

# SHORTWAVE RADIO FROM THE AFRICAN SAHARA AND SAHEL

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## THE AFRICAN SAHARA

A look at a map of the Sahara region of northern Africa is deceiving. The map tells little about the true events transpiring there, the cryptic nature of the area's history, and, other than the straight borders drawn by a politician's pen, the effects of years of colonial rule.

To many, the Sahara is shrouded in mystery, a mystery that is fueled by lack of knowledge. To better appreciate how shortwave is a reflection of the region and its peoples, it is necessary to first look at the Sahara itself and then discuss the Sahel, the sub-Saharan area now undergoing rapid desertification. All of northern Africa is an area in considerable turmoil and one that offers much in variety listening for the shortwave hobbyist.

The Arab word for desert is *sahara*, and The Sahara Desert, the largest in the world, easily defines the word. The Sahara covers all of northern Africa (with the exception of a thin line along the Mediterranean and the Nile River) and includes areas once known as the Barbary Coast and *Afrique Occidentale Francaise*. New maps show the countries of the Sahara as Mauritania, Tunisia, Algeria, Western Sahara, Egypt, Libya, Morocco, and portions of Chad, Niger, and Mali (although the rapidly expanding desert makes placement of countries into either Sahara or Sahel difficult). The Sahara is much more than the shifting sands of late night French Foreign Legion movies; it is an area of great geographical diversity, haunting beauty, and a surprising source of information about prehistoric human life.

The backbone of the Sahara is the Ahaggar, a volcanic mountain chain with peaks of over 9,000 feet. To the south lie the Adrar n Iforas and Air mountain chains, stretching toward Niger and tropical Africa. To the northeast are the table mountains of the Tassili n Ajjer, which divides the Saharan Desert from the Libyan Desert in Egypt. The Tibisti Mountains extend toward Chad, Central Africa, and the Sudan. Surrounding the mountains are huge plains of multicolored outwash gravel, called *regs* by the nomads. Over half of the Sahara is covered by regs, the largest, the Libian Reg, covering 340 square miles. The regs dominate the desert and give it the appearance of lifelessness. Sand dunes (*ergs* in Arabic) border all sides of the Sahara and cover about 25% of its surface.

The Sahara is found in the global desert belt (between 15° N and 35° N) that is created when warm air rises from the equator, carrying moisture with it. The denuding of the Sahara region many thousands of years ago, mostly for firewood, also causes air masses to warm and rise over the desert, thus not releasing moisture. Today, much of the Sahara receives less than four inches of rain per year and there are documented cases of some areas receiving no rain for as long as 17 years.

The climate of the Sahara is harsh, not only because of the lack of moisture, but also because of the extremes of heat and cold. In the night, the desert cools very rapidly and frost is not uncommon in some areas, particularly in the mountains of the northern ergs; snow has been known to fall in the higher elevations of the Ahaggar. The dominant rock and sand composition of the Sahara gets very hot during the day. Temperatures as high as 122° F are not uncommon, and surface sand temperatures have been measured at 175° F. The reflected heat from these surfaces tends to dry the air still further.

As a biological environment, the combination of temperature variation and

great heat render the Sahara as inhospitable as the polar regions. The few plants and animals found there have had to make many adaptations. When rain briefly falls in the Sahara, a wild profusion of flowering occurs. Sand dunes may assume a green appearance as grasses briefly emerge; in the valley between the dunes, wild flowers may be found.

The geological background of the desert can be read in the mountains and water cut valleys. The main Saharan plateau, composed of sandstone, is about 500 million years old. Even to the casual observer, dry river beds and canyons (and the presence of limestones and sandstones) suggest a water-worked area. The Saharan region has been covered by seas, tropical rain forests, and savannahs several times in its geological history.

The Ahaggar Mountains were formed when plate tectonics caused a gradual upheaval of the earth, allowing weaknesses through which volcanoes erupted. Geologists have determined that during the Carboniferous period, about 250 million years ago, a vast sea flooded the desert. The sea gradually receded and was replaced by marshes, lakes, and some dry land. Dinosaur remains suggest that there were tropical forests and a large variety of both plant and animal life during this time. By the Cretaceous, about 130 million years ago, the sea returned, this time in the north and south, leaving the central area dry. The seas withdrew, and savannahs again appeared. During times when vegetation covered the area, a series of wet and dry periods resulted in an enlarging and receding of lake systems. During one of these dry periods, the desert was much larger than its present size, extending more than 300 miles into Central Africa.

