YAAMA MOSQUE
YAAMA, NIGER

Completed 1982.
Client: The Muslim Community of Yaama.
Master Mason: Falké Barmou.

MASTER JURY'S CITATION. The Yaama Mosque is a vibrant expression of the total act of building. The community desired and was encouraged to achieve a splendid mosque that would be an appropriate rendering of their devotion to the Islamic faith. The architect, the master mason Falké Barmou, responded to, as well as nourished, these requirements through the use of more advanced techniques and great originality. There is a manifest will to use traditional techniques in a creative manner, to experiment with them and to achieve results that induce a new awareness of their possibilities. Within the local context this is a very striking element: almost everywhere traditional architecture is losing its momentum, but in this case it is very much alive and exploring its possibilities.

It is in such rare situations that the process of construction can be more critical than its accomplishment. It is the moment where the living tradition of that culture is revitalised. By reassessing the collective image within the community, the configuration of the sanctuary is developed. The productive force of the community is then activated and performed through an elaborate integration and coordination of tasks and duties.

Left: The setting sun illuminates the northern tower. The smaller mihrab tower is at the right. Yaama village is visible in the distance.
Overleaf: The striking architectural composition can be fully appreciated from the interplay of towers and roof lines.
This symbiosis is generated more through a ritual than any rationale of project management and administration. Thus, the whole community participates in a ceremonial where every contribution becomes a sacrificial act to the Glory of God.

This ceremonial is re-enacted and perpetuated through the cyclic renovation, whether maintenance, alterations, or repairs of the edifice. This communal re-creation activates a productive energy which culminates in the contemplative moment of prayer. It is through this conformity, humility and reverence that the masterpiece gradually evolves.

There is an elemental beauty and integration in the whole complex, and a richness and depth in the profuse forms of the detailing. Exterior volumes and massing are simple, vigorous and effective. When the eye travels upwards along the walls of the towers, the growing freedom of plastic expression is very striking indeed and acquires an exuberant symbolic quality. The towers especially intrigued members of the Jury, combining as they do structural logic and discipline with extraordinary creativeness: this austerely functional basis grows into a sculptural manifestation of freedom.

In this architecture we do not see a “primitive” aspect, but a primordial state of being in which men are umbilically bound to Nature. The “regional” becomes intrinsic, and the “particular” extends to the universal. The “rational” is surpassed by the “intelligence of the heart”. The “functional” becomes integral and appears in a wisdom that is reflected in the simplicity of operation and the attainment of grace throughout the process, where mastery of craft and perfection of technique result in an embellishment that is essential rather than superfluous. It is an architecture that contains the true symbol reflecting the magic of traditional cultures.

In this architecture, the issue of whether it is new or old becomes quite insignificant.

The members of the Jury are grateful to have an opportunity to recognise that divine spirit manifested within the work of such men.

That the quality of this work is appreciated even outside Yaama is clearly indicated by the enthusiasm with which other villages are seeking to follow its example and solicit the services of the same architect/mason. In an era when traditional architecture is losing ground, this is a remarkable feat.

OBJECTIVES. Until 1962, when the village elders decided to build a Friday mosque, only neighbourhood mosques existed. The village elders defined the major characteristics of the mosque. The structure was to be a simple, rectangular hypostyle prayer hall with the externally expressed mihrab as the only secondary volume. They appointed the local master mason, to carry out the construction as his share in the project.

SITE. The village of Yaama is in the Sahel region of Niger, near the northern limit of the rain dependent agricultural
Left: The gentle slope of the domical cupolas contrasts with the sharp edges of the towers.
Top: The fenestration is small but artistically grouped and varied.
Above: The sculptural quality of the material is evident in this elegant treatment of the staircase.
area. Vegetation is mostly sparse, consisting of scattered trees and shrubs. Large areas hardly have any vegetation and are strewn with gravel and rocks. In the valleys and depressions the vegetation seems luxurious by comparison. The village site is flat but slopes slightly to the north towards a relatively fertile valley.

