

Not all Arabic speakers are of Arab descent. The assimilation of local peoples (both free and slave) into Arabic groups has affected both the dialects and the customs of Arabic speakers in Chad. Non-Arabs also have adopted the language. To cite two examples, the Yalna and the Bandala are of Hajerai and Ouaddaïan origin, respectively, and were probably originally slaves who adopted the Arabic language of their masters. Among the Runga, who were not slaves, Arabic is also widely spoken.

Congo-Kordofanian Languages

Moundang-Toupouri-Mboum

Classified as belonging to the Niger-Congo subfamily of the Congo-Kordofanian family, languages in the Moundang-Toupouri-Mboum groups are spoken by a variety of populations in Mayo-Kebbi and Logone Oriental prefectures. These languages may be divided into seven subgroups: Moundang, Toupouri, Mboum/Laka, Kera, Mongbai, Kim, and Mesme. Speakers of Moundang, Toupouri, and Mboum/Laka are by far the most numerous of this group. Despite belonging to the same language group, these three populations have very different social structures, life-styles, and myths of origin.

Moundang is spoken by more than 100,000 people in Mayo-Kebbi Prefecture; numerous Moundang speakers also live in Cameroon. The Moundang people raise millet for food and cotton for sale. They also own cattle, which are used for marriage payments, religious sacrifices, and payment of fines. Bororo herders live in the same region and often take care of Moundang livestock.

On the broadest level, the Moundang still belong to a kingdom founded two centuries ago. Although the French colonial administration and the independent Chadian governments undermined the military power of the *gon lere* (king), he continued to wield influence in the 1980s from his capital at Léré. On a smaller scale, clan institutions remain important. Associated with particular territories, taboos, totem animals, and marriage rules, clan government, which predates the kingdom, is much less centralized. In some respects, the two sets of institutions act as checks on each other. For example, the clans allow the king to organize manhood initiation ceremonies, central to the maintenance of Moundang identity; however, the councils of elders of each clan may offer advice to the ruler.

In the nineteenth century, the Moundang suffered frequent attacks by Fulani invaders from the west. They were never subjugated,

but the close contact has resulted in the adoption of Fulani principles of political organization and dress.

Mboum/Laka speakers live in southern Logone Oriental Prefecture. About 100,000 Mboum/Laka speakers lived in Chad in the 1980s; a larger population lived across the border in Cameroon and Central African Republic. Sedentary farmers, the Mboum and the Laka probably were pushed east and south by the expansion of the Fulani over the past two centuries.

The Toupouri language and people are found in Mayo-Kebbi Prefecture around the town of Fianga. Almost all of their land is cultivated, and productivity is enhanced by the use of animal fertilizer and double cropping. During the rainy season, the Toupouri raise sorghum. *Berebere*, a kind of millet, is grown in the drier part of the year. Cattle and fish provide additional food resources. Numbering about 100,000, the Toupouri live in the most densely populated part of Chad; some cantons reach densities of twelve people per square kilometer. Overcrowding has promoted emigration, primarily to N'Djamena and Nigeria.

Fulani

Fulani speakers are not very numerous in Chad. Part of the West Atlantic subfamily of the Congo-Kordofanian family of languages, Fulani (called Peul by the French) first appeared in the Senegal River Valley in West Africa. Population growth and the vagaries of climate encouraged the eastward drift of Fulani-speaking herders through the Sahel. Some Fulani speakers adopted Islam and became very important actors in the spread of the religion and the rise of Muslim states west of Chad. Many of these people settled, taking up village or urban life and abandoning nomadism. Other Fulani speakers, however, remained loyal to their pre-Islamic faith and their nomadic life-style.

Fulani speakers arrived in Chad only in the past two centuries. In the mid-1960s, about 32,000 Fulani lived in Kanem, southern Batha, and northern Chari-Baguirmi prefectures, where they raised mainly cattle and sheep. Many of the Fulani are fervent Muslims, and some are teachers of the Quran.

Related to the Fulani ethnically and linguistically—but refusing contact—are the nomadic Bororo of western Chad. In the dry season, the Bororo pasture their animals around wells and pools in northern Mayo-Kebbi Prefecture near Bongor. After the first major rains, they leave for Kanem Prefecture, north of Lake Chad.

Banda-Ngbaka

Also members of the Niger-Congo subfamily of the Congo-

Kordofanian languages, Banda-Ngbaka languages are located in Guéra, Salamat, and Moyen-Chari prefectures. Subgroups include Sango, Bolgo, Goula, and Goula Iro. Although not spoken as a first language in Chad, Sango has been particularly important because it served as a trade language during the colonial era. Although most Banda-Ngbaka languages are found farther south in Central African Republic, the presence of these subgroups in Chad suggests that Banda-Ngbaka speakers were once much more numerous in Chad. Bolgo, found with Hajerai and Goula languages in the vicinity of Lake Iro and Lake Mamoun, is spoken by refugee populations. Populations speaking these languages are very diverse. Although the Goula speak a Banda-Ngbaka language, for example, their culture resembles that of the Sara.

Social Structure

The variety and number of languages in Chad are mirrored by the country's diversity of social structures. The colonial administration and independent governments have attempted to impose a "national" society on the citizenry, but for most Chadians the local or regional society remains the most important reference point outside the immediate family.

This diversity of social structure has several dimensions. For example, some social structures are small in scale, while others are huge. Among the Toubou and the Daza, some clans group only a hundred individuals. At the other extreme are the kingdoms and sultanates—found among the peoples of Ouaddaï Prefecture, the Moundang of Mayo-Kebbi Prefecture, the Barmi of Chari-Baguirmi Prefecture, and the Kanembu of Kanem Prefecture, among others—which bring together thousands or even tens of thousands of people. Although these social units have enjoyed only limited formal legal recognition since the colonial epoch, they remain important institutions whose authority is recognized by their people.

Chadian social structures also differ in the way they locate people in their physical environment. Despite a sense of territory, even among such highly mobile peoples as the Toubou and Daza, the bond between an individual clan and its land is less specific than the link between the inhabitants of a densely settled farming village and its fields.

Diverse social structures foster variety in the relationships among members of a group and between people and their territory. Whereas a Toubou or a Daza is aware of her or his clan identity, she or he often lives as an individual among people of other clans. Among seminomadic Arabs of the Sahel, people identify most

closely with the *kashimbet*, or “threshold of the house,” a residential unit made up of an elder male or group of males, their wives, and descendants. Although the *kashimbet* does not preclude mobility, people reside most of the time with their kin.

These three diversities—scale, relationships with the environment, and social links among group members—are highly conditioned by the environment and the way the society exploits it. Accordingly, the three major patterns of social structure correspond closely with the three major geographical regions of the country (see Physical Setting, this ch.).

The remainder of this section examines a representative society from each region: the Toubou and Daza nomads of the Sahara, the Arab semisedentary herders of the *sahelian* zone, and the Sara farmers of the *soudanian* region.

Toubou and Daza: Nomads of the Sahara

Toubou and Daza life centers on their livestock (their major source of wealth and sustenance) and on the scattered oases where they or their herders cultivate dates and grain. In a few places, the Toubou and Daza (or more often members of the Haddad group who work for them) also mine salt and natron, a salt like substance used for medicinal purposes and for livestock (see Mining, ch. 3).

The Toubou family is made up of parents, children, and another relative or two. Although the husband or father is the head of the household, he rarely makes decisions without consulting his wife. When he is absent, his wife often takes complete charge, moving family tents, changing pastures, and buying and selling cattle. Although Toubou men may have several wives, few do. Families gather in larger camps during the months of transhumance. Camp membership is fluid, sometimes changing during the season and almost never remaining the same from one season to the next.

After the family, the clan is the most stable Toubou institution. Individuals identify with their clan, which has a reputed founder, a name, a symbol, and associated taboos. Clans enjoy collective priority use of certain palm groves, cultivable land, springs, and pastures; outsiders may not use these resources without clan permission. Social relations are based on reciprocity, hospitality, and assistance. Theft and murder within the clan are forbidden, and stolen animals must be returned.

Within the overall context of clan identity, however, Toubou and Daza society is shaped by the individual. Jean Chapelle, a well-known observer of Chadian societies, notes that “it is not society that forms the individual, but the individual who constructs the society most useful” for him or her. Three features of Toubou

social structure make this process possible. The first is residence. In general, clan members are scattered throughout a region; therefore, an individual is likely to find hospitable clans people in most settlements or camps of any size. A second factor is the maintenance of ties with the maternal clan. Although the maternal clan does not occupy the central place of the paternal clan, it provides another universe of potential ties.

Marriage creates a third set of individual options. Although relatives and the immediate family influence decisions about a marriage partner, individual preference is recognized as important. In addition, once a marriage is contracted between individuals of two clans, other clan members are forbidden to change it. The Toubou proscribe marriage with any blood relative less than four generations removed—in the words of the Toubou recorded by Chapelle, “when there are only three grandfathers.”

The ownership of land, animals, and resources takes several forms. Within an oasis or settled zone belonging to a particular clan, land, trees (usually date palms), and nearby wells may have different owners. Each family’s rights to the use of particular plots of land are recognized by other clan members. Families also may have privileged access to certain wells and the right to a part of the harvest from the fields irrigated by their water. Within the clan and family contexts, individuals also may have personal claims to palm trees and animals. Toubou legal customs are based on restitution, indemnification, and revenge. Conflicts are resolved in several settings. Murder, for example, is settled directly between the families of the victim and the murderer. Toubou honor requires that someone from the victim’s family try to kill the murderer or a relative; such efforts eventually end with negotiations to settle the matter. Reconciliation follows the payment of the *goroga*, or blood price, usually in the form of camels.

Despite shared linguistic heritage, few institutions among the Toubou and the Daza generate a broader sense of identity than the clan. Regional divisions do exist, however. Among the Toubou, there are four such subgroups, the Teda of Tibesti Subprefecture being the largest. There are more than a dozen subgroups of Daza: the Kreda of Bahr el Ghazal are the largest; next in importance are the Daza of Kanem Prefecture. During the colonial period (and since independence), Chadian administrations have conferred legality and legitimacy on these regional groupings by dividing the Toubou and Daza regions into corresponding territorial units called cantons and appointing chiefs to administer them (see Regional Government, ch. 4).

Only among the Toubou of the Tibesti region have institutions evolved somewhat differently. Since the end of the sixteenth century, the *derde* (spiritual head) of the Tomagra clan has exercised authority over part of the massif and the other clans who live there. He is selected by a group of electors according to strict rules. The *derde* exercises judicial rather than executive power, arbitrating conflict and levying sanctions based on a code of compensations.

Since the beginning of the civil conflict in Chad, the *derde* has come to occupy a more important position. In 1965 the Chadian government assumed direct authority over the Tibesti Mountains, sending a military garrison and administrators to Bardaï, the capital of Tibesti Subprefecture. Within a year, abuses of authority had roused considerable opposition among the Toubou (see Tombalbaye's *Governance: Policies and Methods*, ch. 1). The *derde*, Oueddei Kichidemi, recognized but little respected up to that time, protested the excesses, went into exile in Libya, and, with the support of Toubou students at the Islamic University of Al Bayda, became a symbol of opposition to the Chadian government. This role enhanced the position of the *derde* among the Toubou. After 1967 the *derde* hoped to rally the Toubou to the National Liberation Front of Chad (Front de Libération Nationale du Tchad—FROLINAT). Moral authority became military authority shortly thereafter when his son, Goukouni Oueddei, became one of the leaders of the Second Liberation Army of FROLINAT. Goukouni has since become a national figure; he played an important role in the battles of N'Djamena in 1979 and 1980 and served as head of state for a time. Another northerner, Hissein Habré of the Daza Annakaza, replaced Goukouni in 1982.

Arabs: Semisedentary Peoples of the Sahel

The Arabs of Chad are semisedentary (or seminomadic) peoples who herd their camels, horses, cattle, goats, and sheep on the plains of the Sahel. Except in the extreme north, they live among sedentary peoples, and in the region around N'Djamena some Arabs have adopted a more settled existence. In the rainy season, Arab groups spread out through the region; in the dry season, they live a more settled existence, usually on the dormant agricultural lands of their sedentary neighbors. They leave the far north to the Toubou, avoid the mountains of Ouaddaï and Guéra prefectures, and move south of 10° north latitude only in times of extreme drought.

The Arabs were not state builders in Chad, a role played instead by the Maba in Wadai, the Barma in Bagirmi, and the Kanembu in Kanem-Borno (see *Era of Empires*, A.D. 900–1900, ch. 1). The

Arabs exercised great influence over all three empires, however, either by conquest (in the case of Wadai) or by converting their rulers to Islam (in the cases of Bagirmi and Kanem). As with nomads and seminomads elsewhere, the possession of camels and horses translated into military potential that commanded the respect of the settled states. For example, the Awlad Sulayman of Kanem, despite their small numbers, gained fame and fortune during the second half of the nineteenth century by playing the increasingly aggressive empire of Wadai against weaker Kanem-Borno. In the decade after 1900, they used the same tactic to enhance and enrich themselves at the expense of the French and the Sanusiyya, a Muslim religious order of Libyan origin with political and economic interests in the Lake Chad Basin.

Chadian Arabs are divided into three "tribes": the Juhayna, the Hassuna, and the Awlad Sulayman. Members of each tribe believe themselves to be descended from a common ancestor. Among the smaller social units, belief in a shared genealogy (rather than common residence or a common faith) provides a major ideological rationale for joint action.

As is true for the Toubou, the basic Arab social unit is the *kashimbet*, a minimal lineage made up of several generations of men, their wives, and children or grandchildren reckoned through the male line. Members of the same *kashimbet* live near each other and more or less follow the same route during migration. Each *kashimbet* is headed by an elder male, or shaykh. This aspect of the social structure is visible in the disposition of tents (or houses among the more sedentary Arabs of N'Djamena). The residence of the shaykh is often at the center of the camp or settlement, with the woven straw tents or adobe houses of his relatives arrayed around it in concentric circles. The area is surrounded by a fence or some other boundary that defines the *zariba*, or walled camp. Within the *kashimbet*, loyalty is generally intense, institutionalized relationships being reinforced by bonds of common residence and personal acquaintance.

Kinship bonds also provide the ideological basis for broader units. Led by the head of the senior lineage, who is more a "first among equals" than a chief, the shaykhs of neighboring *kashimbets* sometimes meet to decide matters of common interest, such as the date of the annual migration. The shaykhs' leader, or *lawan*, may also deal with outsiders on their behalf. He concludes contracts with farmers to allow Arabs to pass the dry season on agricultural lands and levies tribute on strangers who wish to use the group's pastures and wells.

Unlike what is found in Toubou society, marriage among the Arabs strengthens kinship ties. First, marriage is more a family

than an individual concern; senior males from each family make initial contacts and eventually negotiate the marriage contract. An ideal union reinforces the social, moral, and material position of the group. Second, parallel cousin marriage (that is, union between the children of brothers or male relatives more removed), is preferred. This custom encourages the duplication of bonds within the group rather than the creation of a far-flung network of more tenuous, individual alliances, as occurs among the Toubou. Finally, the marriage ceremony is itself a community affair. Among the Toubou, marriage is associated with the feigned "stealing" of the bride from her family, whose members respond with grief and anger, but marriage among the Arabs is an expression of solidarity. The ceremony is celebrated by a *faqih* (Muslim religious leader), and a joyous procession of neighbors, relatives, and friends escorts the bride to the house of her husband.