Since none of the ancient Saharan rivers had outlets to the ocean, the erosion products they carried from the mountain spine flowed into closed basins, depositing the erosional material as gravel plains, or regs. During dry periods, the smaller sized particles were carried by wind to form ergs (sand dunes) at the edge of the desert. Wind has shaped the desert in other ways, eroding hollows and grooves and wearing down projecting outcrops. One of the more unusual formations of the desert is a *yardang*, a fin-shaped aerodynamic structure which results from wind erosion on a projecting rock outcrop. Yardangs may be 600' high and as long as a half a mile.

In the Western Sahara, interesting geological formations called *dhars* are found. Dhars are sandstone cliffs formed when tectonic changes caused sedimentary sandstone to break and tilt, forming cliffs several hundred feet high which may extend for hundreds of miles. Dhars are important navigational markers in the desert, because they represent a known elevation point in a greatly flattened area.

Early man's role in the Sahara is poorly understood. The earliest signs of human life are stone tools that date back several hundred thousand years. Much has been learned about human occupation of the desert region, however, by studying the desert paintings, or pictographs, found in some stony areas. The pictures show that early people in the Sahara were hunters who camped near lakes. Later pictures show nomadic herdsmen with cattle. The pictographs show that military and commercial routes were open across the Sahara as early as 1000 BC. Later paintings show, as horses are replaced by camels, the effects of increasing dryness about the time of the Roman occupation, in the second century A.D. By the fourth century, most of the nomads of the desert used camels. Camels, which graze closer than cattle, most likely aided the expanding of the Sahara by eating the vegetation that anchored the sand in place.

During periods of mild climate, vegetation typical of the shores of the Mediterranean spread through the Sahara. By about 4000 B.C., such typical Mediterranean trees as maple, ash, walnut and lime were common in the mountains. There are still remnants of this flora in some areas of the desert. Laperrine's olive, although now unable to reproduce, is found above 5000' elevation, where its often twisted trunks can stretch as high as 30-40'. A typical Mediterranean cypress, the duprez cypress, is found in rocky regions where moisture is available. They also have lost their ability to reproduce in the Sahara, however, their seeds are viable if planted in the deep soils near the Mediterranean.

The history of the native peoples in the years after the desert paintings and

prior to the arrival of the first conquerors is practically nonexistent, although historians have pieced together a story of warring tribes, famine, and disease. The native population of all Africa was highly varied and territorial; territorial conflicts appear to have been most common. The variability of the native Africans is without question. There are numerous unrelated linguistic stocks whose evolution puzzles modern linguists but attests to the relative isolation of the "tribes" that inhabited the continent before the arrival of the Europeans. Over five dozen dialects are found in the region of the Sahara alone.

The earliest known identifiable native inhabitants of northern Africa were the Berbers, a diverse people united only by a common language. Current theory suggests their origin to be in the eastern Mediterranean, however their rapid assumption of the culture of their many captors has made their early roots difficult to untangle.

By the 12<sup>th</sup> century B.C. (some say as early as the 16<sup>th</sup> century), the Phoenicians established the first settlement of outsiders in northern Africa and slowly assimilated Numidia, as the Berber kingdom was called. The most famous Phoenician settlement was Carthage, founded in 814 B.C., near what is now Tunis. Its strategic location made it the guardian of the Mediterranean for nearly 600 years. Carthage is thought to have been home to 700,000 people at the height of its wealth and power and formed the anchor for a huge trading empire. Phoenician culture did not spread through the rest of Africa, however, since the Phoenicians were chiefly traders and not explorers or conquerors.

The Greeks began to settle portions of northern Africa about 600 B.C.. A long series of wars erupted between the Greeks and the Phoenicians, wars that spread throughout the Mediterranean. Greek influence in Africa was minimal, and with a series of Roman invasions between 264 and 146 B.C., the Punic Wars, both Greek and Phoenician influences in Africa disappeared. The Roman impact in northern Africa was sizable and long lasting. Under Roman rule, agriculture, communication and quality of life were vastly improved. The Vandals invaded Roman Africa from Spain in 428, ruling the area for a century until they were displaced by the Byzantines, thus returning Roman rule to northern Africa.

Successive waves of Arabs from the east, primarily Egypt, swept through northern Africa in the latter half of the 7<sup>th</sup> century, bringing the Muslim religion and the Arabic language. Their numbers were initially small and it was nearly a century before most of northern Africa had become Muslim. The earliest center for Muslim activity in northern Africa was Fez (Fes), in present day Morocco. Many independent Muslim states developed and were in constant war with each other; rule changed rapidly over northern Africa. In spite of the Muslim influence and the constant destruction of war, Roman culture died very slowly. Around 750, Moors, people of mixed Arab and Berber descent, invaded Spain, which led ultimately to Spanish retaliation by taking portions of Moorish northern Africa. The Moors regained their territory by 1578 and northern Africa, for the most part, remained peaceful until it became the center of European imperialist rivalries in the late 19<sup>th</sup> century.

