

## Case Study, Haiti

# Infrastructure Rehabilitation of Rural Participatory Education Centres in Haiti: Models Using Local Materials, Knowledge and Capacities

---

## ***Framework of the Intervention***

This document describes the lessons learnt from the evolution of HEKS/EPER's approach to rehabilitating the infrastructure of rural Participatory Education Centres in Haiti's Grande Anse department between 2014 and 2018. The approach was based on the valorisation of materials, knowledge and local capacities. This document describes its content, as well as the main results for schools built with rock (gabions) and wood. The reconstruction work was supported, among others, by the Medicor Foundation and, in the case of the wooden models, also by Swiss Solidarity.

The approach includes a meaningful community participation and ownership of the project itself. This includes the buildings themselves and their effective maintenance, as well as their use for various purposes, not only for school education, but also for community events and even as emergency shelter during cyclones.



*School built with rock cages (gabions) in Bras Gauche – December 2015*

The models described here were developed during the last two phases of HEKS/EPER's reconstruction program which started in 2007 and was complemented by a humanitarian program after the massive destruction caused in by Hurricane Matthew in October 2016.

The objective was to support education in the remote areas of the Grande Anse department, in partnership with the Methodist Church of Haiti and particularly its Rural Rehabilitation Program.

---

## ***Lessons learned from previous phases (2007 to 2013)***

- According to the approach used in the early phases of the program, the schools were built in concrete and prefabricated materials by local companies. As a result, the communities concerned were little involved or even left out of the process.
- That said, the difficulties encountered in finding artisans and workers sufficiently qualified to carry out the work properly have gradually led to the consideration of adopting techniques that are simple to implement, with materials available in situ, while hiring artisans from the capital for more delicate parts such as the installation of the frame and the roof.



*School in Guillote, built in concrete blocks – March 2013*

The use of concrete in remote and landlocked areas implies serious logistical challenges, considerable costs and slows down the construction process.

Getting sand, gravel, sometimes water, but also cement, iron bars and concrete blocks to the construction site, involves difficult transports on bad, steep and often dangerous tracks.

Each class built according to this model cost between USD 30,000 and 35,000,

including furniture, which is a significant cost for this type of construction.

Therefore, despite the quality of the buildings, this model proved to be unsuitable for the context of the target area, and alternatives were considered, including the use of local materials available on the site and community participation.

---

## ***New models of intervention, based on local materials, knowledge and capacities***

### Case of the gabion school built in Bras Gauche

The area where this school was built is inaccessible by car. Two hours of walking are necessary to reach the village on steep paths. It was therefore unthinkable to resort to the previous model, which depended on the transport of materials.

The site lies in the hollow of two mountains. A torrent flows through the valley, offering stones of all sizes and sand in abundance. The choice was made to use locally available rocks. The solution had the advantage of considerably reducing transport and logistical constraints. At the same time, it allowed for the full involvement of the volunteer population in collecting the rocks, sand and gravel.

On this basis, and with the help of a technical company specialising in earthquake-proof construction, HEKS/EPER was able to draw up plans for the construction of a classroom with rock walls with earth and sand joints, encased in galvanised steel mesh, complying with the country's earthquake-proof and anti-cyclonic standards.

*NB: the structures built by HEKS/EPER meet or exceed the standards of the Haitian building code, particularly with regard to the risk of hurricanes.*



Emergency construction in response to Hurricane Matthews – April 2017

#### Case of the semi-temporary wooden school built in Palmier

This approach to community participation and the use of local materials and expertise was applied in the framework of the emergency response after Hurricane Matthew in October 2016. The aim was to respond quickly and cost-effectively for the construction of semi-temporary wooden classrooms.

All the materials used were either collected on the site itself by the community, or came from the town of Jérémie, keeping in mind the need to keep them basic, affordable and easily accessible to the community for future maintenance.

In this emergency context, it was decided to build schools according to a model inspired by traditional methods using woven wooden slats.

#### Mobilisation and participation of the communities

A mobiliser was hired and a methodology for raising awareness of the importance of the participation of the population was developed. This approach emphasises the social links existing in the communities and the tradition of collective work for the common good.

Mobilisation begins with regular visits to the site and informal discussions with selected members of the community. It is necessary to take time with the local population who will benefit from the project. As the visits progress, knowledge is refined about the characteristics of the site and the relationship that the inhabitants have with their environment. The community participates using its knowledge, acquiring further skills on-the-job and contributing to the implementation of the project.

