the twentieth century, agriculture has been dominated by the four principal crops: rice, tea, rubber, and coconut. Most tea and rubber were exported, whereas almost all rice

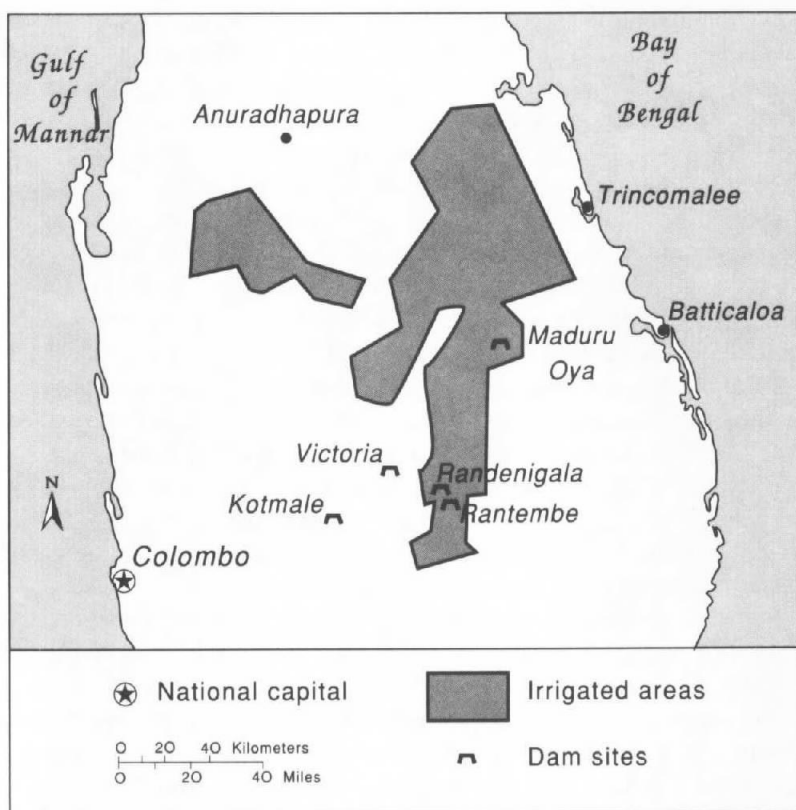
was for internal use. The coconut crop was sold on both domestic and international markets. The importance of other crops increased in the 1970s and 1980s, but no single crop emerged to challenge the four traditional mainstays.

Tea, rubber, and to a lesser extent, coconut are grown on plantations established in the nineteenth and early twentieth centuries. Before the plantations existed, villagers carried out three main types of cultivation. The valley bottoms and lowlands were occupied by rice paddies. These paddies were surrounded by a belt of residential gardens permanently cultivated with fruit trees and vegetables. The gardens in turn were surrounded by forests, parts of which were temporarily cleared for slash-and-burn cultivation, known as *chena* (see Glossary). Various grains and vegetables were grown on *chena* lands. The forests were also used for hunting, grazing for village cattle, gathering wild fruit, and timber. In some villages, especially in the dry zone, there was little rice cultivation, and people depended on the gardens and forests for their livelihood (see Land Use and Settlement Patterns, ch. 2).

Under legislation passed in 1840, the title of most forestland was vested in the government. In order to stimulate the production of export crops, the colonial administration sold large tracts to persons who wished to develop plantations. At first most buyers were British, but by the end of the nineteenth century many middle-class Sri Lankans had also acquired crown land and converted it to plantation use. The early coffee and tea plantations were often situated at high elevations, some distance from the nearest Sinhalese villages, but as time went on more estates were developed on land contiguous to villages. The precise impact of the plantations on village society remains controversial, but it is widely believed in Sri Lanka that the standard of living of villagers suffered as they lost use of the forestland.

Although the large coffee, tea, and rubber plantations relied mainly on Tamil migrants from southern India for their permanent labor supply, Sinhalese villagers were employed in the initial clearing of the forests, and some performed casual daily labor on the plantations in seasons when there was little work in the villages. The coconut plantations, being spatially closer to villages, employed considerable Sinhalese labor.

By the early twentieth century, there was no longer much land suitable for the expansion of cultivation in the wet zone, and in the 1930s the focus of agricultural development shifted from the wet zone to the dry zone and from plantation crops to rice. There was ample uncultivated land in the dry zone of the north-central region, but three major obstacles had to be overcome—the prevalence of malaria,



Source: Based on information from Asoka Bandarage, "Women and Capitalist Development in Sri Lanka, 1977-87," *Bulletin of Concerned Asian Scholars*, 20, April-June 1988, 58; and Abhaya Attanayake, et al., *Mahaweli Saga: Challenge and Response*, Colombo, 1985, 55.

Figure 7. Accelerated Mahaweli Program, 1988

the lack of a reliable supply of water to carry out rice cultivation, and the absence of farmers to cultivate the soil. The first of these problems was solved by the success of the antimalarial campaigns of the 1940s. The others were tackled by government policies that sought to restore and build irrigation works and resettle peasants from the wet zone in the newly irrigated areas. In the 1980s, the pace of this program was quickened by the Accelerated Mahaweli Program (see Government Policies, this ch.).

The most important change in agriculture in the forty years after independence was the increase in rice production. This increase resulted from better yields and the enlarged amount of land under cultivation. In contrast, with the exception of rubber in the 1950s

and 1960s, the principal export crops showed only modest gains in productivity, and the amount of land devoted to tea and rubber fell. After around 1970, there was growth in the production of other crops, including onions, chilies, sugar, soybeans, cinnamon, cardamom, pepper, cloves, and nutmeg.

Fishing, a traditional industry in coastal waters, accounted for 2.1 percent of GNP in 1986. Government efforts to offer incentives for modernization had little impact. The civil disturbances of the 1980s badly affected the industry. Before 1983 the northern region produced nearly 25 percent of the fish catch and around 55 percent of cured fish, but in the mid-1980s fishing was not possible there for long periods. The value of the fish catch off the northern coast fell from Rs495 million in 1981 to Rs52 million in 1986. Production off the southern and western coasts and from inland fisheries grew during this period, but not enough to prevent a decline in the island's total catch. In 1987 the government announced plans to provide funds for investment in fishing in the North and East, but implementation was likely to depend on improved security in these areas.