The Turks arrived in northern Africa in 1514, seeking pirate bases. They formed a treaty with the Berbers and took charge of a sizable area. Their interest was solely in piracy and they did little to subdue the subjects under their control, thus causing little local disturbance. Their pirate activity, however, drew European attention to the Barbary Coast and eventual retaliation.

## ALGERIA

Although debatable as to exactly when French involvement began in African affairs, it is known that the French easily captured and occupied Algiers in 1830. The government of Algiers was in total collapse and the French used the excuse that Algiers was the center of Barbary piracy and needed to be subdued. By 1848, the conquering of all Algeria was complete and it was made part of France. Independence, after a long history of political unrest and guerrilla movements, came in 1962. The official language of Algeria is Arabic, although French is universally used.

Radiodiffusion-Television Algerienne can be best heard broadcasting in English on 9535 KHz between 1900 and 2000 UTC with news and classical music. This broadcast comes from the 100 Kw transmitter at Bouchaoui. RTV Algerienne verifies with an attractive QSL card, but verification is spotty.

## TUNISIA

The French occupied Tunisia in 1881 as an extension of the protection to shipping that they had started with Algeria. It became a French protectorate and remained so until 1957. As with Algeria, the official language is Arabic, with French as the universal second language.

Radiodiffusion-Television Tunisienne is often an easy catch on 12005 KHz at the 0430 UTC sign-on in Arabic. Broadcasting from Sfax with 100Kw, RTV Tunisienne provides a steady diet of middle eastern music. Verification is rare, but short bursts of activity occur occasionally. Verification is by letter.

## MOROCCO

Morocco, once the home of the vicious Sale pirates, found itself in numerous clashes with the French and Spanish. Finding a weakened Moroccan government, France and Spain divided the country into French and Spanish protectorates in 1912. In 1923 the port of Tangier was declared an international zone, free of the military and permanently neutral. Spain and France recognized the independence of Morocco in 1956. Later the same year, the international zone of Tangier was abolished. Co-major languages of Morocco are Arabic, French, and Spanish.

Morocco has occupied the northern portion of the country of Western Sahara since 1975. Western Sahara, like Morocco, was claimed by the Spanish and was a Spanish colony until 1960, when it was declared a Spanish province. In 1973, the indigenous people of the area, the Sahrawis, began a liberation movement. Morocco, with historical claims to the area as part of "Greater Morocco", capitalized on the political unrest, and in 1975 invaded Western Sahara with 350,000 troops. In addition to territory, Morocco was interested in Western Sahara's deposits of phosphate rock, the largest in the world. The acquisition of Western Sahara's phosphate, when coupled with the sizable deposits in Morocco, gave Morocco the dominant position in the world phosphate market. In 1976, Spain withdrew from the colony, agreeing that it should be divided between Morocco (the northern portion) and Mauritania. The Sahrawis maintained their claims to Western Sahara, although Morocco continues to invest in the northern portion. A referendum may be held on the future of the Western Sahara, although with a large nomadic population, it would be difficult to conduct. Co-major languages of Western Sahara are Arabic and Spanish. Additionally, Berber is spoken by much of the population.

The national shortwave outlet of Morocco is Radiodiffusion-Television Marocaine, which operates a 100kw transmitter from the seaport city of Tangier, at the Straits of Gibraltar. When conditions are favorable, its Arabic broadcast on 15330 KHz is an easy catch around 2000 UTC. Verification of the international service is by QSL card and fairly reliable. A recent shortwave outlet is Radio Mediterranee International, which broadcasts on 9575 KHz from Nador (once part of Spanish Morocco). Reception is a sometimes affair but is best around 2000 UTC. Radio Mediterranee rarely verifies, but when it does it is by letter. A third choice in Morocco is the VOA relay site in Tangier, but your knowledge of Moroccan culture will not be enhanced by this station since it serves as a standard relay of Washington-originated VOA programs. Verification via Washington is quick, with a standard colorful VOA QSL card.

## MAURITANIA

Mauritania, originally a Berber kingdom, became a French protectorate in 1903 and a colony in 1920. Like other former French colonies, Mauritania received

independence in 1960. An Army coup occurred in 1978, and a succession of military leaders has followed since. A causative agent of the coup was the problems being encountered by the Mauritanian government in trying to enforce its claim on Western Sahara. Following the coup, the military government signed a peace treaty with the Polisario insurgents in 1979. Although two thirds of the country is desert, copper and iron ore deposits make it one of the Sahara's richest. Severe draught has virtually eliminated the nation's animals and the once dominant nomadic population has now settled near population centers. Arabic and French are the official languages of this Muslim country.