Despite their wide distribution and numerous contacts with sedentary peoples, Arabs have never played a preponderant role in Chadian affairs. During the colonial period, they resisted the French, who attempted to impose a territorially defined administration but who ultimately governed through the Arabs' kin-based social structures. This inability of the colonial authorities to penetrate and change Arab social and political institutions allowed the Arabs to resist Western education and employment in the emerging capitalist economy. Their pastoral life-style also saved them from the forced cultivation of commercial crops that so disrupted the societies of their sedentary neighbors.

Since independence the Arabs have remained on the margins of Chadian national life. The government, dominated by southerners, suspected the Arabs of a major role in the civil strife of the late 1960s. In the Sahel, however, settled non-Arab peoples (such as the Moubi and Hajerai of Guéra Prefecture) have played a much more important role in resisting central power. Although it is true that the Arabs have opposed the government at times, they also have rallied to it. Such a pattern suggests that the Arabs have followed their time-honored prescription of keeping the state off balance to ensure maximum freedom of action.

Sara: Sedentary Peoples of the Soudanian Zone

The essential social unit of Sara society is the lineage. Called the *qir ka* among the eastern Sara, *qin ka* among those of the center, and *qel ka* among the western subgroups, the term actually refers to the male ancestor from whom members of the lineage believe they descend. Within the context of the *qir ka*, an individual identifies patrilineally. Legal identity and rights to land are determined

by membership in the patrilineage. The mother's lineage, however, is not disregarded; it may offer shelter and support, when the individual is cut off from the paternal lineage, or benefit from certain kinds of labor obligations.

Although the basic social group is the lineage, the basic residential unit is the village. In general, local government takes two forms. If the villagers all belong to the same lineage, the village is governed by lineage institutions whereby the elders make important decisions, preside over important cultural rites (such as manhood initiation), and play an important role in agricultural rituals. If villagers are divided among several lineages, however, elders from the different groups may meet together to resolve common problems. In such encounters, elders of the lineage that first settled the territory preside as "first among equals."

During the colonial era, the French superimposed a territorially based administration over precolonial Sara social and political institutions. On the local level, this took the form of the canton (or county). The canton was headed by a chief named by the central government, who in turn named "village chiefs." Although candidates for such positions existed among the traditional Sara authorities, the French generally preferred to appoint collaborators who had no independent base of support. Apart from creating new political structures, the French also sought to reorganize Sara society spatially. They forced people to regroup in more compact villages along roads, causing lineages to abandon traditional lands. Despite considerable initial resistance, the colonial administration eventually succeeded in imposing these new settlement patterns and new chiefs, thus undermining Sara political and social structures. Since independence, efforts by the Chadian government to centralize authority have continued. Nonetheless, Sara institutions have retained influence, and the Sara have added new structures to reinforce Sara solidarity.

Religion

The separation of religion from social structure in Chad represents a false dichotomy, for they are perceived as two sides of the same coin. Three religious traditions coexist in Chad—classical African religions, Islam, and Christianity. None is monolithic. The first tradition includes a variety of ancestor and/or place-oriented religions whose expression is highly specific. Islam, although characterized by an orthodox set of beliefs and observances, also is expressed in diverse ways. Christianity arrived in Chad much more recently with the arrival of Europeans. Its followers are divided into Roman Catholics and Protestants (including

several denominations); as with Chadian Islam, Chadian Christianity retains aspects of pre-Christian religious belief.

The number of followers of each tradition in Chad is unknown. Estimates made in 1962 suggested that 35 percent of Chadians practiced classical African religions, 55 percent were Muslims, and 10 percent were Christians. In the 1970s and 1980s, this distribution undoubtedly changed. Observers report that Islam has spread among the Hajerai and among other non-Muslim populations of the Saharan and *sahelian* zones. However, the proportion of Muslims may have fallen because the birthrate among the followers of classical religions and Christians in southern Chad is thought to be higher than that among Muslims. In addition, the upheavals since the mid-1970s have resulted in the departure of some missionaries; whether or not Chadian Christians have been numerous enough and organized enough to have attracted more converts since that time is unknown.

Classical African Religions

Classical African religions regard the world as a product of a complex system of relationships among people, living and dead, and animals, plants, and natural and supernatural phenomena. This religious tradition is often called "animism" because of its central premise that all things are "animated" by life forces. The relationships among all things are ordered and often hierarchical. Human societies reflect this order, and human survival and success require that it be maintained. Antisocial acts or bad luck signal that this harmony has been upset, leading to efforts to restore it through ritual acts, such as prayers, sacrifices, libations, communions, dances, and symbolic struggles. Such intervention, it is believed, helps ward off the chaos that adversely affects people and their souls, families and communities, and crops and harvests.

Ancestors play an important role in Chadian classical religions. They are thought to span the gap between the supernatural and natural worlds. They connect these two worlds specifically by linking living lineage members with their earliest forebears. Because of their proximity, and because they once walked among the living, ancestors are prone to intervene in daily affairs. This intervention is particularly likely in the case of the recently deceased, who are thought to spend weeks or months in limbo between the living and the dead. Many religious observances include special rituals to propitiate these spirits, encourage them to take their leave with serenity, and restore the social order their deaths have disrupted.

Spirits are also numerous. These invisible beings inhabit a parallel world and sometimes reside in particular places or are associated

with particular natural phenomena. Among the Mbaye, a Sara subgroup, water and lightning spirits are thought to bring violent death and influence other spirits to intervene in daily life. The sun spirit, capable of rendering service or causing harm, also must be propitiated. Spirits may live in family groups with spouses and children. They are also capable of taking human, animal, or plant forms when they appear among the living.

The supernatural powers that control natural events are also of major concern. Among farming peoples, rituals to propitiate such powers are associated with the beginning and end of the agricultural cycle. Among the Sara, the new year begins with the appearance of the first new moon following the harvest. The next day, people hunt with nets and fire, offering the catch to ancestors. Libations are offered to ancestors, and the first meal from the new harvest is consumed.

Among the more centralized societies of Chad, the ruler frequently is associated with divine power. Poised at the apex of society, he or (more rarely) she is responsible for good relations with the supernatural forces that sanction and maintain the social order. For example, among the Moundang, the *gon lere* of Léré is responsible for relations with the sky spirits. And among the Sara Madjingay, the *mbang* (chief) of the village of Bédaya controls religious rituals that preserve and renew the social order. Even after the coming of Islam, the symbols of such authority reinforced the rulers of nominally Islamic states such as Wadai, Kanem-Borno, and Bagirmi.

Finally, most classical African religions involve belief in a supreme being who created the world and its inhabitants but who then retired from active intervention in human affairs. As a result, shrines to a high god are uncommon, and people tend to appeal to the lesser spirits; yet the notion of a supreme being may have helped the spread of Christianity. When missionaries arrived in southern Chad, they often used the local name of this high god to refer to the Christian supreme being. Thus, although a much more interventionist spirit, the Christian god was recognizable to the people. This recognition probably facilitated conversion, but it may also have ironically encouraged syncretism (the mixing of religious traditions), a practice disturbing to many missionaries and to Protestants in particular. Followers of classical African religions would probably not perceive any necessary contradiction between accepting the Christian god and continuing to believe in the spirits just described.

Because order is thought to be the natural, desirable state, disorder is not happenstance. Classical African religions devote

considerable energy to the maintenance of order and the determination of who or what is responsible for disorder. In the case of illness, for example, it is of the greatest importance to ascertain which spirit or which person is responsible for undermining the natural order; only then is it possible to prescribe a remedy. In such circumstances, people frequently take their cases to ritual specialists, who divine the threats to harmony and recommend appropriate action. Such specialists share their knowledge only with peers. Indeed, they themselves have probably acquired such knowledge incrementally as they made their way through elaborate apprenticeships.

Although classical African religions provide institutionalized ways of maintaining or restoring community solidarity, they also allow individuals to influence the cosmic order to advance their own interests. Magic and sorcery both serve this end. From society's standpoint, magic is positive or neutral. On the one hand, magicians try to influence life forces to alter the physical world, perhaps to bring good fortune or a return to health. Sorcerers, on the other hand, are antisocial, using sorcery (or "black magic") to control or consume the vital force of others. Unlike magicians, whose identity is generally known, sorcerers hide their supernatural powers, practicing their nefarious rites in secret. When misfortune occurs, people often suspect that sorcery is at the root of their troubles. They seek counsel from diviners or magicians to identify the responsible party and ways to rectify the situation; if the disruption is deemed to threaten everyone, leaders may act on behalf of the community at large. If discovered, sorcerers are punished.

The survival of any society requires that knowledge be passed from one generation to another. In many Chadian societies, this transmission is marked by ritual. Knowledge of the world and its forces is limited to adults; among the predominantly patrilineal societies of Chad, it is further limited to men in particular. Rituals often mark the transition from childhood to adulthood. However, they actively "transform" children into adults, teaching them what adults must know to assume societal responsibilities.

Although such rites differ among societies, the Sara *yondo* may serve as a model of male initiation ceremonies found in Chad. The *yondo* takes place at a limited number of sites every six or seven years. Boys from different villages, usually accompanied by an elder, gather for the rites, which, before the advent of Western education with its nine-month academic calendar, lasted several months. In recent decades, the *yondo* has been limited to several weeks between academic years.

The *yondo* and its counterparts among other Chadian societies reinforce male bonds and male authority. Women are not allowed to witness the rite. Their initiated sons and brothers no longer eat with them and go to live in separate houses. Although rites also mark the transition to womanhood in many Chadian societies, such ceremonies are much shorter. Rather than encouraging girls to participate in the larger society, they stress household responsibilities and deference to male authority.

Islam

Tenets of Islam

“Islam” means submission to the will of God, and a Muslim is one who submits. In A.D. 610, Muhammad, an Arabian merchant of Mecca, revealed the first in a series of revelations granted him by God (Allah, in Arabic) through the archangel Gabriel. Later known simply as the Prophet, Muhammad denounced the polytheism of his fellow Meccans and preached a new order that would reinforce community solidarity. His censure of the emerging individualistic, mercantile society in Mecca eventually provoked a split in the community. In A.D. 622, Muhammad and his followers fled northwest to Yathrib, a settlement that has since come to be known simply as Medina, or “the city.” This journey (called the *hijra*, or the flight) marks the beginning of the Islamic Era. The Muslim lunar calendar begins with this event, so that its year 1 corresponds to A.D. 622. (However, the solar and Muslim calendars are separated by more than 622 years; a lunar year has an average of 354 days and thus is considerably shorter than the 365-day solar year.) In Medina, the Prophet continued his preaching. Eventually defeating his detractors in battle, Muhammad became the temporal and spiritual leader of most of Arabia by the time of his death in A.D. 632.

In the decades after his death, Muhammad’s followers collected his revelations into a single book of recitations called the Quran. During the same period, some of his close associates collected and codified the Prophet’s sayings, as well as accounts of his behavior, to serve as guides for future generations. These compilations are called the *hadith*, or “sayings,” which, along with the Quran, are central to Islamic jurisprudence.

The *shahada* (or profession of faith) states the central belief of Islam: “There is no god but God (Allah), and Muhammad is his Prophet.” This simple testimony is repeated on many ritual occasions. When recited with conviction, it signals conversion.



*Muslim children at a Quranic school
Courtesy United Nations*

The duties of a Muslim form the five pillars of the faith. These are recitation of the *shahada*, daily prayer (*salat*), almsgiving (*zakat*), fasting (*sawm*), and, if possible, making the pilgrimage to Mecca (*hajj*).

Islam in Chad

Islam became a dynamic political and military force in the Middle East in the decades immediately following Muhammad's death. By the late seventh century A.D., Muslim conquerors had reached North Africa and moved south into the desert. Although it is difficult to date the arrival and spread of Islam in Chad, by the time Arab migrants began arriving from the east in the fourteenth century, the faith was already widespread. Instead of being the product of conquest or the imposition of political power, Islamization in Chad was gradual, the effect of the slow spread of Islamic civilization beyond its political frontiers.

Islam in Chad has adapted to its local context in many ways. For one thing, despite the presence of a large number of Arabs, Arabic is not the maternal language of the majority of Chadian Muslims. As a result, although many Chadian Muslims have attended Quranic schools, they often have learned to recite Quranic verses without understanding their meaning. Hence, perhaps even more than among those who understand Arabic, the recitation of

verse has taken on a mystical character among Chadian Muslims. Islam in Chad also is syncretic. Chadian Muslims have retained and combined pre-Islamic with Islamic rituals and beliefs. Moreover, Islam in Chad was not particularly influenced by the great mystical movements of the Islamic Middle Ages or the fundamentalist upheavals that affected the faith in the Middle East, West Africa, and Sudan. Beginning in the Middle East in the thirteenth century, Muslim mystics sought to complement the intellectual comprehension of Islam with direct religious experience through prayer, contemplation, and action. The followers of these mystics founded brotherhoods (*turuq*; sing., *tariqa*), which institutionalized their teachers' interpretations of the faith. Such organizations stimulated the spread of Islam and also provided opportunities for joint action, for the most part, which was not the case in Chad, where only two brotherhoods exist. Perhaps as a result of prolonged contact with West African Muslim traders and pilgrims, most Chadian Muslims identify with the Tijaniyya order, but the brotherhood has not served as a rallying point for unified action. Similarly, the Sanusiyya, a brotherhood founded in Libya in the mid-nineteenth century, enjoyed substantial economic and political influence in the Lake Chad Basin around 1900. Despite French fears of an Islamic revival movement led by "Sanusi fanatics," Chadian adherents, limited to the Awlad Sulayman Arabs and the Toubou of eastern Tibesti, have never been numerous.

Chapelle writes that even though Chadian Islam adheres to the Maliki legal school (which, like the other three accepted schools of Islamic jurisprudence, is based on an extensive legal literature), most Islamic education relies solely on the Quran. Higher Islamic education in Chad is all but nonexistent; thus, serious Islamic students and scholars must go abroad. Popular destinations include Khartoum and Cairo, where numerous Chadians attend Al Azhar, the most renowned university in the Islamic world.

Chadian observance of the five pillars of the faith differs somewhat from the orthodox tradition. For example, public and communal prayer occurs more often than the prescribed one time each week but often does not take place in a mosque. Moreover, Chadian Muslims probably make the pilgrimage less often than, for example, their Hausa counterparts in northern Nigeria. As for the Ramadan fast, the most fervent Muslims in Chad refuse to swallow their saliva during the day, a particularly stern interpretation of the injunction against eating or drinking between sunrise and sunset.

Finally, Chadian Islam is not particularly militant. Even if young Muslims in urban areas are aware of happenings in other parts

of the Islamic world, they have not responded to fundamentalist appeals.

Christianity

Christianity arrived in Chad in the twentieth century, shortly after the colonial conquest. Contrary to the dominant pattern in some other parts of Africa, however, where the colonial powers encouraged the spread of the faith, the earliest French officials in Chad advised against it. This recommendation, however, probably reflected European paternalism and favoritism toward Islam rather than a display of liberalism. In any case, the French military administration followed such counsel for the first two decades of the century, the time it took to conquer the new colony and establish control over its people. Following World War I, however, official opposition to Christianity softened, and the government tolerated but did not sponsor missionaries.