Village life in this settlement focuses around the Yaama Mosque which is centrally located. The mosque is set in a courtyard. Streets border two sides of the compound. A large open space is reserved for activities on the south side. And a smaller open space separates the east side from the compounds which face it.

**HISTORICAL BACKGROUND.** The region's present state belies its eventful history. For centuries it was the crossroads of large, autonomous and often conflicting states and interests — the Songhai and Kanem, Mali and Kanem/Borno, Songhai and Borno. Although independent, smaller states in the region and to the south sometimes became integrated into one of the greater powers' authority.

In the last decade of the sixteenth century, the Hausa, already commercially active, took advantage of the fall of the Songhai empire following the Moroccan invasion (1591). They increased their overall share in the trans-Saharan commercial and trade transactions.

Initial contact with Islam occurred in 666 A.D. with the expedition of the Arab conqueror Oqba Ibn Nafi in the Kaouar (Bilma). Successive waves of Islamised Berbers spread Islam south. In the eighteenth century, reform movements developed, especially in the Hausa states. This was in reaction to the lifestyles of the ruling classes and the excessive taxes imposed on the poor. The most famous and successful reformer was Osman dan Fodio (1754–1817) who was born near Yaama. He succeeded in founding an Islamic state ranging from present day Burkina Faso to Lake Chad and the Cameroons, and from Birni Nkonni to the Benue river. Osman dan Fodio inspired similar movements in West Africa (Sekou Amadou, El Hadj Omar). His capital was Sokoto, in northern Nigeria about 140 kilometres south of Yaama.

When the dust settled, the frontier between the proponents and opponents of the Jihad was established between Niger and Nigeria. Presumably the area of Yaama-Illëla-Tahoua was outside the Sokoto empire but it was not far from major events or from the strong influence of its large and powerful neighbour.

After a bloody introduction to colonial ambitions (mission Voulet-Chanoine, 1899) the region was finally "pacified" at the beginning of this century. It was integrated into the French colonial empire first as a military territory and then as a colony in 1922. In 1960, the Republic of Niger gained its independence from France.

**ACCESS.** Yaama is reached by a half-hour drive on a dirt road branching off from the main road Niamey-Birni Nkonni-Tahoua-Agadez. This road becomes the village's main street. The first compound is a kind of youth and cultural centre. The street then meanders into the old village core. It passes near the village chief's compound and intersects another street where some modest shops are located. After the next turn, the mosque appears.

Access to the mosque is through four gates: a main gate with an entrance building in the northern enclosure wall, two closely placed gates in the western enclosure wall and another gate in the southern enclosure wall, facing the open space.

**LOCAL ARCHITECTURE.** Not far from Yaama, a modern building was constructed from plastered sand-cement blocks and covered with metal roofing sheets. Otherwise, the village

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*Upper left: The subtle proportions of the full structure can be appreciated from the sense of balance, stability and serenity it provides. Below: Local village architecture uses the same vocabulary including the domical structures for the granaries.*
is almost untouched by such materials and technology. Buildings are made from traditional materials using proven techniques from the past. Houses are made up of independent cells although these may be arranged in continuous clusters giving an urban aspect to the living quarters. The cells can function as a reception room, a sleeping room, a kitchen, a general store, or a shop. And sometimes more functions are served by the same cell. The cells are arranged in the compound so that a functional spatial arrangement is created — the courtyard is divided into outdoor areas that have specific functions: main courtyard, stable, fodder storage, kitchen courtyard, and so on.

Cells are square or rectangular. The rectangular bricks are made in wooden forms and reinforced with straw to avoid cracking. There is no evidence of the traditional pear or cone shaped bricks used in Hausa construction. The structures are built directly on the natural soil after removing the top soil when needed. The masonry is rendered with a straw-mud plaster that is often prepared with other inputs (cow dung, grain husks) and left to mature. Mud is extracted from different pits according to its specific qualities. Different mortar compositions may be used for exterior and interior plastering according to various considerations of suitability. For example, no cow-dung is used for the mosque’s plastering since it is thought unsuitable for a cult building. Floors are made of compacted mud with a smooth finish.