Land Use

Although there have been periodic agricultural censuses, they were limited in purpose and did not provide an overall picture of land use. In 1961, however, a survey of the use of the island's physical resources was compiled based on a 1956 aerial photographic survey of the entire country. The survey indicated that, of the country's total area of nearly 66 million hectares, 29 percent was under permanent cultivation, just over 15 percent under *chena* cultivation, 44 percent under forest cover, and about 6 percent under various types of grasses. Nearly 33,000 hectares consisted of swamp and marshlands, and about 63,000 hectares, or 1 percent, unused land. Just over 3 percent of the island's surface was covered by water. Of the total area, approximately 23 percent was in the wet zone, about 63 percent in the dry zone, and the balance lay in an area that the survey labeled "intermediate," as it had characteristics of both zones.

Of the land under permanent cultivation in 1961, which included cropland, land under plantation, and homestead gardens, the survey indicated that some 75 percent was in the wet and intermediate zones and about 25 percent was in the dry zone. *Chena* cultivation, on the other hand, was predominantly in the dry zone, as were the grass, scrub, and forestlands. Although forest covered almost half the country, only about 0.2 percent and 3.1 percent of the forests were characterized as of high and intermediate yield,

respectively. The study further indicated that approximately 70 percent of the land in the wet zone was under permanent cultivation, whereas in the dry zone under 12 percent was being cultivated on a permanent basis.

Since 1961 irrigation has enabled a much greater proportion of land in the dry zone to be cultivated and in 1978 it was estimated that nearly one-third of the country's dry-zone area was under permanent cultivation (see fig. 8). This proportion increased in the 1980s, when lands irrigated by the Accelerated Mahaweli Program were added to the total. As a result, the proportion of forestland declined and was estimated at just under 40 percent in 1987.

Although the forests had few high-yield timber stands, many areas suffered from deforestation because of the heavy demand for firewood in the 1980s. In 1987 it was estimated that 94 percent of households used firewood for cooking. Scarcities of firewood led to price increases well above the general level of inflation in the 1980s.

Government Policies

Government support for farmers takes several forms, including the provision of credit for producers, the setting of minimum prices for agricultural produce, the building of irrigation works, and the encouragement of internal migration to newly irrigated areas. Since the late colonial period, the government has played a growing role in the provision of credit to smallholders on favorable terms. Until 1986 the main instrument of this policy was the subvention of cooperative societies. Agricultural credit took three forms: short-term loans to farmers for the purchase of seeds and fertilizers; medium-term loans, intended for the purchase of machinery; and long-term loans for capital expenditure on storage, transport, and rice-milling apparatus. The long-term loans were not available for individual farmers, but were used by the cooperative societies to acquire infrastructural facilities.

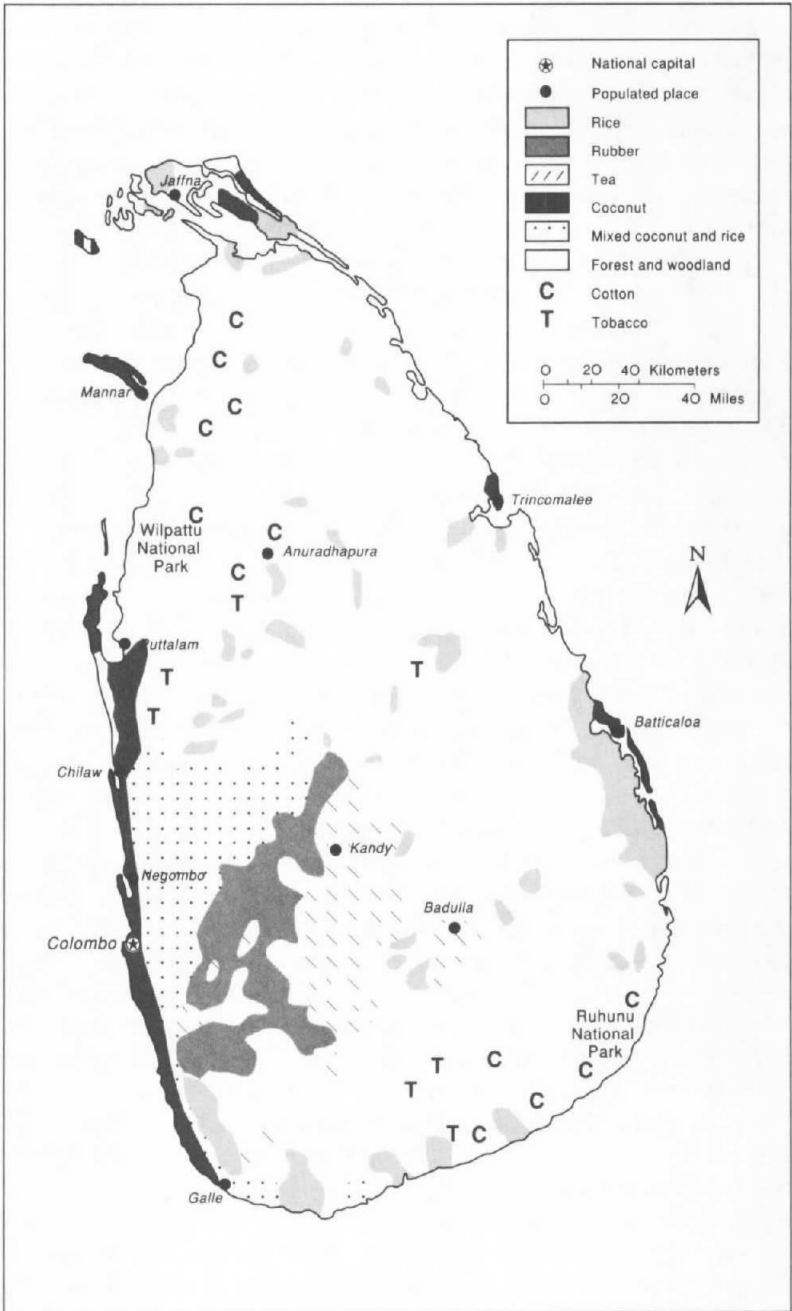
The actual performance of credit provision through cooperatives generally fell short of expectations. Institutional credit did not displace the older sources of credit, such as the village moneylender, friends, and relatives. The inability to repay loans, procedural difficulties, and the existence of unpaid loans already taken from the cooperatives were some reasons given by farmers for preferring noninstitutional credit sources. Another problem with the credit furnished by cooperatives was the high rate of default. This rate may have been attributable partly to real difficulties in repayment, but it also was the result of a widely held impression that government loans were a form of social welfare and that it was not necessary to repay them.