Office de Radiodiffusion-Television de Mauritaine broadcasts chiefly in Arabic and is a good provider of middle-eastern music. The 100kw transmitter is located in the capitol city of Noukchott, a city built in the 1950s. Noukchott is on the Atlantic coast and is a city of attractive flat-roofed houses, wide sandy streets and beautiful mosques. It may be enlarged during drought times by a huge tent city filled with over 300,000 refugees from the rural areas. ORTM can be best heard on 4845 KHz near its 2400 UTC sign-off. Its QSL record has been spotty until recently; it is currently a good verifier.

## LIBYA

Some of the finest Roman ruins are in Libya, but the Romans were not the first to occupy this arid land. There is evidence of earlier Egyptian and Greek settlements, as well as those of the Phoenicians and Carthaginians. Arab invaders brought Islam and converted the native Berbers in the seventh century. Libya was claimed as part of the Turkish Empire from the 16<sup>th</sup> century until 1911, when hostilities broke out between Turkey and Italy and Italian troops entered Libya. Tripoli was occupied in 1912. Tripoli was the scene of much desert fighting during World War II and fell to the British Eighth Army in 1943. The U.N. voted for Libya to become independent in 1952 and the discovery of oil in the Libyan Desert provided a monetary base for the new country (today oil has provided Libyans the highest income per head on the African continent). A bloodless coup occurred in 1969, and under military rule, the name of the country was changed to the Socialist People's Libyan Abab Jamahiriya. Military leaders have made modern day Libya the seat of international terrorism. In recent years, Libya has backed one of her territorial claims by invading Chad. The country has also sent troops to the Sudan and Uganda and has provided military aid to anti-government forces in Lebanon, Ethiopia, and Northern Ireland. In addition to oil, the economic base of the country is supported by sheep, hides, skins, dates and olives. Arabic is the official language.

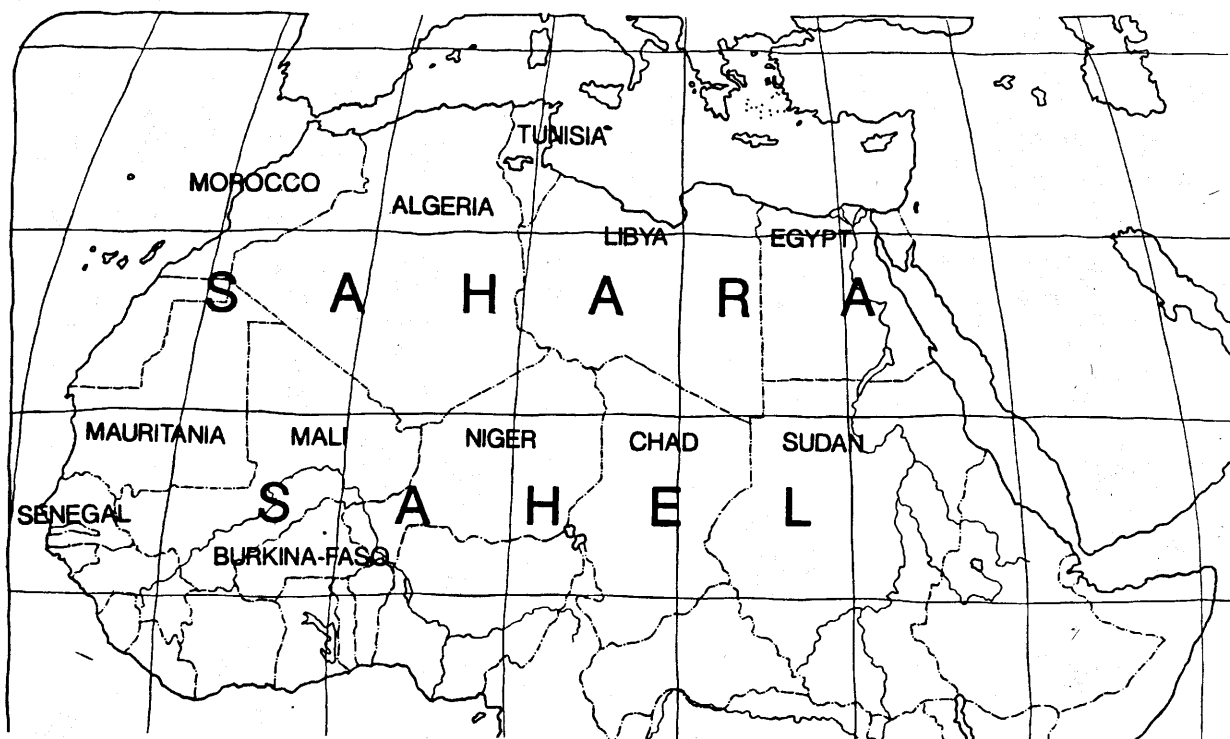
Libyan Jamahiriya Broadcasting operates its external service from a 500kw transmitter in the capitol city of Tripoli, on the Mediterranean near the Tunisian border. The interior portions of Tripoli are old, with narrow, winding market-lined streets. Along the seafront, large buildings and houses are set along eucalyptus-lined avenues. A good time to hear this station in English is between 2330 and 0100 UTC on 6155 khz. The English broadcast features middle eastern music and political features. Although once a very poor verifier, Radio Jamahiriya currently responds with a colorful QSL via its Malta address.

