

# Komoguel Water and Sanitation Programme

MOPTI, MALI

Situated at the junction of the Bani and Niger rivers, the city of Mopti in Central Mali has developed over the past one hundred years from a modest settlement into an important urban and administrative centre that reaches out to both the north and east of the country. In addition to its access to river traffic, the city is also well connected to Mali's road network. A twelve-kilometre causeway across an area of seasonally flooded agricultural land, which was constructed during the French colonial period, links Mopti with the national road network. More recently an international airport was added, which receives a fair number of foreign tourists whose main destinations are principally the Pays Dogon and the nearby historic city of Djenné.

Mopti's strategic location at the confluence of two major rivers has also become its major constraint to further development. During the months of November to February, when the waters of the Niger and Bani are at their highest levels, the city becomes a virtual island with only the causeway as its connection to firm ground. Mopti's population, currently estimated at more than 125,000, is squeezed during this period into an area of not more than 2.5 square kilometres. Not surprisingly, a parallel city has developed over the years at Sévaré, at the other end of the causeway, where there are no restrictions to growth.

As a result of population pressure and overall low levels of development, living conditions in Mopti, particularly in the areas around the harbour and in the adjacent districts of Komoguel and Gangal, have steeply declined over the past decades. Water and sanitation are in a very poor state, a situation that is being aggravated by the absence of a proper system for waste collection and by unpaved streets with open sewers.

The major objective of the intervention of the Historic Cities Programme (HCP) in Komoguel is to improve existing living standards in a limited geographical area of Mopti by focusing on improved health and sanitation conditions. In order to achieve this, a series of limited interventions aimed at improving existing sanitation conditions in an area confined to the immediate surroundings of the Great Mosque of Mopti have been implemented since June 2006.

HCP has based its intervention strategy on close cooperation with the inhabitants of the neighbourhood, local religious authorities and government



The streets are being paved with bricks made from recycled local refuse, such as plastic bags.

Opposite page:

The Centre for Earthen Architecture was inaugurated in 2010. The interior space includes exhibits interpreting the earthen architecture projects undertaken by AKTC.

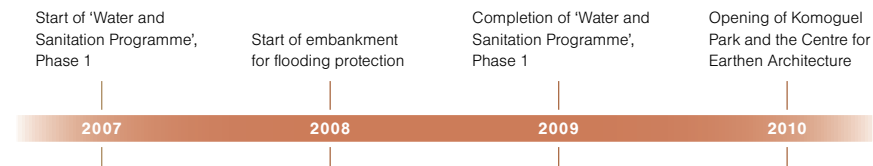


## Project Scope/Objectives

This project's objective was to develop the built environment and improve local health standards through upgraded water supply, sanitation systems and street paving. This included the creation of toilet and shower facilities in a newly constructed community centre and the creation of the Centre for Earthen Architecture.



Phasing 2007 → 2010



Open sewers and poor drainage were serious health hazards in Komoguel.

Opposite page:  
Successful efforts have been accomplished in Komoguel to improve the infrastructure. New paving has been made from recycled waste materials.

officials. Following the complete and successful rehabilitation of Mopti's Great Mosque by HCP in early 2006, substantial goodwill had been created with the local population and with the authorities to justify the launch of a major initiative for the area. The Mosque's Committee in particular welcomed plans for improvement of the environment in the immediate surroundings of the Great Mosque.

The activities are being carried out in phases. A first phase, which started in mid 2006 and continued until December 2009, focused on physical improvement of a relatively small area around the Great Mosque. In close collaboration with the local Mosque Committee, improvements have been realized to provide protection against periodically rising river water by constructing a flood barrier with 3200 square metres of landfill. In addition to this, several public water points were established to increase access to safe and clean drinking water; an underground sewerage system was established and connected with individual households; a treatment facility for raw sewerage was installed; 4000 square metres of streets were paved with locally manufactured bricks (made from recycled polythene bags and sand); and a system for collecting solid waste was introduced. These improvements made to the built environment during the three and a half years that it took to implement Phase 1 also generated training opportunities for 345 people in construction techniques, plumbing, masonry, brick manufacturing, carpentry and metalwork.

Following the completion of Phase 1, HCP commenced with the construction of public toilets, a community centre and a visitor centre on the landfill. The latter will house a permanent exhibition on earthen architecture and will also serve as a small museum, thereby generating income for the maintenance of the local water and sanitation system.