The New Comprehensive Rural Credit Scheme implemented in 1986 sought to increase the flow of credit to smallholders. The Central Bank guaranteed up to 50 percent of each loan in the event of losses incurred by banks lending under the program, and eligible farmers received a line of credit for three years. Loans were automatically rescheduled at concessional rates when crops were damaged by events beyond the farmer's control. In 1986 cultivation loans under this program amounted to nearly Rs257 million, about 74 percent for paddy and the rest for other food crops.

Another important policy was the Guaranteed Price Scheme, which came into effect in 1942. Under this program the government agreed to purchase rice and some other produce at set prices. The intention was to support the farmer's standard of living. For a period in the early 1970s, when the island was threatened by food shortages, the government ordered peasants to market all of their rice through this scheme and at times set the price at a level lower than that of the free market. This policy had the effect of reducing the incentive to grow rice. The program lost some of its impetus in the 1980s. In 1986 the government set the price below the free-market rate for most of the year. As a result of the policy, purchases under the program accounted for only about 6 percent of the rice crop, mostly from districts where private traders were unwilling to operate because of the poor security situation.

Since the 1930s, governments have promoted irrigation works and colonization projects in the dry zone in an attempt to increase rice production and reduce land pressure and unemployment in the more densely settled wet zone. The lack of infrastructure and the prevalence of malaria hampered these programs in the early years. After the near eradication of malaria, increased government investment in infrastructure and enhanced financial support for migrants made the new lands more desirable. Between 1946 and 1971, the proportion of the population living in the dry zone increased from 12 to 19 percent (see Population, ch. 2).

At the end of 1968, about 352,000 hectares were under irrigation for rice cultivation; some 178,000 hectares under major storage reservoirs and barrages, and approximately 174,000 hectares in minor irrigation projects. In the 1970s and 1980s, governments pursued major irrigation programs, most notably the Mahaweli Ganga Program, which was lent added impetus and became the Accelerated Mahaweli Program in 1978. The increasing size of the Mahaweli project dwarfed its earlier endeavors. According to the plan, approximately 593,000 hectares of previously arid land would be brought under irrigation by 1992. In 1986 some 76,000 hectares of new land were under cultivation as a result of this project.



Source: Based on information from *Agro-Bio-Environmental Chart of Sri Lanka*, Tokyo: Resources Council, Science and Technology Agency, 1977.

Figure 8. Agriculture and Land Use, 1988

Other long-standing government policies designed to help farmers included subsidies for fertilizer, seed paddy, and other inputs. Government efforts also partly contributed to the adoption of improved cultivation practices and high-yielding seed varieties in paddy farming in the 1960s.

Land Tenure

Modern land tenure policy dates from the Land Development Ordinance of 1935, which forbade the transfer of crown lands for purposes of cultivation except to enlarge the landholdings of near-landless or landless peasants. The intent of this ordinance was to help small farmers whose livelihood was seen to be at risk from the exploitation of rich peasants and urban landowners.

In 1958 the Paddy Lands Bill was enacted, mainly to benefit the tenant farmers of some 160,000 hectares of paddy land. The bill purported to assist tenants to purchase the land they worked, to protect them against eviction, and to establish a rent ceiling at around 25 percent of the crop. It also established cultivation committees, composed of rice farmers, to assume general responsibility for rice cultivation in their respective areas, including the direction and control of minor irrigation projects. Shortcomings in the law and official indifference in enforcing the act hampered its effectiveness, and many observers termed it a failure. In some regions tenants who tried to pay the lower, official rents were successfully evicted by landlords, and the old rents, often about 50 percent of the produce, remained in force. In the 1980s, however, the rent ceiling of 25 percent was effective in most districts.

The Land Reform Law of 1972 imposed a ceiling of twenty hectares on privately owned land and sought to distribute lands in excess of the ceiling for the benefit of landless peasants. Because both land owned by public companies and paddy lands under ten hectares in extent were exempted from the ceiling, a considerable area that would otherwise have been available for distribution did not come under the purview of the legislation. Between 1972 and 1974, the Land Reform Commission took over nearly 228,000 hectares, one-third of which was forest and most of the rest planted with tea, rubber, or coconut. Few rice paddies were affected because nearly 95 percent of them were below the ceiling limit. Very little of the land acquired by the government was transferred to individuals. Most was turned over to various government agencies or to cooperative organizations, such as the Up-Country Co-operative Estates Development Board.

The Land Reform Law of 1972 applied only to holdings of individuals. It left untouched the plantations owned by joint-stock

companies, many of them British. In 1975 the Land Reform (Amendment) Law brought these estates under state control. Over 169,000 hectares comprising 395 estates were taken over under this legislation. Most of this land was planted with tea and rubber. As a result, about two-thirds of land cultivated with tea was placed in the state sector. The respective proportions for rubber and coconut were 32 and 10 percent. The government paid some compensation to the owners of land taken over under both the 1972 and 1975 laws. In early 1988, the state-owned plantations were managed by one of two types of entities, the Janatha Estates Development Board, or the Sri Lanka State Plantation Corporation.

Cropping Pattern

Rice cultivation has increased markedly since independence, although in the late 1980s yields remained well below those of the major rice-producing countries. Much of the improvement came in the late 1970s and 1980s. Rice remained a smallholder's crop, and production techniques varied according to region. In some villages, it was still sown by hand, with harvesting and threshing often engaging the entire family, plus all available friends and relatives.

Because no completely perennial sources of water exist, there was uncertainty regarding the adequacy of the supply each year. In the wet zone, flooding and waterlogging was experienced in the 1980s, whereas in the dry zone even the irrigated areas were subject to the possibility of insufficient water. In the mid- and up-country wet zone areas, most fields were sown twice a year in the 1980s; in the dry zone most holdings were sown only once; and in the low-country wet zone the amount of flooding or waterlogging determined whether to plant once or twice. The *maha* (greater monsoon—see Glossary) crops are sown between August and October and harvested five or six months later; the *yala* (lesser monsoon—see Glossary) crops sown between April and May and harvested about four or five months later.

Despite some increases in productivity, rice output was disappointing in the 1960s and early 1970s. Greater incentives to farmers after 1977 contributed to increases in production. Both the area under cultivation and the yield increased steadily between 1980 and 1985, when annual output reached 2.7 million tons, compared to an annual output of around 1.4 million tons in the early 1970s. In 1986 unfavorable weather and security difficulties led to a slight decline in production. A severe drought affected the crop in 1987, when output was estimated at only 2.1 million tons.