Since World War II, Chadian Christians have had a far greater influence on Chadian life than their limited numbers suggest. The missions spread the ideology of Westernization—the notion that progress depended on following European models of development. Even more specifically, Roman Catholic mission education spread the French language. Ironically, even though Islam spread more quickly and more widely than Christianity, Christians controlled the government that inherited power from the French. These leaders imparted a Western orientation that continued to dominate in the 1980s.

Protestantism in Chad

The Protestants came to southern Chad in the 1920s. American Baptists were the first, but missionaries of other denominations and nationalities soon followed. Many of the American missions were northern offshoots of missionary networks founded farther south in the Ubangi-Chari colony (now Central African Republic) of French Equatorial Africa (Afrique Equatoriale Française—AEF; see Glossary). The organizational ties between the missions in southern Chad and Ubangi-Chari were strengthened by France's decision in 1925 to transfer Logone Occidental, Tandjilé, Logone Oriental, and Moyen-Chari prefectures to Ubangi-Chari, where they remained until another administrative shuffle restored them to Chad in 1932.

These early Protestant establishments looked to their own churches for material resources and to their own countries for diplomatic support. Such independence allowed them to maintain a distance from the French colonial administration. In addition, the

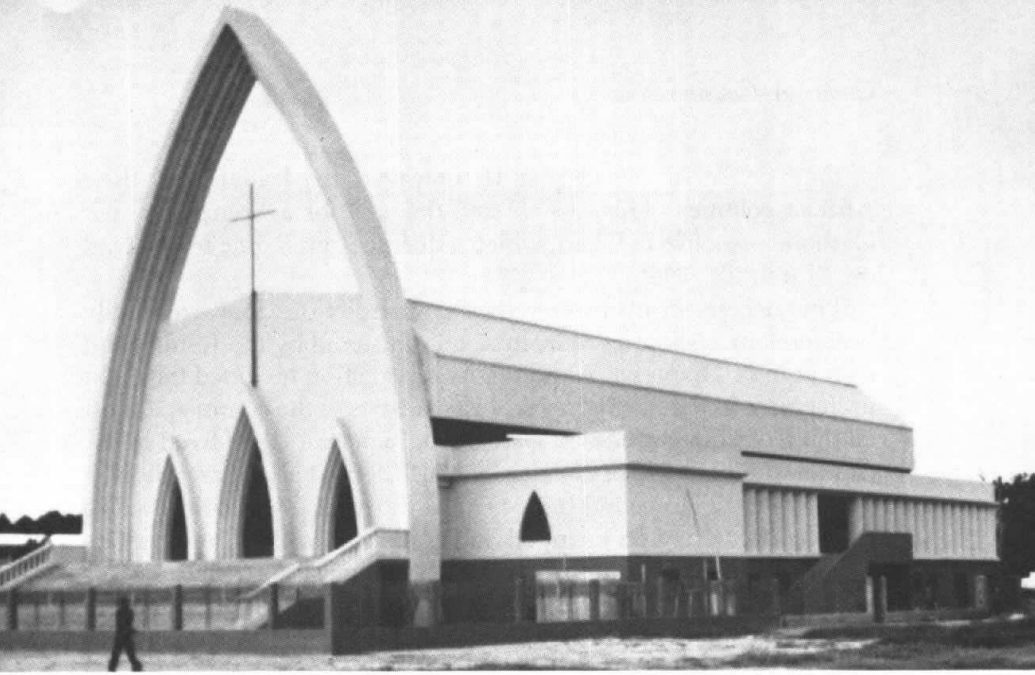
missionaries arrived with their wives and children, and they often spent their entire lives in the region. This family-based expansion of the missionary networks was not peculiar to Chad in the 1920s. Some of the missionaries who arrived at that time had grown up with missionary parents in missions founded earlier in the French colonies to the south. Some missionary children from this era later founded missions of their own. Many remained after independence, leaving only in the early and or mid-1970s when Tombalbaye's *authenticité* movement forced their departure (see Fall of the Tombalbaye Government, ch. 1).

The puritanical message preached by many Protestant missionaries undermined the appeal of the faith. Rather than allowing a local Christian tradition to develop, the missionaries preached a fundamentalist doctrine native to parts of the United States. They inveighed against dancing, alcohol, and local customs, which they considered "superstitions." New converts found it almost impossible to observe Protestant teachings and remain within their communities. In the early years, Chadian Protestants often left their villages and settled around the missions. But abandoning village and family was a sacrifice that most people were reluctant to make.

Although language and doctrine probably discouraged conversion, the educational and medical projects of the Protestant missions probably attracted people. The missionaries set up schools, clinics, and hospitals long before the colonial administration did. In fact, the mission schools produced the first Western-educated Chadians in the 1940s and 1950s. In general, the Protestant missionary effort in southern Chad has enjoyed some success. In 1980, after a half-century of evangelization, Protestants in southern Chad numbered about 80,000.

From bases in the south, Protestants founded missions in other parts of Chad. For the most part, they avoided settling among Muslims, who were not responsive to their message. In the colonial capital of Fort-Lamy (present-day N'Djamena), the missions attracted followers among resident southerners. The missionaries also proselytized among the non-Muslim populations of Guéra, Ouaddaï, and Biltine prefectures. Although Christianity appealed to some in the capital (there were estimated to be 18,000 Christians in N'Djamena in 1980), efforts in other parts of the Sahel were relatively unsuccessful.

In the late 1980s, the future of the Protestant missions in Chad remained unclear. As noted, many Protestant missionaries were forced to leave the country during the cultural revolution in the early and mid-1970s. Outside the south, other missions have been caught in the cross fire of warring factions. Rebel forces have



*The Roman Catholic cathedral in N'Djamena, which was rebuilt in the 1980s following severe war damage
Courtesy Audrey Kizziar*

pillaged mission stations, and the government has accused the missionaries of complicity with the opposition.

Roman Catholicism in Chad

The Roman Catholic missions came to Chad later than their Protestant counterparts. Isolated efforts began as early as 1929 when The Holy Ghost Fathers from Bangui founded a mission at Kou, near Moundou in Logone Occidental Prefecture. In 1934, in the midst of the sleeping sickness epidemic, they abandoned Kou for Doba in Logone Oriental Prefecture. Other priests from Ubangi-Chari and Cameroon opened missions in Kélo and Sarh in 1935 and 1939, respectively.

In 1946 these autonomous missions gave way to an institutionalized Roman Catholic presence. This late date had more to do with European politics than with events in Chad. Earlier in the century, the Vatican had designated the Chad region to be part of the Italian vicarate of Khartoum. Rather than risk the implantation of Italian missionaries during the era of Italian dictator Benito Mussolini, the French administration discouraged all Roman Catholic missionary activity. For its part, the Vatican adopted the same tactic, not wishing to upset the Italian regime by transferring jurisdiction of the Chad region to the French. As a consequence

of their defeat in World War II, however, the Italians lost their African colonies. This loss cleared the way for a French Roman Catholic presence in Chad, which a decree from Rome formalized on March 22, 1946.

This decree set up three religious jurisdictions that eventually became four bishoprics. The first, administered by the Jesuits, had its seat in N'Djamena. Although its jurisdiction included the eight prefectures in the northern and eastern parts of the country, almost all the Roman Catholics in *sahelian* and Saharan Chad lived in the capital. The diocese of N'Djamena also served as the archdiocese of all Chad. The second bishopric, at Sarh, also was delegated to the Jesuits. Its region included Salamat and Moyen-Chari prefectures. The third and fourth jurisdictions had their headquarters in Pala and Moundou and were delegated to the Oblats de Marie and Capuchin orders. The Pala bishopric served Mayo-Kebbi Prefecture, while the bishopric of Moundou was responsible for missions in Logone Occidental and Logone Oriental prefectures. By far the most important jurisdiction in 1970, Pala included 116,000 of Chad's 160,000 Catholics.

The relatively slow progress of the Roman Catholic Church in Chad has several causes. Although Roman Catholicism has been much more open to local cultures than Protestantism, the doctrine of celibacy probably has deterred candidates for the priesthood. Insistence on monogamy also has undoubtedly made the faith less attractive to some potential converts, particularly wealthy older men able to afford more than one wife.

The social works of the Roman Catholic Church have made it an important institution in Chad. Like their Protestant counterparts, the Roman Catholic missions have a history of social service. In the 1970s, along with priests, the staffs of most establishments included brothers and nuns who worked in the areas of health, education, and development. Many of the nuns were trained medical professionals who served on the staffs of government hospitals and clinics. It was estimated that 20,000 Chadians attended Roman Catholic schools in 1980. Adult literacy classes also reached beyond the traditional school-aged population. In the area of development, as early as the 1950s Roman Catholic missions in southern Chad set up rural development centers whose clientele included non-Christians as well as Christians.

Education

The establishment of Protestant mission schools in southern Chad in the 1920s, followed by Roman Catholic and colonial state establishments in later decades, marked the beginning of Western

education in Chad. From the outset, the colonial administration required that all instruction be in French, with the exception of religion classes, which could be taught in local languages. As early as 1925, the state imposed a standard curriculum on all institutions wishing official recognition and government subsidies. The state thus extended its influence to education, even though the majority of Chadian students attended private mission schools before World War II.

Education in Chad has focused on primary instruction. Until 1942 students who desired a secular secondary education had to go to schools in Brazzaville, the capital of the AEF. This restriction obviously limited the number of secondary-school students. Between World War I and World War II, only a dozen Chadians studied in Brazzaville. Once in Brazzaville, students received technical instruction rather than a liberal arts education, entering three-year programs designed to produce medical aides, clerks, or low-level technicians. State secondary schools were opened in Chad in 1942, but recognized certificate programs did not begin until the mid-1950s.

At independence in 1960, the government established a goal of universal primary education, and school attendance was made compulsory until age twelve. Nevertheless, the development of standard curricula was hampered by the limited number of schools, the existence of two- and three-year establishments alongside the standard five- and seven-year *collèges* and lycées, and the Muslim preference for Quranic education. Even so, by the mid-1960s 17 percent of students between the ages of six and eight were in school. This number represented a substantial increase over the 8 percent attending school in the mid-1950s and the 1.4 percent immediately after World War II. Although the academic year in Chad parallels the French schedule, running from October to June, it is not particularly appropriate for a country where the hottest part of the April and May.

Quranic schools throughout the Saharan and *sahelian* zones teach students to read Arabic and recite Quranic verse. Although traditional Islamic education at the secondary level has existed since the nineteenth century, students seeking advanced learning generally have studied in northern Cameroon, Nigeria, Sudan, or the Middle East. In Chad, modern Islamic secondary schools have included the Ecole Mohamed Illech, founded in 1918 and modeled after Egyptian educational institutions. Other schools included the Lycée Franco-Arabe, founded by the colonial administration in Abéché in 1952. The lycée offered a blend of Arabic, Quranic, and secular French education. Numerous observers believed that

although the creation of a French-Islamic program of study was commendable, the administration's major objective was to counter foreign Islamic influence rather than to offer a viable alternative curriculum.

Despite the government's efforts, overall educational levels remained low at the end of the first decade of independence. In 1971 about 88 percent of men and 99 percent of women older than age fifteen could not read, write, or speak French, at the time the only official national language; literacy in Arabic stood at 7.8 percent. In 1982 the overall literacy rate stood at about 15 percent.

Major problems have hindered the development of Chadian education since independence. Financing has been very limited. Public expenditures for education amounted to only 14 percent of the national budget in 1963. Expenditures increased over the next several years but declined at the end of the decade. In 1969 funding for education dropped to 11 percent of the budget; the next year it declined still further to 9 percent. In the late 1980s, the government allotted only about 7 percent of its budget to education, a figure lower than that for all but a few African countries.

Limited facilities and personnel also have made it difficult for the education system to provide adequate instruction. Overcrowding is a major problem; some classes have up to 100 students, many of whom are repeaters. In the years just after independence, many primary-school teachers had only marginal qualifications. On the secondary level, the situation was even worse; at the end of the 1960s, for example, the Lycée Ahmad Mangué in Sarh (formerly Fort-Archambault) had only a handful of Chadians among its several dozen faculty members. During these years, Chad lacked sufficient facilities for technical and vocational education to train needed intermediate-level technicians, and there was no university.

In the 1970s and 1980s, Chad made considerable progress in dealing with problems of facilities and personnel. To improve instruction, review sessions and refresher programs have been instituted for primary-school teachers. On the secondary level, increasing numbers of Chadians have taken their places in the ranks of the faculty. Furthermore, during the 1971-72 school year, the Université du Tchad opened its doors.

Another problem at independence was that the French curricula of Chadian schools limited their effectiveness. Primary instruction was in French, although most students did not speak that language when they entered school, and teaching methods and materials were often poorly suited to the rural settings of most schools. In addition, the academic program inherited from the French did not prepare students for employment options in Chad. Beginning in the

late 1960s, the government attempted to address these problems. A number of model schools discarded the French style of a formal, classical education in favor of a new approach that taught children to reinterpret and modify their social and economic environment. Rather than teaching French as it was taught in French schools to French children, the model schools taught it more appropriately as a foreign language. These new schools also introduced basic skills courses in the fourth year of primary school. Students who would probably not go on to secondary school were given the chance to attend agricultural training centers.

Unfortunately, all of the preceding problems were complicated by a fourth difficulty: the Chadian Civil War. Little has been written specifically about how this conflict has disrupted education, but several effects can reasonably be surmised. Lack of security in vast parts of the country undoubtedly has made it difficult to send teachers to their posts and to maintain them there, which has been particularly problematic because as government employees, teachers often have been identified with government policies. In addition, the mobility occasioned by the war has played havoc with attempts to get children to attend classes regularly. The diversion of resources to the conflict has also prevented the government from maintaining the expenditure levels found at independence, much less augmenting available funds. Finally, the violence has taken its toll among teachers, students, and facilities. One of the more dramatic instances of this was the destruction and looting of primary schools, lycées, and even the national archives attached to the Université du Tchad during the battles of N'Djamena in 1979 and 1980.

To its credit, the government has made major efforts to overcome these problems. In 1983 the Ministry of Planning and Reconstruction reported that the opening of the 1982-83 school year was the most successful since the upheavals of 1979. In 1984 the Université du Tchad, the Ecole Nationale d'Administration, and the Ecole Nationale des Travaux Publics reopened their doors as well.

In the late 1980s, the Ministry of Education had administrative responsibility for all formal schooling. Because of years of civil strife, however, local communities had assumed many of the ministry's functions, including the construction and maintenance of schools, and payment of teachers' salaries.

Primary Education

In the late 1980s, primary education in Chad consisted of a six-year program leading to an elementary school certificate. In the south, most students began their studies at the age of six; in the north, they tended to be somewhat older. With the exception of

schools that followed experimental programs, the curriculum adhered to the French model. Courses included reading, writing, spelling, grammar, mathematics, history, geography, science, and drawing.