The roofs of the main cells are made using two different techniques. In the first, a central wooden post is used to support a system of sloping wooden rafters on which branches or sticks are laid that carry the mud roof. In the second technique, arches made from bent sticks are placed in the walls to form the framework for a shallow dome that is covered with branches and mud mortar. Both techniques give a similar “camel’s back” form when seen from the outside. Water from the roofs is evacuated through prominent gargoyles made from earthenware pipes, hollowed palm-wood planks, or hollow shaped pieces of corrugated iron.

Wall openings are few and small. Doors are generally low so adults have to bow to pass. Windows are so small that they are more like ventilation holes than openings for light. With a few exceptions, like the pinnacles on the corners of some buildings, or a modestly sculptured entrance to a house of an important family, the houses are without decoration.

The built environment is harmonious in its forms, its organisation, colours and textures. The most striking feature is formed by the granaries. These structures resemble giant earthenware pots resting on saddlestones raising them from the ground level. The granaries can be filled through an opening in the top, covered with a thatch cover that may be the size of the roof. Steps cut into a tree trunk give access to the top. The technique of making these granaries is more like that used in pottery than in buildings. A shell is made with sausage-like rolls of mud to form a spherical structure about 5.2 metres in diameter. The thickness of the mud shell varies from four to seven centimetres.

![Plan](image)

**PLAN.** The main prayer hall is a simple plan. In the east/west oriented rectangle of the outside walls there is a grid of squares: eight squares east-west, six squares north-south. Originally there were 30 columns in five rows (east-west), dividing the interior into six east-west or seven north-south corridors. The **mihrab** was placed on the axis of the central east-west row but slightly off to the south so that it can be seen from a corridor rather than be blocked by the first column facing it. During the 1975–1976 repairs, the third column of the central row, counting from the **mihrab**, was removed and the large square was covered with a dome-shaped roof. In the 1978–1982 dry seasons four corner towers were built at the extremities of the north and south walls. They enclose two galleries that each have a second floor with access through staircases in three of the towers. The staircase of the fourth tower starts on the second floor.

The span between the columns was determined by the length and bearing strength of the available beams for the original roof and by the spatial requirements for Muslim prayer.
People pray in rows running north-south and the span of the corridors accommodate a person kneeling in prayer and leaves a circulation space behind him. The dimensions of the columns along the east-west axis correspond to the space needed for a person kneeling down for prayer. The dimensions of the north and south galleries are less determined by the activity that occurs in them.

The outdoor space is an irregularly shaped courtyard in which the mosque is placed near the east wall, leaving a small passage between the qibla wall and the courtyard wall which is common in this type of mosque.

Religious activities can take place on the more spacious sides of the courtyard. The most important space is to the north, where the main entrance is. Banks are built along the walls inside the small entrance building. An exterior sculptural staircase is built against the west wall. It leads to a platform from which the muezzin usually calls. In the southwest corner of the courtyard stands a small building where water is kept in a jar for ablutions.

**EVOLUTION OF DESIGN.** About 12 years after its construction, the mosque needed repair. In 1975, Falké Barmou repaired and embellished the mosque. The opportunity was taken to install a new arch supported roof and a dome. The addition involved removing a column, thus opening up a central square among the rows of columns, a striking feature in this type of mosque. The next step in the transformation of the mosque was the addition of four corner towers which enclose two-storey galleries. This work was accomplished during the 1978–1982 dry seasons. The entrance building was also built during this time.

From a severely sober structure it was transformed into a monumental building. The corner towers and the two-storey galleries changed its exterior appearance. The system of arches and half-arches and the dome, replacing the simpler horizontal beams as a roof support, changed the interior.

**FORMAL ASPECTS.** The mosque has a monolithic base, low on the east and west sides and high on the other sides. Towers project from the four corners. Each tower is a single form with heavy-set tapering walls crowned by a lighter sculptural element. The towers are reminiscent of the stepped minarets found in this area.