## EGYPT

Egypt is the site of one of the world's oldest civilizations, with a recorded history of 5,000 years. The strategic location of Egypt, between Africa and Asia and with access to the Mediterranean and the Red Sea, has made it a tempting prize to invaders for centuries. First the Persians, then the Greeks, Romans and Arabs. In 1517, Egypt became part of the Turkish Ottoman Empire and in 1798 Napoleon arrived. The French built the Suez Canal between 1854 and 1869 and British troops occupied Egypt in 1882. Egypt was granted independence in 1922 but British troops remained to guard the canal. Freedom was finally won in 1953. Egypt is involved in a variety of projects to bring fertility to the desert land, among them the Aswan High Dam and the New Valley Project, a series of deep wells. Reclaimed land, as well as the Nile bottom land, provide rich crops of rice, maize, wheat, vegetables and fruit, as well

as pasture for cattle, buffaloes, goats and camels. Cotton and dates form the main cash crop. The official language of Egypt is Arabic.

Radio Cairo has been a middle eastern music staple for many years. Broadcasting to North America from a 250kw transmitter in Abis, this station is best heard in English between 0200 and 0330 UTC on 9475 or 9675 Khz. Verification, which is by QSL card, has always been spotty.



## THE AFRICAN SAHEL

The Sahel, presently encompassing about 20% of the African land mass, derives its name from the Arabic word for "border," since it provides a belt between the Sahara Desert and the tropical rain forests. The Sahel is an area of rapid desertification and one into which the Sahara is expanding. Listing countries that comprise the Sahel has been complicated by a series of droughts that have occurred through central Africa since the early 1970s, creating drought stricken countries, but countries not considered part of the Sahel. As an example of the problem, a 1974 publication lists 5 countries comprising the Sahel. A 1987 publication lists 11 countries, and a 1990 publication lists 17 countries. This rapid increase is due to the inclusion of all drought stricken countries on the list, rather than just those into which the Sahara Desert is expanding. It is generally agreed that presently 6 countries are found in the Sahel. These countries are Senegal, Burkina-Faso, Chad, Niger, Sudan, and Mali. As droughts continue in Africa, more countries will no doubt be added; some references already include Ethiopia.

The Sahel has been highly visible for the last ten years as numerous aid programs have been established to render assistance to drought victims. In actuality, the drought only brought to the surface a problem which had been festering in the region since the turn of the century. The essence of the tragedy in the Sahel is that the famine was not caused by a brief period of dry weather or drought, but was caused instead by the presence of man and recent events in African history.

The land of the Sahel was once semi-desert and had four months of rainfall a year. The grasses were sufficient to support the herds of cattle tended by the nomads. Millet and sorghum were grown on stable farms in the southern regions of the Sahel. By 1968, just prior to the drought, the savannah ecology of the Sahel was supporting 24 million people and approximately the same number of cattle, roughly a third more than had been present 40 years

earlier. The actual agent of the collapse of the Sahel was the 1968 drought, the third of such severity that had occurred in the century. By 1972, the fifth year of the drought, people and cattle were beginning to die. Lake Chad receded 15 miles from its shore line and fractured into three smaller lakes. The ancient cultural center of Timbuktu, a port city fed by an inland Nigerian river, was completely cut off and today lies surrounded by desert. The nomads were forced to sell their only means of subsistence, the cattle, and with no income, were forced to live in refugee camps or tent cities on the edges of cities.

The Sahel was once one of the most important areas of Africa. In the middle ages, it was the home of the legendary trading empires of Ghana, Mali, and Songhai. Success of the Sahelian way of life resulted from an excellent adaptation to the semi-desert environment. To the casual observer, the life of the nomad appears undirected; in actuality it is very well directed. The dry season found the nomads in the far south of the region, where they had a form of symbiotic relationship with the sedentary farmers. The nomad's cattle would graze the stubble left in the agricultural fields and would in turn deposit manure to enrich the field. The nomads would also receive millet from the farmers in exchange for the manure. When the rains came and the grass began to grow, the nomads would move northward, following the greening grass. After grazing in the north, the herds would return to the south, grazing on the grass that had grown in the southern rainy season. The traditional migration routes and the amount of time a herd of any given size might spend at a particular area, were governed by rules worked out by tribal chiefs. In this way, overpasturage was avoided and the nomads had control over the environment that was so important to their well being.