Tea is Sri Lanka's largest export crop. Only China and India produce more tea. The plants, originally imported from Assam in



*Gemstone prospector near Ratnapura
Courtesy Paige W. Thompson*

India, are grown in the wet zone at low, middle, and high altitudes, and produce a high-grade black tea. The higher altitudes produce the best tea, and terracing is used to eke out the limited area of upper altitude land. Tea cultivation is meticulous and time consuming, requiring the constant and skilled attention of two or three workers per hectare. Because of this requirement, tea is most

efficiently grown on estates, based on large capital investment and having a highly organized and disciplined management and labor supply.

Because working and living on estates was not attractive to Sinhalese peasants, the labor supply for the tea industry from its inception was provided by Indian Tamil immigrants who lived on the estates. Since independence the number of Sinhalese workers has increased, but in the late 1980s Tamils still dominated this sector (see *Ethnic Groups*, ch. 2).

The performance of the tea industry was disappointing in the 1970s and early 1980s, because of poor producer prices and low productivity. Tea production was 211 million kilograms in 1986, down from 220 million kilograms in 1969. The fundamental problem of the tea estates was the advanced age of the tea bushes. In 1987 their average age was around sixty years and only 15 percent of the total area under tea had been replanted with high-yielding varieties. Replanting had been neglected in the 1960s and 1970s partly because low tea prices and high export duties meant that profit margins were not high enough to make it a profitable enterprise. Between 1972 and 1974, the growing risk of nationalization also discouraged investment.

Rubber continues to be an important export crop in the late 1980s. It thrives under plantation conditions in the wet zone, although a significant proportion of the crop is produced by smallholders. Although rubber yields improved greatly in the first twenty years after independence, both the output and area planted with rubber declined in the 1980s. Output fell from 156 million kilograms in 1978 to 125 million kilograms in 1982. Improved prices caused production levels to recover to about 138 million kilograms in 1986.

Despite the importance of rubber, a large number of rubber plantations suffer from old age and neglect. The government offered incentives to encourage replanting and improve maintenance procedures. Nevertheless, the area replanted in 1986 was 12 percent less than in 1985. This drop in replanting resulted from a shortage of seeds and the reluctance of farmers to retire land from production at a time of relatively attractive prices. In early 1988, however, the short- and medium-term outlook for world rubber prices was considered good.

Most of the coconut production was sold in the domestic market, which consumed about 1.4 billion nuts in the mid-1980s. Most of the rest of the crop, usually between 2 billion and 3 billion nuts, was exported as copra, coconut oil, and desiccated coconut. Local uses for coconut include timber for construction, leaves for thatch

and siding, coir for rope and rough textiles, and toddy and arrack for alcoholic beverages.

Coconut output fluctuates depending on weather conditions, fertilizer application, and producer prices. In the 1980s, smallholders dominated its production, which was concentrated in Colombo and Kurunegala districts and around the city of Chilaw in Puttalam District. Because of a drought in 1983, production suffered a setback during 1984 and fell to 1.9 billion nuts, its lowest level since 1977. The recovery during 1985 was impressive, leading to the record production of almost 3 billion nuts. This level was itself surpassed in 1986, when production rose a further 3 percent. But the average export price fell by 45 percent in 1985 and by 56 percent in 1986. In 1986 the farm gate price probably fell below the cost of production, and in early 1988 it appeared that fluctuations in the world price of coconut products would remain a problem for the foreseeable future. The 1987 drought was expected to reduce coconut production by at least 20 percent in both 1987 and 1988. Like tea and rubber, the coconut sector suffered from inadequate replanting. Consequently, a large proportion of the trees were old and past optimum productivity levels.

The importance of crops other than tea, rubber, and coconut increased after 1970, and in 1986 they accounted for around 51 percent of agricultural output. There was a substantial increase in minor food crops, including soybeans, chilies, and onions, all of which are grown as subsidiary crops on land irrigated by the Mahaweli project. In the 1960s and earlier, vegetables were imported from India in large quantities, but in the 1980s the island's import requirements were much smaller. Spices, including cloves, nutmeg, cardamom, and pepper, also registered large gains in the 1970s and 1980s. A large proportion of the spice output was being exported in the 1980s. Other crops of importance included corn, millet, sweet potatoes, cassava, dry beans, sesame seed, and tobacco. A wide variety of tropical fruits, including mangoes, pineapples, plantains, and papayas, also were grown; most were consumed in the domestic market. Sugar output increased in the early 1980s, although in 1986 it still accounted for only 11 percent of the domestic consumption. The expansion in sugar took place despite the problems of the state-run sugar mills and their associated sugar lands in Eastern Province, which have been disrupted by civil strife. Two new mills in Western Province accounted for the increase in production, and in early 1988 the outlook for further expansion was good.

Industry

Industry, including manufacturing, mining, energy, transportation, and construction, accounted for around 38 percent of GNP

in 1986. The most important products included refined oil, textiles, gems, and processed agricultural products. Construction and tourism both grew rapidly in the late 1970s and early 1980s, but contracted after the onset of ethnic violence in 1983. State-owned corporations accounted for over 50 percent of total industrial output. An investment promotion zone was established in 1979 with the goal of attracting foreign capital; textile factories accounted for a large proportion of investment there in its early years. The island's electricity supply was mainly fueled by hydropower (see Energy, this ch.).

Changing Patterns

Sri Lanka developed little industry under British rule, relying instead on the proceeds from agricultural exports to buy manufactured goods from other countries. Most industry during the colonial period involved processing the principal export commodities: tea, rubber, and coconut. Although these sectors remained important, in the 1980s there was a much greater variety of industrial establishments, including a steel mill, an oil refinery, and textile factories.

Industrial diversification began in the 1960s with the production of consumer goods for the domestic market. This trend was a consequence of government measures aimed at saving foreign exchange, which made it difficult to import many items that had previously been obtained from overseas. Heavy industries were established in the late 1960s, mostly in the state sector. During the 1970-77 period the state assumed an even greater role in manufacturing, but after the economic reforms of 1977 the government attempted to improve prospects for the private sector. The fastest growing individual sector in the 1980s was textiles, which made up approximately 29 percent of industrial production in 1986. The textiles, clothing, and leather products sector became the largest foreign exchange earner in 1986. Over 80 percent of the manufacturing capacity was concentrated in Western Province, particularly in and around Colombo.