Frieze-like bands mark the elevations at irregular heights. They would seem to mark the levels of floors or roofs but this is not always the case. Crenellations of half circles decorate the parapets and rounded cones sometimes mark the corners. The mihrab has recently received a superstructure in the form of a crown.

**MATERIALS AND TECHNOLOGY.** Innovative use of traditional techniques and materials characterises the construction of the Yaama Mosque. Wood of any available kind was used as well as mud mortar and in some instances cement stabilised mortar finished with lime wash. Materials were local with the exception of a few minor items like nails and some wooden planks.

The technology employed is commonly used in the region and has been for generations. However, some of the applications of the general technology may have been developed by the mason/architect. Bricks were made by the villagers and brought to the site before and during construction. Mud for mortar was extracted and provided in the same way, then prepared on site. Wood was also furnished the same way. Scaffolding was simple and so were the mason’s tools.

**TECHNICAL ASSESSMENT.** The mosque is accommodating and well conceived. Climatic performance is similar to that of other mosques. No special measures were taken to prolong physical comfort. The second floor galleries offer better conditions during the humid season since they are better ventilated. But this does not seem to have been a major consideration in their construction.

The choice of materials was traditional and therefore harmonious. Traditional techniques were used creatively.

The mosque faces similar maintenance problems as other mud buildings in the region. The mosque needs continual
maintenance work, especially rendering. Large areas of the outside walls are eroded. Some parts have not been rendered at all, while other parts have been rendered with a cement stabilised mortar that does not hold up well. Some interior walls and part of the galleries' roofs have not been finished. The lack of finishing and maintenance is linked to the production process. The building's parts were constructed over a long period and consequently have varying maintenance needs. The work was carried out as a community project and not on a contractual basis. The architect/mason volunteered instead of being commissioned. In short, by the nature of its production process, the mosque is a permanent construction project. This ongoing process may be as important as its product.

The mosque's design is partly conventional and partly innovative. Its basic structure is simple and sound. And even if it was built by successive modifications and extensions, the result is homogeneous — as if a clear conception of the final stage existed from the beginning.

AESTHETIC ASSESSMENT. Treatment of masses and volumes is conventional and simple. Wall openings are few and small with no emphasis on their disposition in the base volume. This accentuates the monolithic character of the mass. In the middle part of the towers they become part of the composition and in the upper parts there is a balanced interplay of masses and voids.

Entering through one of the vestibules the quality of the sober spaces is marred because parts of the walls are unfinished. Nevertheless they are a pleasant, cool transition from the bright outside sun light to the comparative darkness of the interior of the main prayer hall.

The prayer hall gives the impression of a dimly lit forest of columns from which the arches spread like branches. The space below the dome enhances the interior by accentuating the troglodytic character of the corridors.

CONCLUSION. The project objectives were achieved. The mosque is functionally adequate and widely appreciated. Other villages seek to follow its example. The architect/mason has been called upon to assist neighbouring communities. The client/user response was positive and the entire process was adapted to the socio-economic situation.

Technology and architecture are local and regional. Some elements may have originated in northern Nigeria, others in the Sahelian region. Essentially it is a mosque in the tradition of Hausa Islamic architecture, though the technology used in making the arches may be unusual for this type of building.

The building was financed by the village community. Everyone contributed in proportion to their ability to do so. Some people made mud bricks; Others carried them to the building site. Women carried water for brick and mortar production while others cut and gathered wood. Those who could contribute cash were free to do so. Gifts of grain were also welcome and distributed to workers. The owner of the land where the mosque was built waived his rights to its use.

Making the Yaama Mosque more widely known could help maintain traditional architecture. The inevitable evolution towards modern construction techniques could become more gradual, allowing more scope for a transition with continuity, and safeguarding local and regional architectural vocabulary. Then craftsmen and users may integrate outside influences rather than have to adopt them in their entirety which results in a break with tradition.