The settled part of the population, the farmers, had an equally compatible understanding of their environment. They had learned to let the land lay fallow for long periods, in some cases, up to 20 years, before recropping, and they grew a variety of crops adapted to different growing seasons and situations.

When much of the Sahel came under French rule in the late 19th century, this delicate system was upset. The French colonial empire was interested in developing wealth in the Sahel and changed the farmers cropping practices from sorghum and millet to cash crops, such as peanuts and cotton. The French further divided the Sahel into separate states with definite boundaries. In many cases, nomadic tribes were prevented from crossing these boundaries, thus limiting their freedom of movement and upsetting the old tribal customs allowing for the exchange of farmer and pasture nomad.

Ironically, probably the most important impact on the Sahel was the introduction of European medicine. The introduction of good health practices altered a slow growth population (about 2.5% per year) into one of the highest population growth rates in the world. Veterinary medicine allowed an equally unchecked population increase in cattle, and a very large population of cattle and people quickly developed. Since a nomad's worth was measured in the number of cattle he possessed, herds increased dramatically in size in a very short period of time. As almost a cruel joke, Mother Nature provided seven years of unusually heavy rains which supported grass in higher concentration than in normal periods. Soon, as the rains faded, the herders began to overtax the pastures, and the farmers began to do likewise as the very best lands were taken out of food production and planted in cash crops. The usual process of allowing the land to lie fallow for a long period of time became a process of allowing the land to lay fallow for only one year. Fertility began to decline, slowly at first, and then dramatically. The poor crops left the soil barren, which was easily picked up by wind and eroded by rain. Very rapidly, the once semi-lush regions of the Sahel began to desertify and lack of rainfall accelerated the process.

Desertification was compounded further by the introduction of deep wells, known as bore holes, installed by well-intentioned individuals and governments. A vast reservoir of water lies a thousand feet under the Sahel, and as water became scarce and the land devastated, more and more bore holes were installed to nourish pasture land and provide water for cattle. A major problem occurred as enormous herds of cattle converged on the bore holes, sometimes from hundreds of miles away, destroying the land around the bore hole for as great as 50 square miles. The overgrazing of the Sahel was a

consequence of having too many cattle with no place to go. The ultimate desertification came as farmers destroyed their land, leaving it to be blown by the wind. The breakdown between the nomads and the farmers became complete.

Desertification was additionally hastened by the cutting of firewood. More than 50% of all of the wood cut in the world is used as firewood and the Sahel is no exception. The removal of trees exposed more soil to air and water erosion. Slash and burn agriculture, which was practiced in part of the Sahel, further destroyed the land. As firewood became scarce, the nomads burned dried cow dung. Dung used for burning was no longer available to release nutrients to the soil, and the soil became poorer.

Thus when the drought did come, conditions had already been set in motion for massive famine. It is in the context of an ecologically devastated area, that we look at the political history and the shortwave stations that operate from the Sahel.

## CHAD

Chad, a former French colony, was a territory in French Equatorial Africa (Afrique Equatoriale Francaise) until 1960, when it became an independent republic (other countries carved from French Equatorial Africa are Central African Republic, Congo Republic and the Gabon Republic). Coastal areas of FEA were discovered by the Portuguese in the 15th century and used as slave ports. Between 1839 and 1843, Capt. L.E. Boret-Williaumez captured the Gabon estuary for France, where a refuge for free slaves was founded and called Libreville. H.M. Stanley discovered the course of the Congo River between 1874 and 1877, whereupon a French explorer, Pierre Savorgnan de Brazza, made treaties with the inland tribes, putting them under French rule. Very heavy wars between France and local tribes in the Chad region resulted in subjugation of the natives in 1900. In 1910, all colonies were federated into French Equatorial Africa. This area supported Free France in WWII, and in 1946, all FEA residents were made French citizens. In 1960 each state became independent.

Radiodiffusion Nationale Tchadienne, broadcasting with 100kw from the capitol city of N' Djamena, is the national station of Chad. Try for this one on 4905 KHz at its 0430 UTC sign-on. Although often a difficult catch due to propagation or jamming, it is worth the try since some of the best "highlife" music to be found comes from this station. For the Dxer, Radio Moundou, transmitting from the central city of Moundou with 1kw, is a very nice catch. Try 5286 KHz at the 0457 UTC sign-on. Both stations are spotty verifiers, but will verify with letters at times.