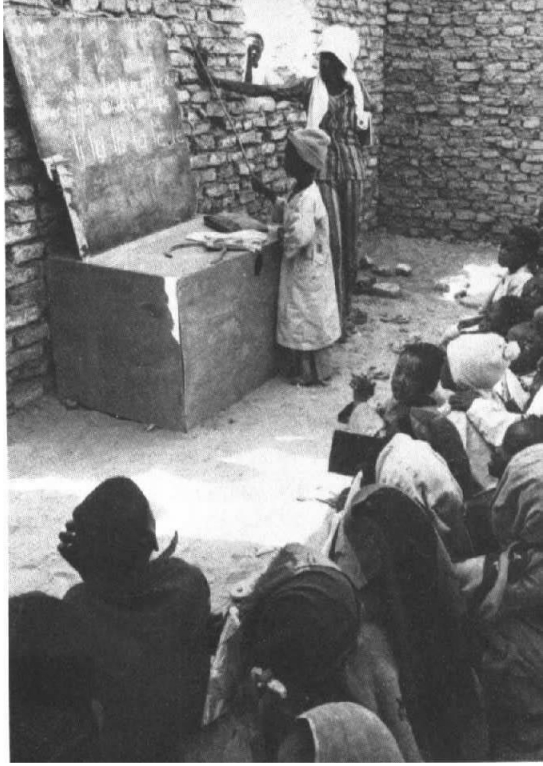
Primary-school enrollment for the 1986-87 school year was more than 300,000 students. There were 6,203 instructors teaching in 1,650 schools, but 10 percent of the instructors were in nonteaching positions, yielding a pupil-to-teacher ratio of about sixty to one. Only about 40 percent of all primary-school-aged children attended class, and attendance was much greater in the south than in the Sahel or in the northern parts of the country (see table 2, Appendix A). Approximately 2.8 percent of primary-school children were enrolled in private schools, and most of these were in Roman Catholic mission schools concentrated in the south or near the capital.

Secondary Education

In 1983 secondary education in Chad continued to follow French models. Primary-school graduates competed for entrance into two types of liberal arts institutions, the *collège d'enseignement général* (called a *collège*, or CEG) or the *lycée*. The *collège* offered a four-year course of study, and the *lycée* offered a seven-year program. In both institutions, students took a general examination at the end of four years. *Collège* students who passed could be allowed to transfer to a *lycée* to complete their studies; successful *lycée* students continued at their institutions. At the end of seven years of secondary education, all students took comprehensive exams for the baccalaureate degree, called the *bac*, a requirement for admission to a university.

Students with primary-school certificates interested in teaching careers could enroll in a *collège* or *lycée*, or they could enter a teacher training school. The normal school program was six years long. The first four years were devoted to general education, much the same as at the *collège* or *lycée*, and the last two years concentrated on professional training. Students finishing this course were awarded an elementary-level teaching certificate. In 1986-87 Chad had sixty-one *collèges* and *lycées*. More than half of these schools were located in the N'Djamena area. There were 43,357 secondary students enrolled in the 1986-87 school year. In the 1983-84 school year, 5,002 *collège* students took the exam, with a success rate of 43.5 percent, or 2,174 students; 3,175 students took the *bac*, and 36.9 percent, or 1,173 students, passed. Although still low, the numbers of examination candidates suggested major improvements over 1960, when 2,000 students attended general secondary schools, and over 1968-69, when enrollment stood at 8,724. Finally, during the

*A primary school in a
bombed-out building in
Kanem Prefecture
Courtesy UNICEF
(Maggie Murray-Lee)*



1986–87 school year, Chad had five institutions for training primary-school teachers, with a enrollment of 1,020 students.

Higher Education

When the country became independent in 1960, Chad had no university. For the first decade of the nation's life, students who wished to study beyond the secondary level had to go abroad. In the 1966–67 school year, eighty-three Chadians were studying outside the country; the following year, this number rose to 200. In the early years, almost all students seeking advanced education were male. The largest number went to France (30 percent in the academic year 1966–67, for example), but some Chadians studied in Belgium, Senegal, Côte d'Ivoire, and Congo. At that time, most students were pursuing degrees in education, liberal arts, agriculture, and medicine.

Pursuant to an agreement with France, the Université du Tchad opened in the 1971–72 academic year. Financed almost entirely through French assistance, the faculty of 25 welcomed 200 students the first year. By the 1974–75 academic year, enrollment had climbed to 500, and the university graduated its first class of 45. The imposition of compulsory *yondo* rites greatly disrupted the following school year, but after the overthrow of Tombalbaye and the end of the *authenticité* movement, the university continued to grow (see Classical African Religions, this ch.). Enrollment rose

from 639 in 1976–77 to a high of 1,046 in 1977–78. Enrollment then dropped slightly to 974 in 1978–79. Unfortunately, the Chadian Civil War curtailed university activities in 1979 and 1980, when the first and second battles of N'Djamena threatened facilities and students alike. With the return of relative calm in the early 1980s, the university reopened. In 1983–84 the university had 141 teachers and 1,643 students.

In addition to the university, higher learning in Chad included one advanced teacher-training institution, the Ecole Normale Supérieure, which trained secondary-school instructors. Enrollment in the 1982–83 and 1983–84 school years came to about 200 students. Degree programs included history-geography, modern literature, English and French, Arabic and French, mathematics and physics, and biology-geology-chemistry.

Vocational Education

In 1983 vocational education was offered at three *lycées techniques industriels* (in Sarh, N'Djamena, and Moundou), and the Collège d'Enseignement Technique in Sarh. Enrollment figures for three of the four technical schools stood at 1,490 in 1983.

Primary-school graduates interested in technical or vocational training could follow two courses. They either could enter a first-level, three-year program (*premier cycle*) at a *collège* (after which they could transfer to one of the four technical schools) or they could enroll directly in one of the lycées for a six-year program. Students completing the three-year *premier cycle* received professional aptitude certificates; those finishing the entire six-year course were awarded diplomas.

Apart from the *lycées techniques*, several other institutions offered vocational training in Chad in the early 1980s. These included the Ecole Nationale d'Administration, which opened in 1963 in N'Djamena; a postal and telecommunications school in Sarh; a school for technical education related to public works; and the Ba-Illi agricultural school. Other Chadians studied at technical training centers abroad.

In the late 1980s, advanced medical education was not available in Chad. The only medical training institution was the National School of Public Health and Social Work (Ecole Nationale de Santé Publique et de Service Social—ENSPSS) in N'Djamena. Its enrollment, however, has been very limited; in 1982 there were only twenty-eight students in nursing, three in social work, and thirty-three in public health.

Health and Medical Services

A range of diseases afflicts the populace of Chad. In 1983 infectious and parasitic diseases were the most prevalent ailments, followed by respiratory afflictions and nervous disorders. In 1988 a severe epidemic of meningitis affected N'Djamena, in particular. By 1987 only one case of acquired immune deficiency syndrome (AIDS) had been reported to the World Health Organization; however, it was likely that incidence of the disease was many times higher, especially in the southern areas near Cameroon and Central African Republic.

By the early 1960s, the government made a substantial effort to extend the country's limited health infrastructure. Despite the ensuing civil conflict, the government has attempted to maintain and expand health services. Foreign assistance has allowed the construction of new buildings and the renovation of existing facilities, as well as the laying of groundwork for training health care professionals.

By the early 1980s, health facilities included five hospitals (at N'Djamena, Sarh, Moundou, Abéché, and a locality in Mayo-Kebbi Prefecture). Two polyclinics served the population of the capital region. Medical centers numbered 18, and there were 20 infirmaries and 127 dispensaries. Private medical facilities numbered seventy-five, and twenty social centers administered to the needs of Chadians in all prefectures except Biltine and Borkou-Ennedi-Tibesti.

Despite apparent progress in health care delivery, it is difficult to determine if growth in the number of facilities represented an increased capacity or merely a reorganization and reclassification of health establishments. The only data available in 1988, for example, showed that despite the increase in numbers of units, the hospitals, medical centers, and infirmaries increased the number of beds by only 238 more than the number recorded in 1971. Modern health care was also very unevenly distributed. Such facilities in Chad have long been concentrated in the south and remained so in 1983. For example, eleven of the eighteen medical centers were found there, along with three of the five hospitals, and private care followed the same pattern, with sixty-four of seventy-five centers in the southern prefectures. In theory, therefore, people in the less populated *sahelian* and Saharan regions had to travel very long distances for modern medical care. In fact, distance, lack of transportation, and civil conflict probably discouraged most people from making the effort.

A continuing shortage of trained medical personnel has compounded the difficulty of providing adequate, accessible health facilities. In 1983 Chad's medical system employed 42 Chadian doctors, 8 pharmacists, a biologist, 87 registered nurses, 583 practical

nurses, 59 nurses specializing in childbirth, 22 midwives, 19 health inspectors, and 99 public health agents. Foreign assistance provided another 41 doctors, 103 nurses, and 2 midwives.

More detailed information concerning health care in Chad was unavailable in the late 1980s, largely because of the Chadian Civil War, which had disrupted government services for many years. As a result of this conflict, there were probably fewer health personnel in the late 1980s than earlier in the decade, particularly in the *sahelian* and Saharan zones, where nurses abandoned rural infirmaries. Mortality levels in Chad have been high for a long time, but the war may have reversed the limited progress made in the 1960s in dealing with the country's many health problems. Although the conflict was far from resolved in the late 1980s, the Habré government had been much more successful than its predecessors in consolidating control over the *sahelian* and Saharan regions of the country where modern health care has been the least available. Although resources remained scarce, greater international attention to Chad's plight produced more foreign assistance than in the past.

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In the late 1980s, reliable studies on Chad in English remained scarce. For a useful general study of Chad, the reader should consult Jean Chapelle's *Le peuple tchadien: ses racines et sa vie quotidienne*. A slightly more recent study, *Tchad: la genèse d'un conflit* by Christian Bouquet, covers some of the same ground but focuses on the context of Chadian underdevelopment and civil conflict. The much drier volume, *Le Tchad* by Jean Cabot and Christian Bouquet, offers a more detailed survey of the physical environment. In English, Dennis D. Cordell's *Dar al-Kuti and the Last Years of the Trans-Saharan Slave Trade* analyzes Chad's role in Saharan commerce, the Muslim slave trade, and the expanding Islamic world of the nineteenth century. Finally, Samuel Decalo's *Historical Dictionary of Chad* is one of the very few general references to the country in English.

There are a number of good regional studies of Chadian society and religion. Basic literature on the Sara of the *soudanian* zone includes Robert Jaulin's controversial *La mort sara*, a study of the *yondo*; Jean-Pierre Magnant's important *La terre sara, terre tchadienne*; and Françoise Dumas-Champion's *Les Masa du Tchad*. Annie M.D. Lebeuf's *Les principautés Kotoko* remains the essential study of the Kotoko. Albert Le Rouvreur's *Sahéliens et sahariens du Tchad* surveys the northern two-thirds of the country. Within this region, basic reading should include Jean Chapelle's now-classic *Nomads*

noirs du Sahara, a study of the Teda and Daza; Jean-Claude Zeltner's *Les Arabes dans la région du Lac Tchad*; and Dennis D. Cordell's "The Awlad Sulayman of Libya and Chad," in *Canadian Journal of African Studies*. In *Survivances pré-islamiques en pays zaghawa*, Marie-José Tubiana analyzes the retention of pre-Islamic beliefs and practices in eastern Chad. In *Pilgrims in a Strange Land*, John A. Works, Jr. has written a good study of Hausa communities in Chad and their role in the spread of Islam. (For further information and complete citations, see Bibliography.)

Chapter 3. The Economy



Typical Chadian village, with grass huts and large earthen pots for storing grain

WHEN FRANCE GRANTED INDEPENDENCE to Chad in 1960, it left the new government with an essentially traditional economy, having a small industrial sector, an agricultural sector dominated by cotton, and an inadequate transportation sector. Moreover, the country had few trained technicians or capable administrators. In spite of well-intentioned efforts by a series of civilian and military governments, throughout the 1970s and 1980s, the combination of prolonged civil strife, chronic drought, and political uncertainty aborted most progress.

By the late 1980s, even though there had been a lull in the fighting, better rains, and a modicum of political stability, Chad was still one of the poorest countries on earth and one of the least endowed with resources. The economy had not improved appreciably since independence and, by some measurements, was probably worse than in 1960. Reliant on foreign aid and vulnerable to the uncontrollable forces of the international cotton market, Chad could hope to make only incremental gains in its quest to achieve a viable, self-sustaining economy.

Growth and Structure of the Economy

Chad's remoteness, its inadequate infrastructure, its recent history of war, drought, and famine, and its dependency on a single cash crop—cotton—for export earnings made it one of the poorest nations of the world. In the mid-1980s, Chad's gross national product (GNP—see Glossary) per capita was only US\$160, which clearly reflected the extent of the nation's impoverishment. In the mid-1980s, Chad ranked among the five poorest nations of the world according to World Bank (see Glossary) statistics.

Chad's economy was based almost entirely on agriculture and pastoralism. In 1986 the World Bank estimated that approximately 83 percent of the country's economically active population worked in agriculture, 5 percent worked in industry, and 12 percent were engaged in services, including government employment, trade, and other service activities. Cotton processing, which includes ginning raw cotton into fiber for export, some spinning and weaving, and producing edible oil from cotton seed for local consumption, dominated industry.

Figures for the gross domestic product (GDP—see Glossary) also reflected agriculture's importance. In 1986 the World Bank estimated that 46.3 percent of Chad's GDP came from agriculture and

pastoralism. Industry and manufacturing accounted for only 17.9 percent of GDP, while services represented 35.7 percent of GDP.

Geography and climate played an influential role in Chad's economy. The country is divided into three major climatic zones—Saharan, *sahelian*, and *soudanian*—which are distinguished by the level of annual average rainfall. There are only two productive zones—the *soudanian* cotton-producing zone of the south, sometimes called Le Tchad Utile (Useful Chad), and the central *sahelian* cattle-herding region. The northern Saharan region produces little.

In 1987 Chad's economy was dependent on a single cash crop—cotton. Like most other single-crop economies in the Third World, when world commodity prices were high, conditions improved. When those prices fell, conditions worsened. Despite several important swings, during the 1970s and particularly in the early 1980s, cotton prices were good. Chad's cotton revenues peaked in 1983 and 1984, but in 1985 world cotton prices fell steeply, nearly crippling the cotton industry. This decline forced a major economic restructuring under the auspices of the World Bank and foreign donors. To revive the cotton industry, a 1986 restructuring program curtailed all cotton-derived revenues to the government until world prices rebounded. This program forced cutbacks on the production of raw cotton and limited the level of government support to producers for improved cropping methods, ginning, and other related industrial operations.

Cattle and beef exports followed cotton in economic importance. Estimates of the value of these exports varied greatly because large numbers of livestock left the country "on the hoof," totally outside the control of customs officials. Nevertheless, cattle and beef exports accounted for 30 to 60 percent of all exports from 1975 through 1985, depending on the value of the cotton crop in a given year. Approximately 29 percent of Chadians depended almost entirely on livestock for their livelihood in the early 1980s, and livestock and their by-products represented around 26 percent of GNP.

Chad's lack of resources limited the exploitation of mineral deposits. There were known deposits of bauxite in the southern regions, and reports indicated deposits of uranium and some other minerals in the Tibesti Mountains and Aozou Strip (see Glossary). Even in late 1987, however, no bauxite was being mined, and because of hostilities in the northern zones, claims of mineral deposits there had not been verified. Chad's only mining industry was the traditional exploitation of sodium carbonate (natron) in dried beds around Lake Chad.