Industrial Policies

The enactment of the State Industrial Corporations Act of 1957 provided for the reconstitution of existing state enterprises as well as the establishment of new corporations to promote the development of large-scale and basic industries. The period 1958 to 1963 witnessed the first phase in the rapid growth of state industrial corporations. By 1963 fourteen such corporations were engaged in such fields as textiles, cement, sugar, paper, chemicals, edible oils and fats, ceramics, mineral sands, plywood, and leather. By 1974 there



A rubber tapper's child
Courtesy
Paige W. Thompson

were twenty-five state corporations, including such major undertakings as a steel mill and an oil refinery.

Despite the 1977 policy shift in favor of the private sector, in early 1988 government-controlled enterprises continued to play a major role in industry. State-owned corporations accounted for nearly 60 percent of total industrial output. The most important public company was the Ceylon Petroleum Corporation, which accounted for about 55 percent of all public-sector production.

From the beginning, many industrial corporations in the state sector were troubled by such problems as management inefficiency, technical deficiencies in planning, overstaffing, and defective pricing policies. These difficulties contributed in many undertakings to poor economic results. Moreover, public sector enterprises were associated with objectives that reflected both growth and welfare considerations for the economy as a whole. They became the chief instruments furthering state ownership and social control in the economy, and they were expected to promote capital formation and long-term development. At times they were also looked upon chiefly as major sources of employment and enterprises providing goods and services to the public at relatively low prices. As a result, a number of the state industrial corporations have lost money. In 1987 the debts of state-owned corporations were Rs19 billion, of which Rs15 billion were owed to foreign sources and Rs4 billion to the two state-owned banks.

The liberalization of the economy in 1977 was largely prompted by the perceived inefficiency of the public sector, not by any ideological commitment to free enterprise. As a result, the government let private enterprise compete with the state corporations but took few steps to dismantle the state sector. Instead, it attempted to improve its efficiency. One major state venture, the National Milk Board, was dissolved in 1986, however. It had been established in 1953, but had never succeeded in developing the milk industry. In 1987 it was reported that consideration was being given to transferring to private control several state-run industrial enterprises. These included the four government textile mills, the State Distilleries Corporation, the National Paper Corporation, the Mineral Sands Corporation, Paranthan Chemicals, Sri Lanka Tyre, and Union Motors. In early 1988, however, doubts remained about the extent of the government's commitment to this program. Although the plan to sell the textile mills was expected to be implemented within two years, some of the government's economic advisers reportedly were urging the government to proceed cautiously in its privatization policy, in view of the limited capital markets, the concentration of private wealth, and the weak regulatory framework.

Manufacturing

The share of manufacturing in the economy declined from 21 to 15 percent of GDP between 1977 and 1986. This fall is somewhat misleading because it resulted in large part from the rapid growth in the service sector and the decline in output of the state-owned Ceylon Petroleum Corporation. The latter accounted for as much as one-third of the value of manufactured goods in some years and thus strongly affected aggregate manufacturing statistics. These statistics fluctuated along with changes in the value of the output of the oil refinery, which in turn varied with oil price levels and the extent of plant closings for maintenance. Some manufacturing sectors grew rapidly during this period.

Manufacturing was dominated for most of the twentieth century by the processing of agricultural produce for both the export and domestic markets. The most important industries were engaged in preparing and packaging for outside markets the principal export commodities—tea, rubber, and coconuts—for which Sri Lanka is noted. Such preparation generally involved low technology, comparatively modest capital investment on machinery, and uncomplicated, sequential procedures. Tea leaves, for example, follow a four-part process of withering, rolling (to extract bitter juices),

fermentation, and heating (or roasting), before being packed in chests for export.

The processing of coconut and of rubber also were important industries, although their ratio in proportion to all manufacturing fell in the 1970s and early 1980s. The processing of the latter two commercial crops generally involved refining the basic commodities into a range of semi-finished products to be used in manufacturing finished goods at home or abroad. Coconuts, for example, are transformed into copra, desiccated coconut, coconut oil, fiber, *poonac* (a meal extract), and toddy. Copra and desiccated coconut are used as oils or as ingredients in food such as margarine; coconut oil is used to make soap; coconut fibers such as coir are used to make yarn, rope, or fishnets, while *poonac* is used as food for livestock. The coconut palm flower is also used in the production of alcoholic beverages.

Rubber is also processed in various ways, including latex or scrap crepe and ribbed or smoked sheet, which together account for much of Sri Lanka's export of this commodity. Processing methods for rubber are outdated, however, and Western consumer countries have protested against the hardness, high moisture content, and inconsistent quality of the Sri Lankan product.

Manufacturing received a boost in the early 1960s when import controls, which were the result of shortages in foreign exchange, made it difficult for consumers to obtain or afford foreign products. The result was a protected and profitable ready-made home market. This situation led to an expansion of both private-and public-sector manufacturing, with the private sector concentrating on consumer goods. These new enterprises, however, depended heavily on imported raw materials, and when the country's balance of payments difficulties became even more serious in the early 1970s, industry suffered from the lack of foreign exchange. In 1974 it was estimated that only 40 percent of the capacity of the industrial sector was used. After the 1977 liberalization, raw materials were more freely available, and in 1986 capacity utilization was estimated at 78 percent.

In 1978 the government established the Greater Colombo Economic Commission primarily to serve as the authority for the free trade zones to be set up near the capital. The first investment promotion zone consisted of a large tract that was established in 1979 at Katunayaka, near the Bandaranaike International Airport. A second zone was inaugurated in 1986 at Biyagama, in Colombo District. Foreign companies that built factories in the zones received generous tax concessions. The commission succeeded in attracting some foreign investment, especially from Hong Kong and other

Asian countries. At the end of 1985, a total of 119 enterprises had signed agreements with the commission, but only 7 were signed in 1986, when there were 72 units in production. The total number of people employed was nearly 42,000. Gross export earnings from the investment promotion zones in 1986 were around Rs5.5 billion, up 43 percent from 1985. Foreign investments outside the free trade zones were coordinated by the Foreign Investment Advisory Committee.

The principal change in manufacturing in the 1980s was the rapid growth of the textile sector, from 10.5 percent of output in 1980 to 29.2 percent in 1986 (see table 8, Appendix A). In the mid-1980s, the government was attempting to diversify foreign investment away from textiles. Most textile factories were located in the investment promotion zones (see fig. 9).