## FORMER FRENCH WEST AFRICA

French West Africa (Afrique Occidentale Francaise) was until 1959 a federation uniting eight territories. The territories were easily broken into two distinct geographical groups. The first group included Senegal, Mauritania, French Sudan, Upper Volta, and Niger, all in the northern tropical zone--Senegal, Mali (old French Sudan), Burkina-Faso (old Upper Volta) and Niger are countries of the Sahel; Mauritania was discussed with the Sahara. This area has a dry climate with a single rainy season and grows baobab, tall grasses, millet, peanuts, and humped cattle. The inhabitants are Sudanese Blacks who settled the land and converted to Islam early. A little further north in this area the savannah gives way to the Sahara desert which is populated by nomadic Moors and Tuaregs. The second group comprised the Republic of Guinea, the Ivory Coast, and Benin (former Dahomey), which are in the northern equatorial zone with two rainy seasons.

The French were long established on the west coast of Africa where they engaged in gum and slave trading; the chief gum factory was in Senegal. Submission of the inland areas started in 1854 when French explorers subdued much of Senegal and Niger. From these outposts the French expanded their influence outward to include all of the area that came to be known as French West Africa in 1895. The area supported Free France in WWII, and in 1946 the colonies were transformed into territories of the French Republic and the inhabitants made French citizens. In 1958 territories became autonomous



states, and in 1959 French West Africa ceased to exist. By 1969, all the former colonies had achieved independence.

## SENEGAL

With its 100kw transmitter operating intermittently from Dakar, the national station of Senegal is the Office du Radiodiffusion-Télévision du Senegal (old-timers will remember "Radio Dakar"). When in operation, it is best heard with French and Arabic programming on 4890 KHz between 2300 and 2400 UTC. QSLs are spotty, but a very nice QSL is issued.

## MALI

Mali is represented on shortwave by Radiodiffusion Television du Mali, broadcasting from Bamako with either 50 or 100kw. U.S. listeners have the best chance to hear this station at its 0555 UTC sign-on on 4783v, 4835v and 7285 KHz. RTV Mali plays excellent "highlife" music and when the propagation is good, makes for some of the best African music on shortwave. Verification is irregular.

## BURKINA-FASO

Upper Volta is now Burkina-Faso and its shortwave outlet, Radiodiffusion-Télévision Burkina, broadcasts from Ouagadougou with 50kw. It is usually best heard between 2300 and 2400 UTC, or at its 0530 UTC sign-on, on 4815 KHz. It programs chiefly in French and some vernaculars and is a good verifier; its QSL often arrives with beautiful stamps attached.

## NIGER

La Voix du Sahel, the international service of the Office de Radiodiffusion-Télévision du Niger, is a spotty catch (and verifier) on 5020 KHz around its 0530 UTC sign-on. It provides a different style of "highlife" music from the other Africans and is worth the listening when the reception is good. Programming is chiefly in French and African dialects from the 100Kw station.

## SUDAN

Sudan is the largest country in Africa and one that has received double problems from the drought: loss of its own food production, plus a massive influx of refugees fleeing from war and famine in Ethiopia and Chad. Occupying much of the upper Nile basin, Sudan is a melting pot of races. In ancient times, two civilizations flourished in Sudan: Nubia and Kush. The country was converted to Christianity in the 6<sup>th</sup> century and to Mohammedism in the 14<sup>th</sup>

century. Sudan was conquered by Egypt in 1820 and managed to expel the Egyptians in 1898, only to be reconquered in 1899. Between 1899 and 1955, the area was known as the Anglo-Egyptian Sudan and achieved its independence in 1956. Since 1956, the rapidly changing government has been stressed by problems associated with famine and civil war. Sudan is today the world's greatest source of gum arabic, used in medicines and inks, and also produces sesame, groundnuts, cotton, sugar and textiles.

An often rare piece of DX is offered by Sudan via the 10kw Sudan National Broadcasting Corporation outlet on 9540 KHz from Soba (the once often reported tropical band frequency of 5039 KHz has been inactive for several years). Programming is chiefly in Arabic and the best time to log this difficult-to-hear station is at its 1100 UTC sign on, although its 10kw signal often does not make it to the U.S. The station occasionally verifies with a letter.

The regions of the Sahara and Sahel are undergoing massive changes as the droughts continue. The Sahara continues its expansion into the Sahel, and more countries are being added to the Sahel as time passes. The areas are also plagued by political unrest and a generally decreasing annual per capita

income as population numbers continue to outgrow the amount of available food. Change is inevitable; listen to the Sahara and Sahel on shortwave and witness the change.

The following table is not intended to be an all inclusive listing of shortwave stations operating in the African Sahara and Sahel, but rather a "best bet" listing to enable gathering of information from the area. Since many of the stations are in the tropical bands, winter reception is best. Listeners on the east coast of North America typically find good reception conditions from local sunset until station sign-off; those in central North America should find reception best near many station's 2400 sign-off time.