Based on information collected through an extensive baseline survey carried out during the first phase, a complementary second phase – involving also the Aga Khan Foundation (AKF) and the Aga Khan Agency for Microfinance (AKAM) – will follow, pending the availability of co-funding. The successful completion of the first phase for Komoguel has opened the possibility for further improvement of water and sanitation conditions in the quarter. During a second phase, a much larger area will be targeted for improvement. During Phase 2, two new sewage treatment facilities will be constructed, underground sewage will be put in place for 2000 beneficiaries and 8000 square metres of street will be paved with bricks. This second phase will include other socio-economic development issues related to public health, education, family income and possibly also open space development. During this phase cross-cutting issues such as gender, environment and the organizational and institutional development of civil society will also be addressed.



Background

BRIEF HISTORY OF PROJECT SITE

The district of Komoguel is located in north-east Mopti and borders the inner Lake Pagué Danawal. The project area encompasses Mopti's Great Mosque, built in the 1930s and now considered a prime example of quality earthen architecture in West Africa. The local built environment is semi-protected, with a limit placed on building height to protect the skyline.

Challenges

PROJECT RISKS

Water and sanitation development activities could continue through a number of phases to eventually encompass all watersheds in Mopti town, but local capacities to manage the complex of individual watersheds remain limited. With the island town's growing population and no further space for expansion, there is a risk of increased urban development along the town's outer edges, outside the established watersheds.

SITE CONDITIONS

Komoguel has one of the highest recorded residential densities in Mali (over 400 persons per hectare). Conservation and upgrading works faced significant logistical and technical challenges due to tight access via the narrow alleyways connecting fragile traditional homes.

INFRASTRUCTURE

The piped water network is insufficient. Untreated sewage, which currently is allowed to flow into inner Lake Pagué Danawal, poses a major health threat to the population. Acting as a large evaporation basin, the lake is in danger of disappearing altogether under layers of sediment made up of untreated sewage. Decades of under-investment in drainage, water supply and electrical networks, coupled with extensive war damage, means that significant investments are required to achieve the most basic levels of service coverage for a fast-growing population.

BUILDING CONDITIONS

Lack of maintenance, together with war-related damage, has left the bulk of Komoguel's traditional housing stock in a state of advanced disrepair. Additionally, high occupancy levels in subdivided homes pose a challenge to improving living conditions.

Significant Issues and Impact

DATA COLLECTION/SURVEYS

Since a first baseline survey in 2007, regular sample surveys have been conducted in the area and progress has been measured, covering more than 30,000 people. Nearly 40% of the population is 15 years old or less. Average household size is eight to nine people.

MASTER PLANNING PROCESS

A comprehensive master plan for Mopti is not available. There are remedial plans, however, for improving the port and some parts of the built environment.

PLANNING ISSUES

Mopti's relative isolation limits its future development. Ideally located for river traffic, it can only be reached by road via a single 11-km-long causeway passing through the floodplains to connect it with Sévaré. All future planning must take accessibility into account, balancing the needs of a relatively large population with a limited geographical space (around 2500 hectares).

COMMUNITY INVOLVEMENT/PROGRAMME

All sanitation improvement and construction activities were undertaken by or in close collaboration with community members. Community members are also assisting in managing and securing contributions to certain projects.

VOCATIONAL TRAINING/CAPACITY BUILDING

More than 300 craftsmen have been trained through apprenticeships during the course of the activities. Capacity building at organizational and institutional level involves the local counterpart CAK/Cogest (Comité d'Assainissement de Komoguel/Comité de Gestion).

CONTRACTING METHODS

All works were carried out with direct labour recruited (usually from the resident community) and supervised by AKTC professional staff. Subcontractors were used for moving earth (digging and transportation).

NEW TECHNOLOGIES INTRODUCED

Production of paving bricks manufactured from recycled plastic bags.

RELEVANT CODES/STANDARDS ADOPTED

All construction and installation work was undertaken in accordance with the relevant international charters and domestic laws.

Partners

**PUBLIC PARTNERS**  
Ministry of Culture, Municipality of Mopti, Republic of Mali.

**PRIVATE PARTNERS**  
Chambre des Métiers de Mopti.

**COMMUNITY PARTNERS**  
Association pour l'assainissement de Komoguel.

Donors

Canadian International Development Agency, United States Department of Agriculture.

Authoritative Framework

'Memorandum of Understanding' with the Ministry of Culture (2006); various agreements with the Municipality of Mopti town.