During the July 1983 riots, 152 factories were destroyed, but there was little long-term effect. Some observers expressed the view that the equipment destroyed was inefficient, and that modernization was long overdue.

Construction

Total expenditure for construction was estimated at 7.7 percent of GDP in 1986. The sector was given a boost by the ambitious public investment program of the government that came to power in 1977. Between 1977 and 1980, construction expanded at an annual rate of 20 percent in real terms. It stagnated in the 1980s as the number of new projects dwindled and the early ones were completed.

The largest construction project of the post-1977 period was the Mahaweli irrigation program. Conceived in the 1960s as the Mahaweli Ganga Program, the project originally was expected to bring approximately 364,000 additional hectares of land under irrigation and to provide an extra 540 megawatts of hydroelectric power to the national grid. Completion of the program was to require thirty years. Construction of the first two dams was completed in 1977 and opened about 53,000 hectares of new land to irrigation in a general area south of the old capital of Anuradhapura in the dry zone. When the United National Party swept into power in 1977, the project was given renewed impetus and renamed the Accelerated Mahaweli Program. Construction work was undertaken at five new sites between 1979 and 1982, with the intent of increasing the hectares under irrigation and generating an extra 450 megawatts of hydroelectric power for the national grid. By the end of 1987, new dams and reservoirs had been completed at Kotmale, Randenigala, Maduru Oya, and Victoria. The operational power

stations at Randenigala and Victoria together generated 330 megawatts of power, with an additional 147 megawatts expected when the Kotmale station came on line. All construction related to the Accelerated Mahaweli Program was scheduled for completion by 1989. The total cost of the entire project was estimated at US\$1.4 to 2 billion.

The Urban Development Authority was established in 1978 to promote integrated planning and development of important urban locations. Its responsibilities have included the new parliamentary buildings and the reconstruction of St. John's fish market in Colombo. Total expenditure of the Urban Development Authority was Rs529 million in 1986, well under its annual budget in the early 1980s. The Million Houses Program was established in 1984 to coordinate both public and private housing construction. In early 1988 the government's policy was to subsidize private housing rather than undertake extensive public housing programs.

Mining

Mining is carried out in both the public and private sectors. The most valuable products are precious and semiprecious stones, including sapphires, rubies, cats' eyes, topaz, garnets, and moonstones. Official exchange earnings from gems were negligible in the first two decades after independence because most of the output was smuggled out of the country. The setting up of a publicly owned State Gem Corporation in 1971 and export incentives for those exporting through legal channels brought a marked improvement. In 1986 legal exports were valued at Rs755 million, but many observers believed that a considerable quantity was still being exported illegally. In the late 1980s, Japan remained the most important market for Sri Lanka's gems. The Moors traditionally have played an important role in the industry (see *Ethnic Groups*, ch. 2).

Graphite also is of commercial significance. Almost the entire output is exported as crude graphite (plumbago). Ilmenite, a mineral sand used in the manufacture of paint and the fortification of metals, also is exported. Salt is produced by evaporation for the domestic market. Thorium deposits have been reported in Sabaragamuwa Province and in the beach sands of the northeast and southwest coasts. Exploration also has disclosed the presence of apatite (source of phosphate), dolomite (fertilizer component) and small pockets of economically extractable iron ore.

Energy

Over 70 percent of the island's total energy consumption was satisfied by firewood, agricultural residues, and animal waste,

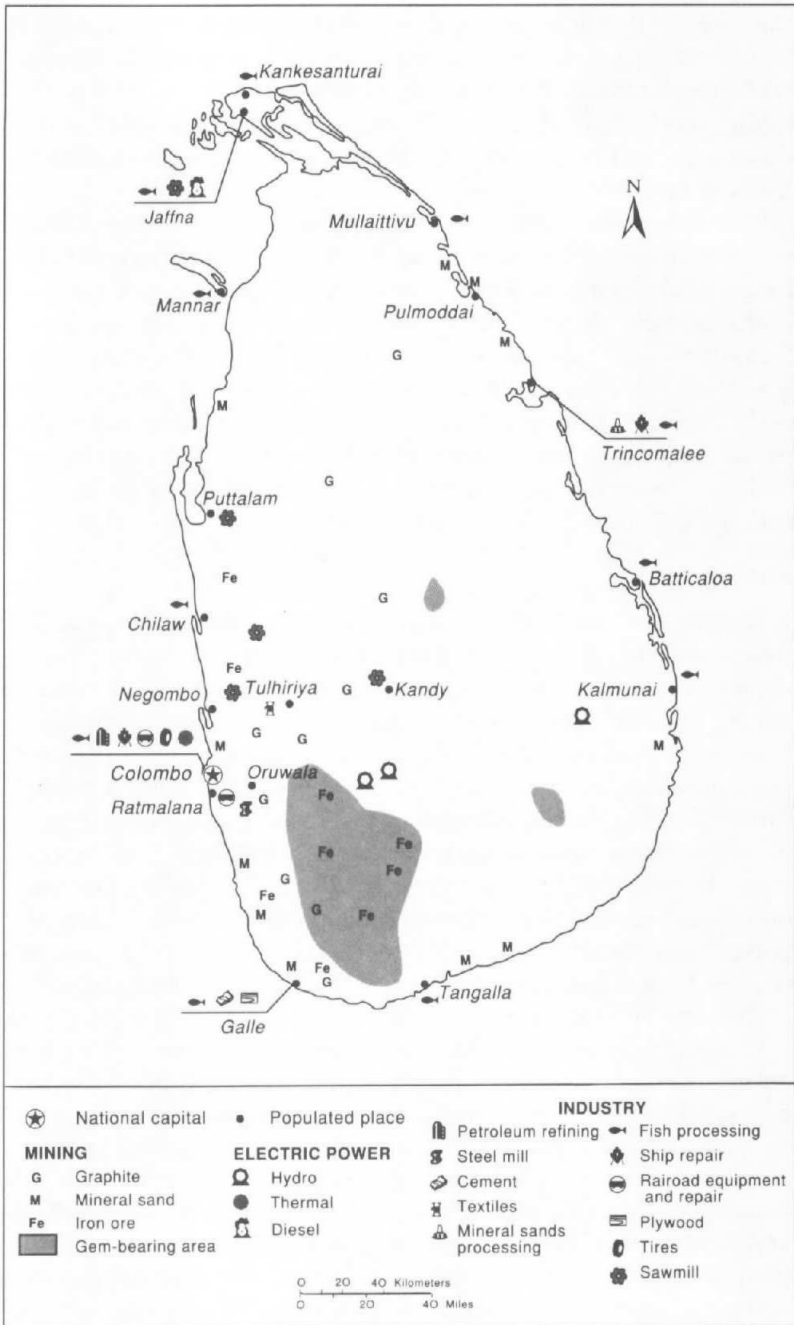


Figure 9. Industry, Mining, and Power, 1988

mostly for household use. The country had no coal or petroleum deposits, and the only other indigenous energy source was hydropower.