### SHORTWAVE STATIONS OF THE SAHARA

ALGERIA	X-mitter location	Freq	S-on	S-off	Lang
RTV Algerienne	Bouchaoui	7145	1500	0005	A
		9535	0600	0005	F
		15160	0700	1800	F
		17745	0800	1500	F
EGYPT Egyptian RTV Union	Abis	9475	0200	0330	E
		9675	0200	0330	E
LIBYA Libyan Jamahiryi	Tripoli	6155	2330	0100	E
		15450	1315	1745	E
MAURITANIA ORTM	Nouakchott	4845	0630	2400	A/F
MOROCCO RTV Marocaine R. Mediterranee Int VOA	Tangier	15330	0945	2100	A/E
	Nador	9575	0800	2100	F/A
	Tangier	9760	1830	2200	E
		15205	1700	2200	E
TUNESIA RTV Tunisienne	Sfax	7475	1800	2300	A
		12005	0430	2300	A

### SHORTWAVE STATIONS OF THE SAHEL

BURKINA-FASO RTV Burkina	Ouagadougou	4815	0530	2400	F
CHAD RDF Nationale R. Mondou	N'Djamena	4905	0430	2200	F
	Moundou	5286	0457	1829	F/A
MALI RTV Mali	Bamako	4783	0555	2400	F
		4835	0555	2400	F
		7285	0555	2400	F
NIGER L Voix du Sahel	Niamey	5020	0530	2200	F
SENEGAL ORTV du Senegal	Dakar	4890	0600	2400	F
		7170	0800	2400	F
SUDAN Sudan NBC	Sobo	9540	1100	1459	A



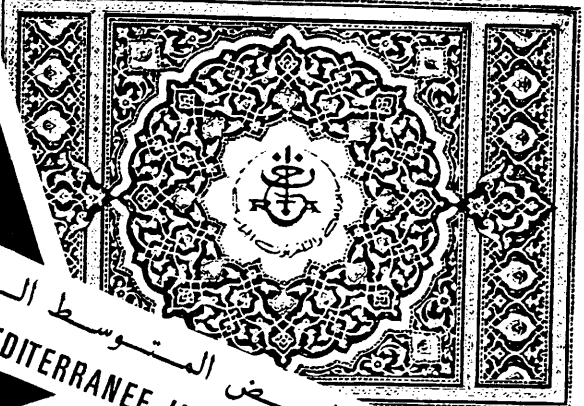
RADIO DIFFUSION NATIONALE  
TCHADIENNE  
P.O. 892 N° Diaména Tchad

C. S. L.

avec un grand plaisir que nous avons accusé réception de votre  
votre rapport est

هنا نواكشوط  
HUNA NOUAKCHOTT!!

هنا نواكشوط  
ICI NOUAKCHOTT



إسى نواكشوط  
HUNA NOUAKCHOTT!!



الإذاعة الموريتانية



REPUBLIQUE DE HAUTE-VOLTA  
Unité - Travail - Justice  
MINISTRE DE L'INFORMATION

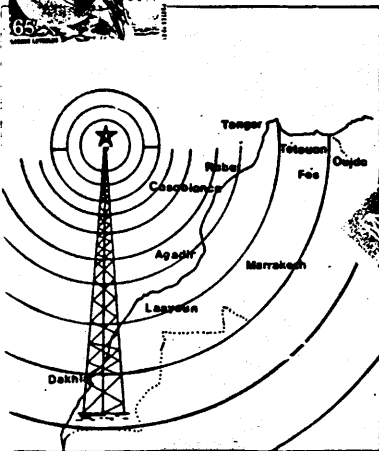
RADIO DIFFUSION TELEVISION VOLTAIQUE  
BP 7029 - Ouagadougou

إذاعة البحر الأبيض المتوسط الدولية  
RADIO MEDITERRANEE INTERNATIONALE (G. O. 1734 M)



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VOICE OF THE  
SOCIALIST PEOPLE'S LIBYAN ARAB  
BROADCASTING DAILY IN ENGLISH ON 11810 K  
SHORT WAVE FROM 22.30 - 24.00 HRS.  
HEAD OFFICE  
RADIO JAMAHIIYA  
P.O. BOX 333  
TRIPOLI - S.P.L.A.



الإذاعة المغربية توافكم 93 ساعة في اليوم



ICI NIAMEY  
RADIO DIFFUSION NATIONALE MALI



REPUBLIQUE TUNISIENNE

MINISTRE  
DES COMMUNICATIONS

TELEDIFFUSION TUNISIENNE

4, Rue de Kenya - 1002 Tunis  
Tel. 283.177 - Tlx 134261

N° 0734 TDT/AG