Oil offered one of the few reasons for economic optimism. In 1974 a consortium of companies led by Conoco discovered oil near Rig Rig, north of Lake Chad. Plans to exploit these reserves, estimated at 438 million barrels, and to build a small refinery to serve Chad's domestic needs were delayed in the late 1970s and early 1980s because of the Chadian Civil War. In 1986 the government—with World Bank support—revived the idea, and plans called for operations to begin in the early 1990s. Nonetheless, these deposits would ensure only Chad's domestic needs, and no oil would be exported. In 1985 Exxon, which had become the leader of the exploratory consortium, discovered oil in southern Chad, near Doba. The size of the reserves was not known, although it was believed to be large. Exxon, however, suspended drilling in 1986 when world oil prices fell.

Remoteness and distance are prime features of economic life in Chad. Transportation and communications are difficult, both internally and externally. Douala, Cameroon, the nearest port from N'Djamena, is 1,700 kilometers away. By the mid-1980s, the only paved roads linking the capital to the interior, some 250 kilometers of hardtop, had disappeared because of insufficient maintenance. Of the estimated 31,000 kilometers of dirt roads and tracks, only 1,260 kilometers were all-weather roads. The remainder became impassable during the rainy season. There were no railroads in Chad.

Since independence, Chad has relied on outside donors and regional institutions for economic survival and development. Chad's principal sponsor has been France, which has subsidized the budget. Through the mechanisms of the Lomé Convention (see Glossary) between the members of the European Economic Community (EEC) and their former colonies in Africa, the Caribbean, and the Pacific (ACP), France has also subsidized Chad's cotton production and exports. French companies have dominated trade, and French banks have controlled Chad's finances.

Information on Chadian government finances was fragmentary and inconsistent. The political instability from 1976 to 1982 left large sections of the country beyond any form of central control, and during this period the state had very few finances. After 1982, however, fragmentary estimates indicated a growing importance of donor finances and a decline in internally generated revenues. In addition, during the 1980s military spending was high. Although the proportion of real government expenditures for defense was difficult to assess, it could have represented as much as 70 percent of government spending. Despite a measure of political stability after 1982, the situation worsened in 1985 with the collapse of

cotton revenues. In 1986 the World Bank and the International Monetary Fund (IMF—see Glossary) joined in efforts by other donors, including France, the EEC, and the United States, to stabilize Chad's financial and budget difficulties.

Role of Government

Both before and after the Chadian Civil War, the government participated actively in the economy and fostered a liberal economic development policy. It encouraged foreign investment, both public and private, and in 1987 had under review the Investment Code of 1963. The objective was to minimize regulations for the private manufacturing sector and particularly for small- and medium-sized enterprises.

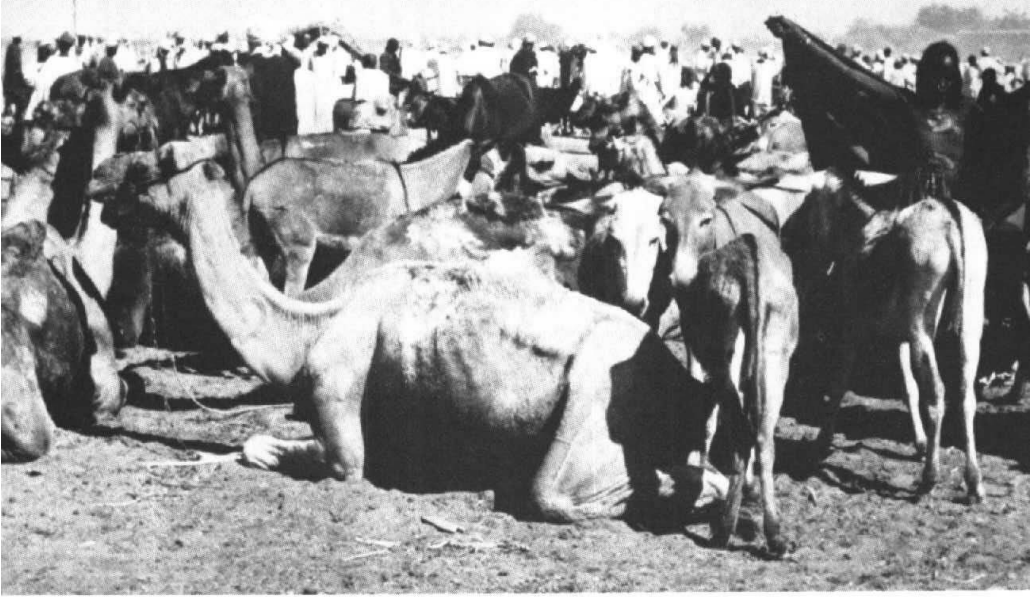
The government considered the public sector a complement to, and not a substitute for, the private sector. Even so, because of the country's narrow productive base and limited cash economy, the government was forced to play an active role in the economy. This participation primarily took the form of mixed public and private marketing enterprises, called parastatals. As a partner in these ventures, the government participated in the planning and controlling of the economy and became a key actor in the service sector through the parastatals, which employed thousands of individuals (see Manufacturing, Mining, and Utilities, this ch.; Government Finances, this ch.).

Agriculture

In 1986 approximately 83 percent of the active population were farmers or herders. This sector of the economy accounted for almost half of GDP. With the exception of cotton, some small-scale sugar production, and a portion of the peanut crop, Chad's agriculture consisted of subsistence food production. The types of crops that were grown and the locations of herds were determined by considerable variations in Chad's climate (see Physical Setting, ch. 2).

The *soudanian* zone comprises those areas with an average annual rainfall of 800 millimeters or more. This region, which accounts for about 10 percent of the total land area, contains the nation's most fertile croplands. Settled agricultural communities growing a wide variety of food crops are its main features. Fishing is important in the rivers, and families raise goats, chickens, and, in some cases, oxen for plowing. In 1983 about 72 percent of all land under cultivation in Chad was in the *soudanian* region.

The central zone, the *sahelian* region, comprises the area with average annual rainfall of between 350 and 800 millimeters. The minimum rainfall needed for the hardiest of Chad's varieties of



*A livestock market in Massakoury
Courtesy Michael R. Saks*

millet, called *berebere*, is 350 millimeters. The western area of the zone is dominated by the Chari and Logone rivers, which flow north from their sources in southern Chad and neighboring countries (see fig. 3). The courses of these rivers, joining at N'Djamena to flow on to Lake Chad, create an ecological subregion. Fishing is important for the peoples along the rivers and along the shores of Lake Chad. Flood recession cropping is practiced along the edges of the riverbeds and lakeshore, areas that have held the most promise for irrigation in the zone. International donor attention focused on this potential beginning in the mid-1960s. Particular attention has been paid to the traditional construction of polders (see Glossary) along the shores of Lake Chad. Land reclaimed by the use of such methods is extremely fertile. Chad's only wheat crop is cultivated in these polders.

In the rest of the *sahelian* region, the hardier varieties of millet, along with peanuts and dry beans, are grown. Crop yields are far lower than they are in the south or near rivers and lakes. Farmers take every advantage of seasonal flooding to grow recession crops before the waters dry away, a practice particularly popular around Lake Fitri. The *sahelian* region is ideal for pasturage. Herding includes large cattle herds for commercial sale, and goats, sheep, donkeys, and some horses are common in all villages.

The Saharan zone encompasses roughly the northern one-third of Chad. Except for some dates and legumes grown in the scattered

oases, the area is not productive. Annual rainfall averages less than 350 millimeters, and the land is sparsely populated by nomadic tribes. Many of Chad's camel herds are found in the region, but there are few cattle or horses.

Chad's subsistence farmers practice traditional slash-and-burn agriculture in tandem with crop rotation, which is typical throughout much of Africa. Sorghum is the most important food crop, followed by millet and *berebere*. Less prevalent grains are corn, rice, and wheat. Other secondary crops include peanuts, sesame, legumes, and tubers, as well as a variety of garden vegetables.

Crop rotation in the *soudanian* zone traditionally begins with sorghum or millet in the first year. Mixed crops of sorghum and/or millet, with peanuts, legumes, or tubers, are then cultivated for approximately three years. Farmers then return the land to fallow for periods up to fifteen years, turning to different fields for the next cycle. Preparation of a field begins with cutting heavy brush and unwanted low trees or branches that are then laid on the ground. Collectively owned lands are parceled out during the dry season, and the fields are burned just before the onset of the first rains, usually around March. Farmers work most intensively during the rains between May and October, planting, weeding and protecting the crops from birds and animals. Harvesting begins in September and October with the early varieties of sorghum. The main harvest occurs in November and December. Farmers harvest crops of rice and *berebere*, grown along receding water courses, as late as February.

The cropping cycle for most of the *sahelian* zone is similar, although the variety of crops planted is more limited because of dryness. In the polders of Lake Chad, farmers grow a wide range of crops; two harvests per year for corn, sorghum, and legumes are possible from February or March to September. Rice ripens in February, and wheat ripens in May.

As with most Third World countries, control of the land determines agricultural practices. There are three basic types of land tenure in Chad. The first is collective ownership by villages of croplands in their environs. In principle, such lands belong to a village collectively under the management of the village chief or the traditional *chef des terres* (chief of the lands). Individual farmers hold inalienable and transmittable use rights to village lands, so long as they, their heirs, or recognized representatives cultivate the land. Outsiders can farm village lands only with the authorization of the village chief or *chef des terres*. Renting village farmlands is possible in some local areas but is not traditional practice. Private ownership is the second type of tenure, applied traditionally

to the small plots cultivated in wadis or oases. Wells belong to individuals or groups with rights to the land. Ownership of fruit trees and date palms in the oases is often separate from ownership of the land; those farmers who plant and care for trees own them. State ownership is the third type, primarily for large enterprises such as irrigation projects. Under the management of parastatal or government employees, farmers enter into contractual arrangements, including paying fees, for the use of state lands and the benefits of improved farming methods.

Detailed and reliable statistical information on Chad's agriculture was scarce in the late 1980s; most researchers viewed available statistics only as indicators of general trends. The one region for which figures were kept was the *soudanian* zone through survey coverage by officials of the National Office of Rural Development (Office National de Développement Rural—ONDR), who monitored cotton production. These officials also gathered information on food production, but this effort was not carried out systematically. Survey coverage of the *sahelian* zone was first hampered, then prevented, by civil conflict from the mid-1970s to the early 1980s.

Moreover, figures from international and regional organizations often conflicted or differed in formulation. For example, total area devoted to food production was difficult to estimate because sources combined the area of fields in production with those lying fallow to give a total for arable lands. The arable land figure has shown a gradual increase since 1961. Estimated then at 2.9 million hectares, it rose to almost 3.2 million hectares in 1984. In 1983 there were about 1.2 million hectares in food production and in 1984 slightly more than 900,000 hectares. Therefore, perhaps a third of Chad's farmlands were in production in a given year, with the balance lying fallow.

Cotton

Background of Cotton Cultivation

Cotton is an indigenous crop to southern Chad. In 1910 the French colonial administration organized market production on a limited scale under the direction of the military governor. By 1920 the colonial administration was promoting the large-scale production of cotton for export. The French saw cotton as the only exploitable resource for the colony and as an effective means of introducing a cash economy into the area. Indeed, the elaboration of colonial administration went hand in hand with the extension of cotton production throughout the region.

France's motives were clear: it sought to ensure a source of raw materials for its home industries and a protected market for its exports abroad. France also intended that taxes derived from commercial ventures within the colonies would offset the expenses of the colonial administration. Therefore, customs duties on cotton exports from Chad, then a part of French Equatorial Africa (Afrique Equatoriale Française—AEF; see Glossary), were paid to the governor general at Brazzaville (in contemporary Congo), as were duties on exports from other colonies under regional administration. Revenues from a head tax were paid in cash locally and went directly to the lieutenant governor of the colony. Not surprisingly, virtually the only means of earning the money to pay the tax was by the sale of cotton to the French.

In 1928 exploitation of cotton within the colony was placed in the hands of Cotonfran, a private company. Under the terms of the contract between the colonial administration and Cotonfran, the administration maintained a certain quantity of production by the villages, and Cotonfran bought at least 80 percent of that production. The cotton was ginned locally, but no further transformation was permitted; all the cotton fiber was then exported to France.

The colonial administration fixed the quantity of cotton produced and the price paid to the peasant producer on the basis of calculations furnished by Cotonfran of costs and expectations for the price of cotton on the world market. France reorganized village administration by replacing traditional chiefs with individuals more amenable to the colonial power, which assured the proper cultivation of the cotton crop and the collection of taxes. This system included forced labor and the subordination of growing food crops to cotton.

Production Factors

In 1988 the entirety of Chad's cotton was produced in the five *soudanian* prefectures of Mayo-Kebbi, Tandjilé, Logone Occidental, Logone Oriental, and Moyen-Chari, plus the Bousso region of Chari-Baguirmi Prefecture, which juts down into the *soudanian* zone (see fig. 1). Few regions outside these prefectures offered sufficient water and population to sustain cotton production. Moreover, in this land of difficult transport, areas producing a cash crop also needed to be able to grow enough food for their people. Typically, the cultivation of cotton and food crops was carried on side by side. Efforts to extend the cultivation of cotton to the neighboring *sahelian* prefectures of Salamat and Guéra have had little success. In 1983 and 1984, with production at its highest in a decade, these two prefectures represented only .5 percent of total production.



*Cotton being unloaded from a truck in Pala, Mayo-Kebbi Prefecture
Courtesy Michael R. Saks*

Suggestions also have been made from time to time to bring cotton production to the fertile borders of Lake Chad. Trials have shown the high yields possible there, estimated at 3,000 to 4,000 kilograms per hectare. As of 1987, however, farmers in the Lake Chad area had not taken voluntarily to cotton production. Traditionally, farmers have resisted government efforts to control local production of such crops as wheat, and the history of coercion and government intervention associated with cotton was no inducement.

The government has introduced methods to increase crop yield, which include the expanded use of fertilizers and insecticides. Even so, compared with crop yields of more than 1,000 kilograms per hectare for other francophone West African states (such as Cameroon, Mali, and Côte d'Ivoire), until 1982 Chad's crop yields did not significantly exceed 500 kilograms per hectare; from 1983 to 1987, yields averaged almost 750 kilograms per hectare.

Area under cotton cultivation reached a peak in 1963 of 338,900 hectares. From 1963 until the end of the 1970s, the area under cotton cultivation averaged 275,000 hectares. In the 1980s, however, the area has been consistently less than 200,000 hectares. By 1983 the area of land under cotton cultivation had dropped by 36 percent from the average during the 1960s and 1970s. Several sources estimated the area in southern Chad under cotton cultivation at 30 to 40 percent of all land in cultivation, and in some areas of

Mayo-Kebbi Prefecture, it may have been higher (see table 3, Appendix A).

Cotton production has exhibited wide swings. Factors such as climatic conditions, production prices, and civil strife have influenced production. The first crop to exceed 100,000 tons came in 1963, but the 1970s were the best years for production, which from 1971 to 1978 remained well above 100,000 tons per year. Chad reached its all-time record production in 1975. Production suffered from 1979 to 1982 because of the Chadian Civil War and hit a twenty-year low in 1981. In 1983, with the return of some political stability and higher market prices, production improved but then fell from 1984 to 1987, a reflection of declining world cotton prices.