In 1927 the Department of Government Electrical Undertakings, now called the Ceylon Electricity Board, took over the transmission of electricity throughout the country. Hydroelectric power came into use in 1951 with the commissioning of the Laksapana project in Central Province. Demand for power increased from approximately 20 megawatts in 1951 to nearly 73 megawatts in 1963, about 90 percent of which was met from hydroelectric sources. In the 1970s, the island increasingly came to rely on imported oil for the generation of electricity, but new hydroelectric capacity from the Mahaweli project in the 1980s reduced the importance of oil. In 1986 total installed capacity was 1,010 megawatts, of which 74 percent was from hydropower.

In early 1988, it appeared that the Mahaweli project would solve Sri Lanka's electricity supply problem for the foreseeable future. This integrated power generation and irrigation project started contributing to power supplies in 1984 when the first two phases of the Victoria Dam were completed, adding 140 megawatts to installed power capacity. In April 1985, the final stage of the Victoria Dam increased capacity by 70 megawatts. A slightly greater capacity was expected to result in the late 1980s.

United States and British-owned oil companies in Sri Lanka were nationalized in 1963, and since then the importing, refining, and distributing of all oil products has been the responsibility of the Ceylon Petroleum Corporation, the state oil company. Its oil refinery started production in 1969. The main products in 1986 were fuel oil (559,497 tons), heavy diesel (60,995 tons), auto diesel (406,569 tons), kerosene (153,692 tons), and gasoline (123,089 tons).

Transportation

In 1987 the road network extended 74,954 kilometers, of which 25,504 were maintained by the Ministry of Highways and the remainder by local governments (see fig. 10). During 1984 the government embarked on a five-year road maintenance program at an estimated cost of Rs5 billion, to be financed by loans from the World Bank (see Glossary) and the Asian Development Bank, together with a grant from Japan. The total number of registered motor vehicles in 1986 was about 478,000.

Road haulage is handled by private companies; some businesses also have their own trucking operations. After 1978 container transport became an important mode of freight haulage for exports

Sri Lanka: A Country Study

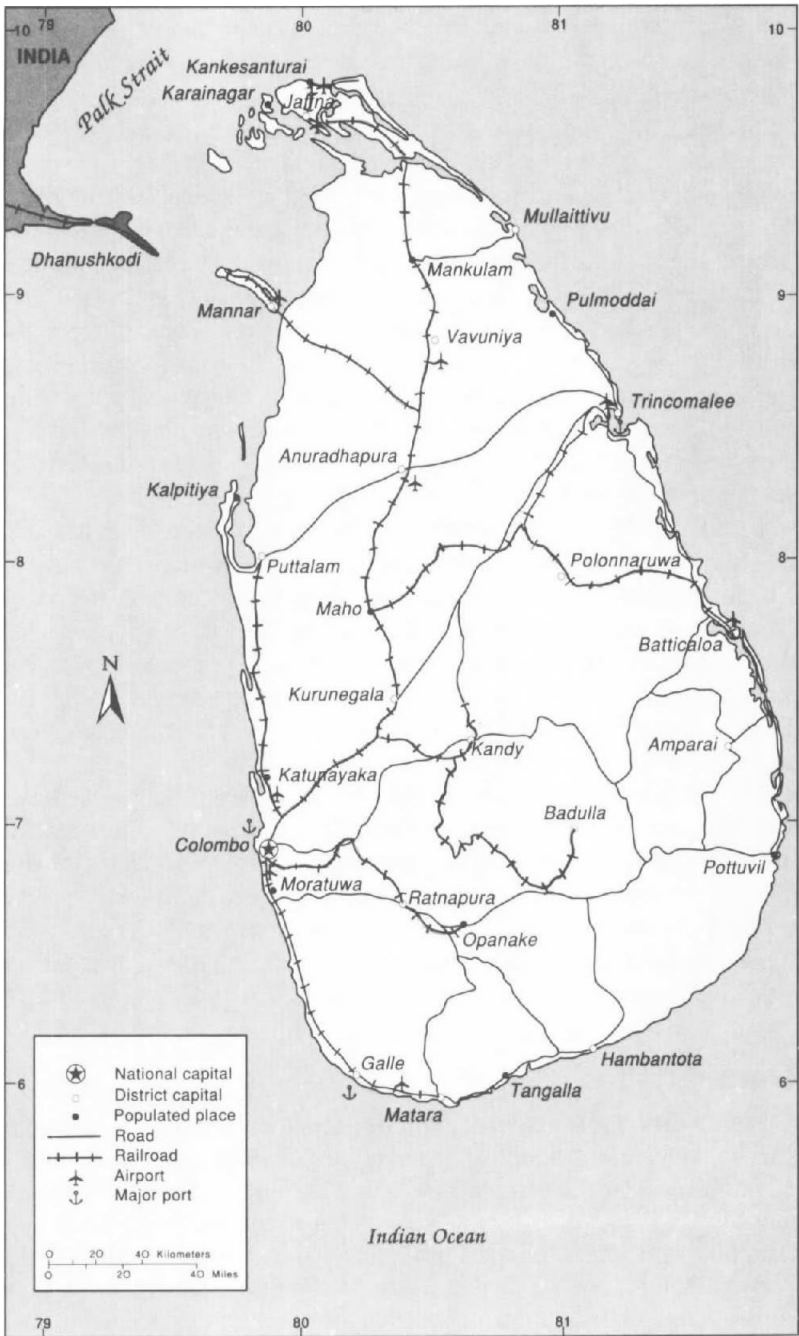


Figure 10. Transportation System, 1988

produced in the investment promotion zones. Intercity haulage is carried out by trucks. Bullock carts remained important in rural and suburban areas in the 1980s.