Once the crop is harvested, the producers must sort the cotton to separate lower quality yellow cotton from higher quality white cotton. Since the late 1970s, the proportion of white cotton generally has been 90 percent or more of total production. Going back to the 1960s, the quality of Chadian cotton had been consistently high, except for 1972 and 1973, when the proportion of yellow cotton rose to 18 percent. Since 1980 the quality has remained high at initial sorting, with white cotton representing more than 95 percent of the crop and accounting for 98 percent of production in 1984.

Administrative Structure

In 1989 the official structure responsible for the production and marketing of cotton was composed of the ONDR under the Ministry of Agriculture and Rural Development, of Cotontchad, and of the Cotton Price Stabilization Board (Caisse de Stabilisation des Prix du Coton—CSPC). Founded in 1965, the ONDR was originally given responsibility to monitor, improve, and assist all agricultural production. By the mid-1980s, however, the government's emphasis on cotton production made the ONDR an important factor for the cotton industry only. Cotontchad, successor to Cotonfran, was founded as a parastatal company in 1971 to collect, buy, gin, transport, and export the cotton crop. The company also had responsibility for elements of the small national textile, soap, and edible oil industries. The CSPC's task was to stabilize prices paid to peasant producers by funding operating losses incurred by Cotontchad. Assuring a constant price to the producer not only helped maintain a certain level of production for Cotontchad but also limited costs to the company by holding down producer prices. The ONDR, the CSPC, Cotontchad, and the government itself were involved in determining producer prices. In addition, the CSPC supported the program to improve yields. Between 1971 and 1983,



*Irrigation farming near Mao in Kanem Prefecture
Courtesy UNICEF (Maggie Murray-Lee)*

an estimated 57 percent of all payments by the CSPC were made in conjunction with the program to improve cotton production.

Other major actors in the cotton industry were the private banks, the French Textile Development Company (Compagnie Française pour le Développement des Textiles—CFDT), and French and EEC institutions, as well as the World Bank. Private banks provided the credits necessary to Cotontchad and to the peasants to finance the opening of each planting season and especially to provide capital for the import and distribution of fertilizers and insecticides. The CFDT marketed Chad's cotton on the world market. The CFDT also contributed to the smooth operation of Cotontchad through technical agreements to maintain equipment and to provide expertise in improving cropping methods through the ONDR. In addition, the CFDT supported research carried out by the Cotton and Textile Research Institute (Institut de Recherche sur le Coton et les Textiles—IRCT), a small public research facility located near Doba. Subsidies to Chad's cotton production under the Lomé Convention were paid through the Stabex system (see Glossary) of the EEC. Those funds were channeled to the CSPC for price support to the producers. The CSPC also received portions of funds needed to assure payments to producers from Cotontchad as well as from the central government. Between 1971 and 1983, virtually all income to the CSPC derived from rebates paid by Cotontchad into the system.

After 1984 the system became far more dependent on external sources of funds (such as Stabex) because of sharply reduced income to Cotontchad. In addition to Stabex, the EC's European Development Fund (EDF) contributed directly to the program of improving yields. French assistance remained crucial to the system. The Central Fund for Economic Cooperation (Caisse Centrale de Coopération Economique—CCCE) was a shareholder in Cotontchad, and the other arm of French foreign aid, the Cooperation and Aid Fund (Fonds d'Aide et de la Coopération—FAC), directed assistance to the southern zone in support of the cotton complex. FAC also provided direct assistance to the government, which, among other things, helped pay the salaries of officials and functionaries, especially those in the ONDR.

Pricing Mechanisms

Prices paid to Chad's cotton producers, the peasants of the southern *soudanian* zone, have risen slowly over the years. The structure included separate prices for white cotton and for yellow cotton. From 1971, when the distinction arose, to 1978, the price for white cotton was CFA F50 per kilogram (for value of the CFA

F—see Glossary) and stayed at this level during much of the period of heavy civil conflict until 1982. From 1982 to 1985, the price increased steeply to CFA F100 per kilogram, at which point it had leveled by 1987, despite downward pressure because of the fall in world prices and a new program of cost reductions by Cotontchad under World Bank direction. The price paid for yellow cotton has not kept pace with this rise, reaching only CFA F40 per kilogram in 1983, where it remained through 1987.

The price paid to the producer traditionally has not covered actual production costs, either for the peasant or for Cotontchad. As much as 50 percent of the costs of production has been borne by outside donors, primarily from the EDF, through the Stabex system. Between 1981 and 1984, the EDF financed between 70 and 80 percent of the costs of the program to improve yields, largely through subsidies to the CSPC for price support and subsidies for Cotontchad in the initial purchase of insecticides and fertilizers. The costs of improvements have been reimbursed only partially from payments made by producers through the ONDR.

Restructuring the System

By 1987, because world prices were still insufficient to recoup costs, Cotontchad was rapidly going broke. In the mid-1980s, annual net losses were estimated at CFA F18 billion. Net losses per kilogram of ginned cotton were estimated at CFA F453 in 1985 and CFA F298 in 1987. These figures stood in contrast to 1984, when there was a net profit of CFA F193 per kilogram. Cotontchad's position was not expected to improve unless the world price of cotton reached the CFA F600-per-kilogram range.

With World Bank backing and support from France, the Netherlands, and the EC, restructuring of Cotontchad began in 1986 with government implementation of the Emergency Cotton Program. At the producer level, the program called for freezing the price paid producers at the CFA F100-per-kilogram level through 1988 and studying new methods of fixing producer prices to reflect world market conditions. Subsidies on improved inputs, such as fertilizer and insecticides, were eliminated as of 1987, with producers assuming the costs. Cotton production was to be limited to about 100,000 tons by restricting the area under production to 75,000 hectares during the program period. At the company level, Cotontchad sold nonessential assets to the private sector (including 2 aircraft and about 150 vehicles), closed its branch office in Bangui, Central African Republic, and laid off administrative staff. It also closed six ginneries and reduced the number of cotton collection centers in accordance with the production target of 100,000 tons.

For its part, the government exempted Cotontchad from taxes, particularly export duties, and suspended its contributions to the CSPC, the ONDR, and the Debt Amortization Fund (Caisse Autonome d'Amortissement—CAA). Staffs at the CSPC and the ONDR were reduced, and the roles of both organizations were reviewed.

Subsistence Farming

Since the 1950s, Chad's food production has declined (see table 4, Appendix A). Even so, despite pockets of malnutrition remaining in areas where rains failed or locusts damaged local crops, the overall picture for Chad's food production was good in the 1985-87 period. The rebound of food production in this period was the result of good rains, the return of political stability, and the absence of major conflict in the *sahelian* and *soudanian* zones. The downturn in cotton production and added restrictions on its cultivation also released lands and labor for farmers to put into food production. Production was so high in these years that, for the first time in a decade, it was estimated that Chad had returned to food sufficiency. This followed a cereal shortfall in the drought years of 1984 and 1985 of around 325,000 tons. Total cereal production rose thereafter to the 700,000-ton level, well above the estimated 615,000 tons of grains needed for food sufficiency.

Yet the overall food sufficiency registered by Chad in these years served to underscore the problem of regional imbalances in cereal production. The *sahelian* zone experienced a chronic shortfall in cereal production, whereas the *soudanian* zone traditionally had a cereal surplus. The *soudanian* zone was also the biggest producer of all subsistence food crops and of cash crops. It was estimated that the *soudanian* zone produced between 53 and 77 percent of Chad's total cereal production from 1976 to 1985, with the average falling in the 60- to 70-percent range. But because the populations of the two regions were approximately equal, the lack of a good transport system and marketing mechanisms to allow the rapid transfer of the southern surplus to the northern zones was a constant problem. This danger was especially threatening during times of drought affecting the *sahelian* zone.

Sorghum and Millet

Chad's most important subsistence crops were sorghum, millet, and *berebere*. Areas under production for these grains showed a downward trend after the mid-1950s, dropping from an average of 1.5 million hectares to around 1 million hectares in the 1960s and 1970s and falling to levels averaging 750,000 hectares between 1981 and 1986. Taking an average for all lands devoted to grain

production during the years from 1981 to 1985, according to the Food and Agriculture Organization (FAO), sorghum and millet cultivation accounted for 85 percent of the total area. Between 1980 and 1985, these coarse grains accounted for 80 to 95 percent of all grain production.

Wheat

In 1987 wheat was Chad's least important cereal grain. Farmers planted the crop in polders around the shores of Lake Chad, and some small planting also was done in the oases and wadis of northern Chad. Replacing an earlier state operation, the Organization for the Development of the Lake (Société pour le Développement du Lac—SODELAC) was founded in 1967 to organize cultivation and provide wheat for the state-owned flour mill at N'Djamena, the Grands Moulins du Tchad. The flour mill began operations in 1964 but closed in 1980; as of 1987, operations had not resumed. In the late 1970s, plans to plant some 20,000 hectares of wheat in polders failed because warfare around Lake Chad affected the infrastructure of SODELAC and the construction of new polders and because farmers resisted SODELAC-controlled production.

Wheat production generally followed trends similar to the production of other cereals, remaining low in the 1960s and 1970s but reaching a high in 1983. In 1984, however, production fell sharply. The bulk of wheat was traded through traditional channels to those herders in the northern regions of Chad who preferred wheat to millet or sorghum.

Rice and Corn

At the time of the French conquest, rice was grown on a small scale. Before World War I, the Germans on the Cameroon side of the Logone River encouraged the spread of rice cultivation. By World War II, the French imposed cultivation in the areas of southern Chad near Lai and Kélo, along the Logone River. Although production was destined originally for colonial troops, the taste for rice spread in some localities. What was originally intended by the French as a commercial cash crop had become a local subsistence crop by the 1980s.

The Development Office for Sategui Deressia (Office de Mise en Valeur de Sategui-Deressia—OMVSD), founded in 1976, replaced Experimental Sectors for Agricultural Modernization (Secteurs Expérimentaux de Modernisation Agricole—SEMAA), originally responsible for the organization, improvement, transformation, and commercialization of rice. Efforts by these organizations to extend

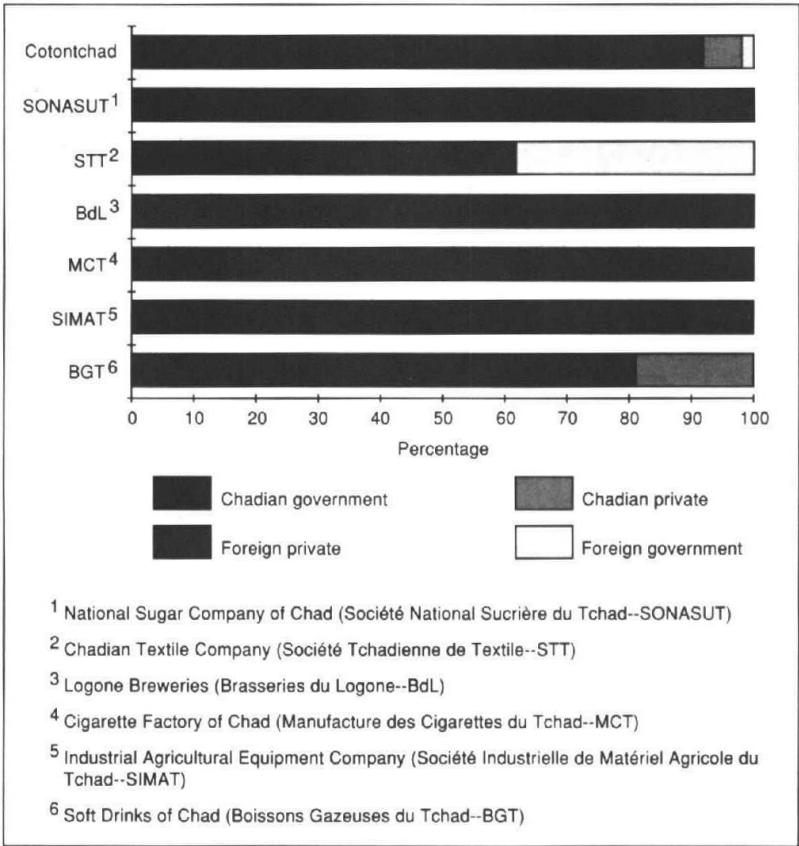


Figure 6. Ownership of Chad's Major Industries, 1987

commercial rice cultivation had mixed results. The area under rice cultivation has increased since the 1950s. Yet even in the 1980s, the greater part of this area was cultivated by traditional means. Schemes for controlled paddies at Bongor and Lai put only 3,500 hectares and 1,800 hectares, respectively, into cultivation before political events of the late 1970s and early 1980s disrupted efforts and international donor funding ceased. The bulk of rice production from traditional floodwater paddies was traded to the towns and cities or was consumed locally.

Corn was a crop of minor importance, grown in and around village gardens for local consumption. Production from the late 1960s through the mid-1980s remained in the 20,000- to 30,000-ton range. By 1987 no efforts at commercialization had been made, nor had

the government tried to improve and extend corn production.

Peanuts

Peanuts have become an important food crop in Chad. Peanuts were eaten roasted or dry, and their oil was used in cooking. Peanuts were cultivated in both the *soudanian* and the *sahelian* zones. Production of peanuts was more stable than that of any other major crop, staying in the 90,000- to 100,000-ton range from the 1950s through 1987, with dips in drought years. The area under peanut production also remained stable, although kilograms-per-hectare yields declined slightly. The drought-resistant nature of peanuts made their production particularly important for the peoples of the *sahelian* zone, where peanuts were planted alone or in combination with millet in the first year of rotation; in the *soudanian* region, peanuts were traditionally planted in the third year of crop rotation.

Although considerable efforts were made to commercialize peanut production, most efforts failed. Through the 1960s and 1970s, about 97 percent of the annual crop went to local consumption. What remained was sold to various edible oil manufacturing concerns, none of which succeeded. For example, a Chinese-built peanut oil mill at Abéché, finished in 1969, never operated. Local farmers sold surplus peanuts through traditional channels, rather than to the state monopoly set up in 1965, the National Trading Company of Chad (Société Nationale de Commercialisation du Tchad—SONACOT). This parastatal bought local produce for sale abroad or domestically to state-run commercial operations. Unlike Cotontchad, SONACOT was never given the means to compel farmers to sell their crops, and it did not have the resources to compete with prices offered by traditional traders. With the collapse of central authority in 1979, SONACOT disappeared. The only commercial sales of peanuts were then limited to Cotontchad purchases in the south, but by 1987 these had been halted to reduce costs.

Tubers

The importance of tubers has grown dramatically over the years. Cassava and yams were the most important crops in this category, with much smaller production of potatoes, sweet potatoes, and coco yams (taro). Grown only in the *soudanian* zone, tubers were once neglected, although such cultivation is widespread in other parts of subtropical West Africa. Estimates in the 1950s put tuber production at 50,000 tons annually. Production rose and by 1961 it exceeded 200,000 tons. From 1961 to 1984, the proportion of roots and tubers in the national diet rose from 6 to 17 percent. The reason

for this important shift in eating habits among people of the *soudanian* zone was the hedge these crops provided against famine in years when drought reduced millet and sorghum production.

Livestock

Livestock raising, and in particular cattle herding, is a major economic activity. Animal husbandry was the main source of livelihood for perhaps a third of Chad's people. The growing importance of cattle and meat exports underscored this point. In the 1960s and 1970s, these exports were estimated at between 25 and 30 percent of all merchandise exports. The proportion of these exports grew in the 1980s as the value of cotton exports declined. It was impossible, however, to know with certainty the actual values of cattle exports. For processed meat exports, less uncertainty existed because these exports were controlled from the slaughterhouse to the point of export; in 1985 processed meat exports represented less than 1 percent of all merchandise exports. The real value of Chad's cattle herds was in the export by traditional traders to markets in Cameroon and Nigeria. These "on the hoof" exports passed largely outside the control of customs services. Therefore, these exports were neither counted nor taxed. Perhaps one-fourth of cattle's estimated 30-percent share of total exports, was officially recorded.

The size of Chad's herds was also difficult to determine. Considered to have declined in the mid-1970s and again in the early 1980s because of drought and warfare across the *sahelian* zone, herds, estimated to be growing at a rate of 4 percent annually, reached some 4 million head of cattle, 4.5 million sheep and goats, 500,000 camels, and 420,000 horses and donkeys by the mid-1980s. Sheep and goats were found in all regions of Chad.

Before the drought of the 1980s, the *sahelian* zone held the largest herds, with about 80 percent of the total cattle herd. Smaller numbers of cattle were found in the *soudanian* zone, along with about 100,000 buffaloes used in plowing cotton fields. Camel herds were concentrated in the dry northern regions. Herders practiced transhumance—seasonal migrations along fairly well-set patterns.

With the 1984–85 drought, transhumance patterns changed. Camels were brought farther south into the *sahelian* zone in search of water. Cattle were herded even farther south, sometimes through Salamat Prefecture into Central African Republic.

The government and international donor community had contemplated considerable improvements for Chad's livestock management, but these plans were undermined by the Chadian Civil War, political instability, and an inadequate infrastructure. The most

successful programs have been animal vaccination campaigns, such as an emergency project carried out in 1983 to halt the spread of rinderpest. The campaign reached some 4.7 million head of cattle across the nation and demonstrated the capabilities of Chad's animal health service when given external support. The Livestock and Veterinary Medicine Institute of Chad (Institut d'Élevage et de Médecine Vétérinaire du Tchad—IEMVT), which was financed by foreign aid, was capable of producing vaccines for Chad as well as for neighboring countries. Despite plant capacity, by 1984 a lack of a trained staff limited production to vaccines for anthrax and pasteurellosis.

Two institutional efforts to manage cattle marketing were attempted in the 1970s and 1980s. The Chadian Animal Resources Improvement Company (Société Tchadienne d'Exploitation des Ressources Animales—SOTERA), a mixed enterprise formed as a livestock company with participation by some traditional livestock traders, began operations in 1978. Its aim was to control live animal exports through a license system and to have a monopoly on exports of chilled meat and hides. It was hoped at the time that the association of traders to SOTERA would increase the effective collection of export taxes on livestock by 50 to 75 percent. By 1984, however, SOTERA handled only a small portion of the domestic market and less than 30 percent of the export trade. A second institution, the Center for the Modernization of Animal Production (Centre de Modernisation des Productions Animales—CMPA), was engaged in marketing dairy products, supplying chicks to farmers, and overseeing the sale of eggs and the processing of feed. But, among other problems, the CMPA was unable to compete with local traders for milk needed to produce cheese for sale. Although highly subsidized, this venture also was unsuccessful and demonstrated the resilience of the traditional private network for marketing produce.

Despite these institutional difficulties, the international community continued to support efforts to expand animal health services to Chad's herders. Some estimates suggest that the nation's herds could be increased by 35 percent if the distribution of water were improved, extension services were made more available, and animal health services were expanded.

Fishing

With its two major rivers, Lake Chad, and many runoff zones, in the 1970s Chad ranked high among Africa's producers of inland freshwater fish. With the drought and diversion of the waters of some rivers, however, production declined in the 1980s. Traditionally, fish has been an important source of protein for those living

along the rivers and lakes, and fishing was also a means of earning cash. Because it was practiced in an entirely traditional manner and totally outside the control of government or modern commercial enterprises, there was no accurate statistical information on fishing.

In the 1960s, 1970s, and 1980s, total production of fish was estimated at between 60,000 and 120,000 tons per year. But because these figures represent production for the Logone River and Lake Chad, which are shared with Cameroon, Niger, and Nigeria, Chad's fish production amounted to an estimated 70 percent of the total. The largest part of the catch—perhaps two-thirds—was consumed locally. In areas adjacent to urban centers, some portion—usually the best of the catch, such as large Nile perch (called *capitaine* in Chad)—was marketed fresh. Along Lake Chad and the river borders with Cameroon, the surplus catch was dried, salted, or smoked before being sold. Between 1976 and 1985, production of dried, salted, or smoked fish was estimated at 20,000 tons annually, representing from 20 to 25 percent of Chad's total annual catch. A large share of the commerce in preserved fish was carried on with markets in Cameroon and Nigeria. Small dried or salted fish called *salanga* were most popular on the markets of Cameroon. Larger smoked fish called *banda* were generally exported to the major Nigerian market of Maiduguri.

Through the mid-1980s, Chad had taken few steps to control or modernize fishing or to promote fish conservation, although some plans had been made in the 1960s and 1970s. Perhaps the most significant innovation applied by Chadian fishermen has been their use of nylon netting, which began in the 1960s. During the periods of conflict, no government plans could be carried out to control fishing. Although considerable potential existed for the development of the Chadian fishing industry, because of insufficient government interest traditional production and marketing of freshwater fish was likely to remain unchanged for the near term.

Forestry

Like most states of the African Sahel (see Glossary), Chad has suffered desertification—the encroachment of the desert. Traditional herding practices and the need for firewood and wood for construction have exacerbated the problem. In the early 1980s, the country possessed between 13.5 million and 16 million hectares of forest and woodlands, representing a decline of almost 14 percent from the early 1960s. To what extent this decline was caused by climatic changes and to what extent by herding and cutting practices was unknown. Regulation was difficult because some people

traditionally made their living selling wood and charcoal for fuel and wood for construction to people in the urban center. Although the government attempted to limit wood brought into the capital, the attempts have not been well managed, and unrestricted cutting of woodlands remained a problem.

Manufacturing, Mining, and Utilities

Manufacturing

The small industrial sector was dominated by agribusiness, and Cotontchad in particular. Next in importance were the National Sugar Company of Chad (Société Nationale Sucrière du Tchad—SONASUT), the Chadian Textile Company (Société Tchadienne de Textile—STT), the Logone Breweries (Brasseries du Logone—BdL), and the Cigarette Factory of Chad (Manufacture des Cigarettes du Tchad—MCT). Observers estimated that these five industries generated some 20 percent of GDP. Of lesser importance were the Farcha Slaughterhouse (Abattoir Frigorifique de Farcha), the Industrial Agricultural Equipment Company (Société Industrielle de Matériel Agricole du Tchad—SIMAT), and Soft Drinks of Chad (Boissons Gazeuses du Tchad—BGT).

During the Chadian Civil War, the facilities and equipment of many industries were badly damaged. Most industrial operations either ceased or were reduced greatly, and almost all foreign investors withdrew from the country. Those operations that did continue on a reduced scale were limited to the *soudanian* region, which was not involved directly in large-scale fighting. By 1983, with the reestablishment of political stability on a national scale, the five major industrial concerns resumed full operations, and the less significant ones, such as SIMAT and the BGT, were rebuilt.

With the exception of the two bottling companies (the BGT and the BdL), which were privately owned, all the other important industries were either parastatals with majority government ownership or mixed companies with important government participation (see fig. 6). For the most part, private participation was limited to French investors; investment by private Chadian interests was extremely rare. French companies were also important shareholders in the larger Chadian companies, such as Cotontchad. Except for Cotontchad, whose top management was Chadian, all the other major industries were run by expatriate directors, accountants, and mid-level managers who, for the most part, were French.

Industrial output grew rapidly in 1983 and 1984, as industries resumed operations that had been interrupted by war. By 1984 and 1985, prewar levels of output had been either reached or exceeded.

Growth slowed for all industries after 1985, however, because of the dramatic downturn of world cotton prices, and output in 1986 began to decline.

Cotton fiber production by Cotontchad, which directly reflected production of raw cotton, fell sharply in 1985. This decline was stabilized in 1986-87 by emergency support from international donors. These donors prescribed retrenchment programs to prevent the total collapse of the cotton industry. The restrictions imposed on the production of ginned cotton fiber, however, reduced by half the number of ginning mills, with raw cotton production limited to about 100,000 tons. Production of edible oils by Cotontchad was also affected by the program of cost savings.

Other industries were affected directly by the fall of cotton prices. STT textile production slowed, as did the production of agricultural equipment by SIMAT, which made plowing equipment for use in cotton planting. Furthermore, the drop in revenues to farmers in the *soudanian* zone for their cotton and peanut production affected their ability to buy equipment. Lost revenues to farmers, along with the reduction in the numbers of workers needed in ginning operations, took a toll on cash earnings and therefore on buying power. By 1986 the ripple effect of these lost revenues in the cotton sector was widespread. The downturn in production in all industries left Chad with considerable unused capacity, ranging from 15 to 50 percent.

A number of other factors resulted in the slump in Chadian industry. Commercial sale of goods was low in a largely cash poor or nonmonetary economy. The decline in the cotton sector, which had provided the largest infusion of cash into the economy, further reduced consumer demand. Another impediment to industry was the high local cost of production compared with the cost of production in neighboring countries. Factors that raised local production costs included high transportation costs, overdependence on imports, and restricted economies of scale for small operations. Imported inputs were equivalent to about 30 percent of industrial turnover for Cotontchad, the BdL, and the STT and to about 60 percent for the MCT. Local substitutes for inputs were often more expensive than imported equivalents. Imports were often marketed to subsidize local production by a given industry. An example was SONASUT's importing refined sugar at less than local production costs, selling it locally, and using the proceeds to subsidize sugarcane production on SONASUT plantations. Interlocking relationships of production among companies also kept production costs high. For example, the BGT used SONASUT's refined sugar in its production of soft drinks, according to a

convention with the government to use local inputs, even though imported refined sugar was cheaper.

Before the warfare of the 1979–82 period, Chad's industrial sector included between 80 and 100 small- to medium-sized enterprises, in addition to the major manufacturing industries. Most processed agricultural products or competed in the import-export trade. About half were local subsidiaries of foreign-owned firms or were Chadian firms with significant foreign capital. The foreign-owned distributorships sold agricultural equipment, construction materials, and petroleum products.

Since 1983 the return of foreign investment has been slow because of the high costs of rebuilding and a continuing perception of political uncertainty. Of the approximately twenty enterprises that had reopened by the late 1980s, most were import-export enterprises that lacked a formal relationship with the banking sector. Most Chadian-owned enterprises had managed to reestablish themselves. Yet by 1986, small enterprises that had assembled bicycles, motorcycles, and radios remained closed.

The lack of access to credit was another impediment to business expansion in Chad. Despite the reopening in 1983 of the Bank of Central African States (Banque des Etats d'Afrique Centrale—BEAC) and of two commercial banks, the International Bank for Africa in Chad (Banque Internationale pour l'Afrique au Tchad—BIAT) and the Chadian Credit and Deposit Bank (Banque Tchadienne de Crédit et de Dépôt—BTCDD), the high proportion of available credit going to Chad's major industries limited credit available to smaller enterprises (see Banking and Finance, this ch.). Moreover, the banks invoked strict criteria for loan eligibility because of the high risk of lending in Chad. Few owners of small businesses knew sufficient accounting and technical skills to meet bank information requirements for loans.

Mining

The only mineral exploited in Chad was sodium carbonate, or natron. Also called sal soda or washing soda, natron was used as a salt for medicinal purposes, as a preservative for hides, and as an ingredient in the traditional manufacture of soap; herders also fed it to their animals. Natron deposits were located around the shore of Lake Chad and the wadis of Kanem Prefecture.

Natron occurs naturally in two forms: white and black. More valuable commercially, hard blocks of black natron were exported to Nigeria. White natron was sold on local markets, principally in N'Djamena and farther to the south. Although efforts were made in the late 1960s to control the commercialization of natron through

the creation of a parastatal, by 1970 those efforts had failed because of resistance by traditional chiefs and traders who controlled production through a system of perpetual indebtedness.

A number of other mineral deposits are known, but none had been commercially exploited by the mid-1980s. Bauxite is found in the *soudanian* zone, and gold-bearing quartz is reported in Biltine Prefecture. Uranium is reported in the Aozou Strip, as are tin and tungsten in other parts of the Tibesti Mountains, but exploration reports in 1971 for these three minerals did not indicate large or rich deposits. As of 1987, conflicts in the region prevented further exploration.

By far the potentially most important resource is oil. In 1970 a consortium of Conoco, Shell, Chevron, and Exxon started exploration and in 1974 discovered minor oil deposits at Sédigi, near Rig Rig, to the north of Lake Chad (see fig. 7). Total reserves at Sédigi were estimated at 60 million tons, or roughly 438 million barrels of oil. Exploration in 1985 by the Exxon-led consortium discovered potentially large deposits near Doba in the southern region of Chad. Further efforts were suspended in 1986 when world oil prices continued to drop, although the consortium maintained a liaison office in N'Djamena in 1988.

Plans existed in the late 1970s to exploit the deposits at Sédigi and to construct a small refinery at N'Djamena. Those plans lapsed during the conflicts of the late 1970s and early 1980s but were revived in 1986 by the government with the support of the World Bank. The reasons for proceeding with plans to exploit these deposits and build a refinery were clear. The cost of importing petroleum products exceeded the cost of extracting and refining domestic crude, even when international oil prices were low. The plans, which anticipated operations to begin in the early 1990s, included well development in the Sédigi field, a pipeline to N'Djamena, a refinery with a 2,000- to 5,000-barrels-per-day (bpd—see Glossary) capacity, and the transformation or acquisition of power-generating equipment in the capital to burn the refinery's residual fuel oil. The refinery's output would satisfy 80 percent of Chad's annual fuel needs, including all gasoline, diesel, butane, and kerosene; lubricants and jet fuel, however, would still have to be imported.

Water and Electricity

In the late 1980s, public utilities in Chad were extremely limited. The Chadian Water and Electricity Company (Société Tchadienne d'Eau et d'Electricité—STEE), was the major public utility company. The government held 82 percent of the shares and CCCE held 18 percent. STEE provided water and electricity to the four

main urban areas, N'Djamena, Moundou, Sarh, and Abéché. The company supplied water, but not electricity, to six other towns. Despite old equipment and high maintenance costs, STEE was able to meet about half of peak demand, which increased significantly from 1983 to 1986. Production of electricity rose by 35 percent from 1983 to 1986, and the supply of water increased by 24 percent during the same period. In 1986 STEE produced 62.1 million kilowatt-hours of electricity and supplied 10.8 million cubic meters of water.