The Ceylon Transport Board had the sole responsibility for providing public passenger road transport from 1957 to 1978. Fares were heavily subsidized, but overcrowding was severe. In 1978 private buses were again allowed to operate, and the Sri Lanka Transport Board and nine regional transport boards replaced the Ceylon Transport Board. The Sri Lanka Transport Board had responsibility for overall transport policy, budgeting, and production planning, whereas the regional boards were responsible for the operation of regular regional and interregional bus services. In 1986 the revenue-cost ratio of the regional boards was 89 percent. Private road transport expanded rapidly in the late 1970s and early 1980s, but as in the state sector, there was some contraction in the mid-1980s as a result of the declining security in the northern and eastern parts of the country. In 1986 the private sector accounted for about half of the passenger-kilometers. Many buses in both the state and private sectors were in poor condition.

The island's first railroad line, from Colombo to Kandy, was opened in 1867, and in the 1980s Sri Lanka Railways had 1,944 kilometers of railroad track. In early 1988, service in Northern and Eastern provinces had been irregular for several years. The network's passenger-kilometers amounted to 1.9 billion in 1986, about 38 percent less than its total in 1982. Freight services, on the other hand, remained fairly steady in the mid-1980s. The railroads have been operated at a loss since independence.

Three ports can accommodate deep water vessels: Colombo, Trincomalee, and Galle. Colombo was by far the most important. In 1985 it handled nearly 3 million tons of cargo compared with about 600,000 jointly handled by the other two ports. In 1986 the Ceylon Petroleum Corporation began a project to build a single-point buoy mooring 9.6 kilometers offshore from Colombo port. When completed, this project will greatly reduce the costs of discharging crude oil to the refinery near Colombo.

In 1971 Sri Lanka launched its own merchant fleet. The state-owned Sri Lanka Shipping Corporation purchased its first vessel, a 14,000-ton freighter, in March 1971. By 1981 the corporation owned eight ships, including a 20,000 deadweight ton tanker. In 1987 the firm began to replace its aging fleet.

Colombo is a stopping place on international air routes between Europe and the Asia-Pacific region. The first stage of a redevelopment plan for the Bandaranaike International Airport at Katunayaka was completed in October 1986 with the opening of a new

runway, built at a cost of Rs517 million. Some foreign airlines reduced or suspended services in the mid-1980s because of declining traffic due to the security situation.

Air Lanka, the nation's flag carrier, was established in 1980, and in early 1988 it connected Sri Lanka with Europe, the Middle East, and South and Southeast Asia. It was 60 percent government owned. In 1987 a presidential commission set up to inquire into the airline's financial affairs accused former members of the airline's board of subordinating the company's development to their private gain. Taking into account the realizable value of its assets and other costs associated with a forced sale, estimated cumulative losses up to the end of the fiscal year 1986 were Rs7.7 billion, or about Rs1.3 billion for each year of operation. In early 1988, a foreign airline was reportedly being sought to manage Air Lanka and turn it into a viable enterprise.

Telecommunications

In 1988 Sri Lanka's domestic and international telecommunications services were operated by the Posts and Telecommunications Department, of the Ministry of Posts and Telecommunications. Communications with most countries were available through telephone and telex services; an international direct dialing service was introduced in 1980 and by 1987 was in operation in most parts of the country. Advances in the telecommunications field, however, had not kept pace with the growth in the economic sector occurring since the 1970s. In the 1980s, the quality and availability of telecommunications services in Sri Lanka was average compared to other Asian countries, but poor compared to other parts of the world. With approximately 106,500 telephones in use in 1986, the telephone network was extremely overloaded, the exchanges nearing or exceeding capacity levels. Line congestion and long waiting lists for telephone connections were common. Telephone lines were concentrated in urban areas, with over 60 percent located in the Colombo area, which houses only 5 percent of Sri Lanka's population. Direct dialing was available within Colombo and to some major towns, but operator assistance was necessary for other connections, which often led to long delays.

The Sri Lanka Broadcasting Corporation operated radio services, and the Sri Lanka Rupavahini Corporation and the Independent Television Network operated television services in the 1980s. In 1987 almost 700 hours of weekly radio programming were broadcast domestically in Sinhala, Tamil, and English. Programs were transmitted internationally via a shortwave station at Ekala, and domestically through twenty-four medium-wave stations and FM

stations located in five cities throughout Sri Lanka (see table 9, Appendix A). Over 2 million radio sets were in use in the mid-1980s. Foreign service broadcasts to Asia, Europe, Africa, and the Middle East were transmitted from Ekala in eight languages (English, Hindi, Kannada, Malayalam, Nepali, Sinhala, Tamil, and Telugu). Independent foreign broadcasts transmitting programs from Sri Lanka included the Deutsche Welle station at Trincomalee, and Voice of America radio station at Colombo, and the religious stations of Trans-World Radio and Adventist Radio.

Television transmissions began in 1979 and by 1986 there were some 350,000 receivers in place. Programs were broadcast over three channels in Sinhala, English, and Tamil for four hours daily via the main transmitter at Pidurutalagala, Nuwara Eliya District, and two relay stations at Kokkaville in northern Batticaloa District and Kandy. The Independent Television Network broadcast over one channel from the station at Wickramasinghapura.

International telecommunication services were provided mainly by the Padukka satellite station and the South East Asia-Middle East-Western Europe submarine cable system. The earth station, commissioned in 1975, continued to provide international telephone and television services via the Indian Ocean Region INTELSAT satellite. The submarine cable station located at Colombo was commissioned in 1984. It extended from Singapore to France via six countries (Indonesia, Sri Lanka, Djibouti, Saudi Arabia, Egypt, and Italy) and provided Sri Lanka with international telephone communications.

Sri Lanka was planning to invest Rs2.5 billion in telecommunications in the late 1980s. The advances were slated in the telephone network and other telecommunications services.

Labor

The formally employed population of Sri Lanka in the late 1980s was shifting gradually from agriculture to manufacturing, trade, and service employment. Nevertheless, over 40 percent of the work force remained agricultural in early 1988; most of these workers were smallholders, tenants, and plantation workers. The labor force growing most rapidly in the early and mid-1980s was in the service sector.

Characteristics and Occupational Distribution

A precise breakdown of the labor force and movement within it was not possible in the late 1980s because the official statistics were not reliable. Early censuses, taken when the island was a British colony, compiled long lists of occupations with little