In N'Djamena the majority of households had access to water. There were, however, only about 3,000 officially connected customers, a good proportion of which were collective customers. There were also an estimated 1,500 illegal water connections. The rest of the people received water from standpipes. Some 5,000 customers were officially connected for electricity in the capital in 1986, with an unknown number of illegal connections. Because electricity was so expensive and because electrical appliances were beyond the means of most people, the consumption of power per household was low. The high cost of electricity also hindered the expansion of small- and medium-sized enterprises.

Transportation and Communications

As a landlocked state, Chad has no ports. The nearest ports were all located on the Atlantic Ocean. Douala, Cameroon, at 1,700 kilometers from N'Djamena was the closest port. Furthermore, there were no railroads in the country. Two ancient land routes connected Chad to the Mediterranean Sea and the Red Sea. The first, more than 3,000 kilometers across difficult desert tracks, led north to Benghazi, Libya. The second, to the Red Sea via Sudan to Port Sudan, was 2,600 kilometers from Abéché and 3,350 kilometers from N'Djamena. Neither route has been used for commercial traffic in modern times. There were only two Atlantic routes of commercial importance in the 1970s and 1980s. One was the Nigerian rail-connected routes to Port Harcourt or Lagos via Maiduguri; the other was the Cameroonian route to Douala via rail from Ngaoundéré. Because of Nigeria's internal political difficulties and its troubled relations with its neighbors, the Nigerian route was intermittently closed to Chadian traffic in the 1980s, leaving open only the Cameroonian route to surface traffic into and out of Chad.

Until 1985 there was no permanent bridge across the Chari River to N'Djamena. Access to N'Djamena from Kousséri, Cameroon, was by ferry. When water levels fell during the drought of 1984 and 1985, ferries sometimes were unable to make the crossing. To alleviate this problem, in 1985 a pontoon bridge was constructed

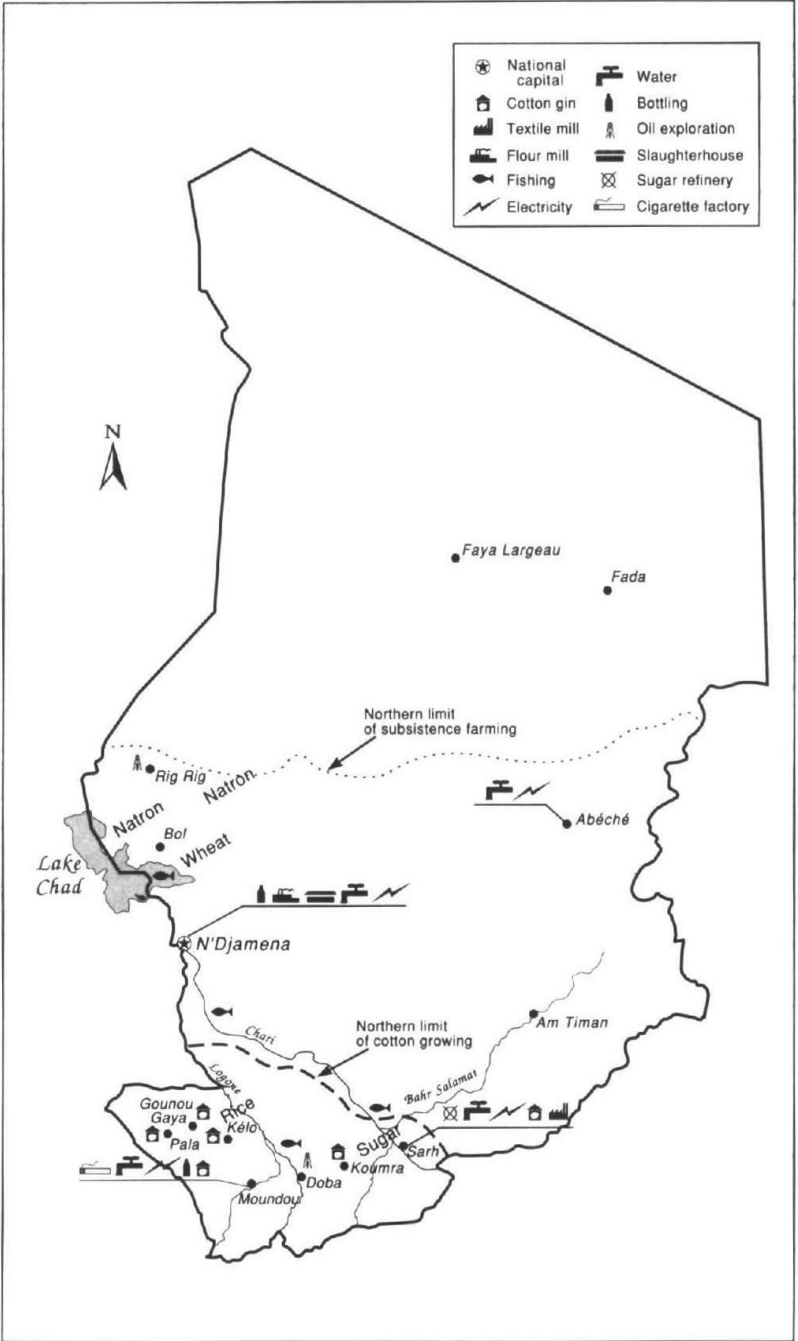


Figure 7. Economic Activity, 1987

over the Chari River. A similar situation existed farther south where, in 1986, a bridge was constructed at Léré, across the Mayo-Kebbi River. This bridge replaced ferry transport, formerly the only means of crossing, and linked southern Chad with Cameroon.

The closest rail links to Chad were the Nigerian rail system from Maiduguri to the ports of Lagos and Port Harcourt and the Cameroon system from Ngaoundéré to Douala. Both were connected to Kousséri in Cameroon, across the Chari River from N'Djamena, via all-weather roads, then on to Chad via the bridge over the Chari (see fig. 8).

The country's external traffic amounted to some 350,000 tons per year in the mid-1980s. For the most part, this traffic was carried on the road and rail route to Douala via Ngaoundéré. A great part of this traffic did not leave Chad via the capital. Chad's largest export, ginned cotton, took routes directly from the southern region to Cameroon via Léré (Chad) and Garoua (Cameroon) before reaching the rail at Ngaoundéré. Petroleum products were imported entirely by road, whether from Cameroon or from Nigeria.

As a member of the Customs Union of Central African States (Union Douanière des Etats d'Afrique Centrale—UDEAC), Chad exported and imported goods through a free storage area at Douala. The facility was completed in 1985 with funding from the EC and served both Chad and Central African Republic. The facility permitted long-term storage of goods exported from or imported into Chad. Agreements with Cameroon under UDEAC auspices allowed reductions of 50 percent on port taxes and of 25 percent on the total charged for handling costs. A quota for rail transport was also established whereby Chadian importers and exporters paid only 65 percent of rail charges to transport their goods and the remaining 35 percent was assumed by Cameroon.

Land Transport

In 1988 the road system in Chad remained deteriorated or underdeveloped. At one time, two paved roads linked the capital to the interior: one to Massaguet, 80 kilometers to the northeast, and the other to Gélendeng, 160 kilometers to the south. Both roads, however, had virtually disappeared by 1987 because of lack of maintenance. Of the 253 kilometers of paved roads reported in 1978, none were still paved in 1987. Chad had about 7,300 kilometers of dirt roads and tracks that were partly maintained; only 1,260 kilometers were all-weather roads. About 24,000 kilometers of rural marked tracks received no maintenance at all. Most of this road and track network was passable only during the dry season.

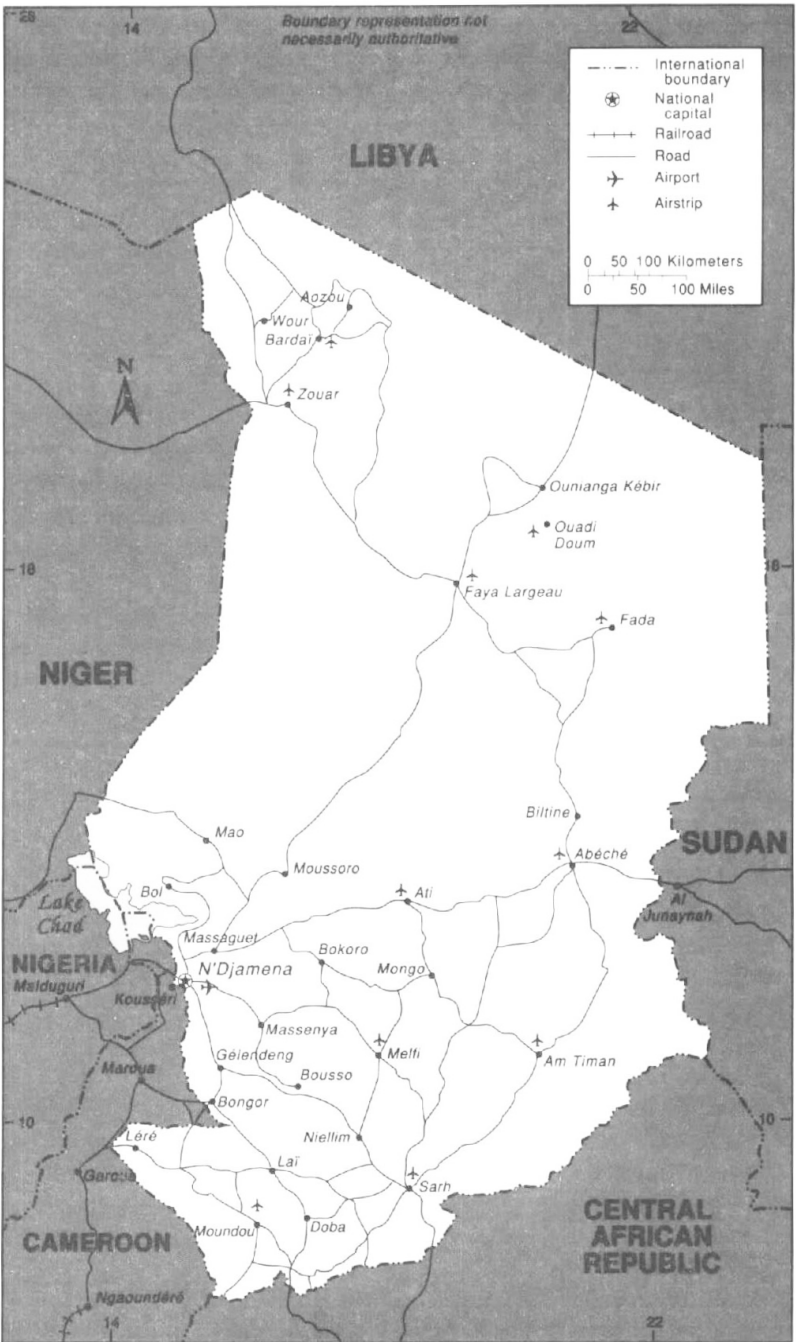


Figure 8. Transportation System, 1988

Considerable foreign donor attention was focused on land transportation problems. In addition to the externally financed bridges constructed to allow passage to Cameroon, the National Office of Roads (Office National des Routes—OFNAR) under the Ministry of Public Works, Housing, and Urban Development used technical assistance and training financed by the United States Agency for International Development (AID) and the United Nations International Development Agency (IDA). In 1987 three OFNAR subdivisions operated in N'Djamena, Sarh, and Moundou. Plans existed to open subdivisions in Abéché and Mongo as road rehabilitation advanced into these areas. The National Quarry Office (Office National des Carrières—OFNC) was created in 1986 under the Ministry of Public Works, Housing, and Urban Development to manage quarry operations at Dandi (north of N'Djamena near Lake Chad), using a large crusher financed by AID. The crushed stone was to be used for road improvements.

Government plans for the rehabilitation of the national road network called for the reconstruction of 3,800 kilometers of priority roads from 1987 to 1992. In 1987 about 2,000 kilometers were receiving spot repairs. The network of priority roads would reestablish the all-weather links between the capital and Sarh via Gélendeng and Niellim. It would also connect Sarh to Léré via Moundou in the south and N'Djamena to Am Timan via Bokoro and Mongo. The reconstruction and maintenance of the system would depend on the success of IDA- and AID-funded efforts to restore the capabilities of the OFNAR and to start the operation of the Dandi quarry.

Domestic freight traffic amounted to approximately 265,000 tons per year in the early 1980s. More than 100,000 tons of this traffic was in the southern regions, which included the transport of the cotton crop from collection points to ginning mills and then to points of export. The transport of food in normal nondrought years averaged around 50,000 tons annually. The internal transport of petroleum products represented some 25,000 tons annually of the total domestic freight, with the distribution of beer, sugar, and miscellaneous consumer goods making up the balance.

Transport during the rainy season was difficult, particularly between the capital and *sahelian* and *soudanian* zones. To avoid the swollen rivers and runoffs, Chadian traffic often was forced to pass by way of Cameroon, taking all-weather and paved roads via Maroua from Léré or Bongor and then on to Kousséri and N'Djamena. Travel in the rainy season via Maroua to Mayo-Kebbi Prefecture was a day or day-and-one-half journey; the internal route south from N'Djamena toward Mayo-Kebbi Prefecture could take two weeks or longer.

The main transport carriers in Chad in 1987 were the Cooperative of Chadian Transporters (Coopérative des Transporteurs Tchadiens—CTT), Cotontchad, and the United Nations Development Programme (UNDP) Emergency Food Programme transport fleet. The CTT was an association of private truck owners having a government-granted monopoly on all internal and external transport, except for the operations of Cotontchad and other parastatals with private trucking fleets. In 1985 the CTT had 382 members, who owned 580 trucks with a total capacity of 16,700 tons, as well as 108 tanker trucks for fuel transport with a capacity of 3,427 cubic meters. The CTT transported some 150,000 tons of dry cargo and an estimated 8,700 cubic meters of petroleum products in the same year. Not all transporters participated in the cooperative. Trucks with capacities of five tons or less carried unrecorded but significant amounts of goods over short distances.

Cotontchad, which was not a member of the CTT, was the single largest carrier in Chad. In 1985 it operated about 260 heavy trucks and another 100 light- to medium-weight vehicles that transported the cotton crop from collection points to ginning operations and on to export terminals. In 1986, as a part of the emergency restructuring program to reduce transport costs, the company sold about eighty of its large tractor trailer trucks to the CTT, which was expected to take responsibility for the long-distance import-export movement of the cotton crop.

The UNDP fleet in 1985 consisted of 240 trucks to transport emergency food during the drought. In 1987 the number of UNDP trucks fell to about 150, and these trucks were underused. In the late 1980s, the fleet brought supplies and food to remaining pockets of malnutrition, especially to those areas hit by locust infestations. The government was anxious to maintain this fleet for use during any renewed drought, despite the overcapacity and possible competition the fleet's operations might pose for the CTT.

By 1987 overall trucking capacity exceeded demand for domestic and import-export transport. Much of the fleet was also mismatched for domestic needs, being either oversized or suited more for the paved and all-weather roads leading into the country. Moreover, many trucks were in poor condition. To compound the problem, there were insufficient maintenance and support facilities available to keep vehicles in good repair. Studies were under way in 1987 to improve this situation, with particular attention to breaking up the CTT's monopoly.

Air Transport

Chad was regularly served by two international air carriers in