*NB: During community meetings, speech is rarely free, fair and spontaneous. It is very often subject to games of influence and power, reflecting the tacit hierarchical relationships of dominant to dominated community members.*

The meetings are an opportunity to exchange with the population in an informal way and to gather the different opinions of the community, from a more individual perspective or via small committees. This allows more expression of opinions, questions, suggestions, without the potential obstacles of expression during large meetings. By proceeding in this way, in the

absence of local leaders, the quality of the information collected is often more accurate and relevant.

More meetings appeared necessary to inform and explain, but also to listen, feel and better understand. The exchanges allowed open discussions with the population about the different possible options, notably for the location of the buildings or the organisation of the worksite, to encourage the public to make proposals, to decide together. This fully participatory approach allowed for increased ownership of the intervention.

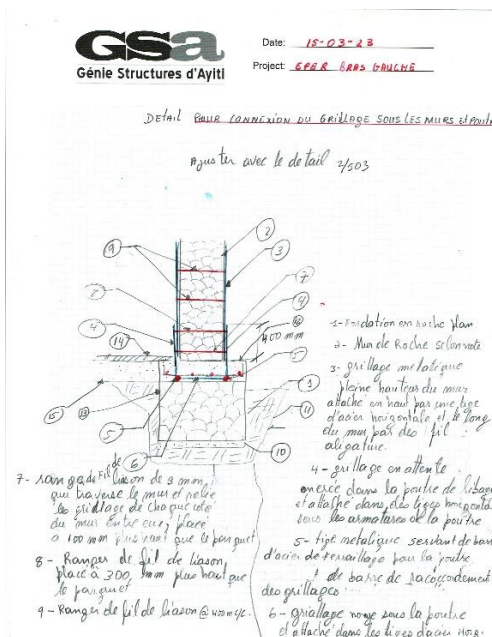
## Deciding on the location of buildings

The siting of a building, or a series of buildings, is a process that must integrate several parameters and requires knowledge of land use and local customs.

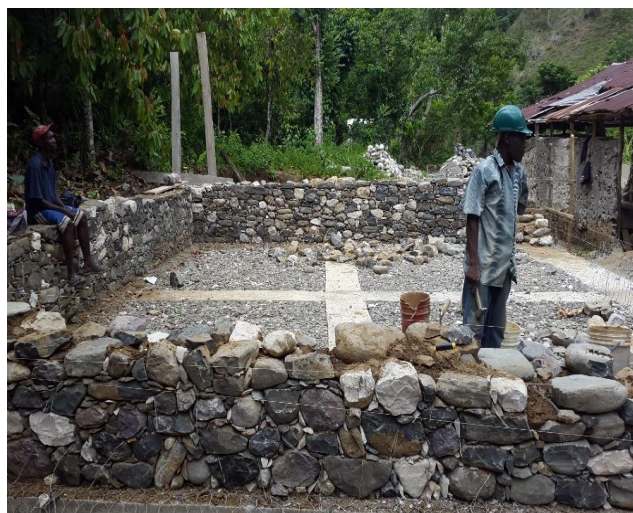
This process should ideally be carried out on the ground, in the presence of the beneficiary population, to assure their commitment and effective participation in the work. While this approach does not replace the imperative of a drawn design of a construction project, it complements it through a permanent back and forth between these two components.

Although sometimes unstructured, the series of discussions conducted with the communities allowed the exchange of many ideas and experiences, their joint analysis and the choice of solutions accepted by all.

Through on the ground interaction and proposing to proceed together, attention and interest are captured at the level of the entire community, which encourages it to become fully involved in decision-making on the project and in its implementation.



First design sketch showing the building system



School of Bras Gauche, construction of the walls with stones, earth mortar and sand



### Project planning and monitoring through regular and structured communication with the community

Over time, the meetings are structured by **weekly meetings** with all members of the community. The sessions bring together as many people as possible, offer the floor, and allow for more detailed explanation of the approach and discussion.

Thus, on a weekly basis, the meeting opens with an assessment of the situation and the progress made over the past week.

This is followed by a presentation of the objectives for the following week. Each task is broken down and explained in detail for the sake of clarity and understanding by drawing up a common list of the tools needed to carry out the work. The tasks are adapted to the capacities and know-how of the communities.



*Gabion School in Duri – December 2018*

This ranges from site preparation (clearing brush, earthwork, digging foundations, tanks, etc.), to placing bags of soil for septic tanks, to braiding wood for the walls.

Everyone brings their comments and it is often the elders who encourage the younger ones to sign up, either to dig or to carry water. Of course, anyone who wants to can get involved, **the rule being volunteering without any money being involved**. For some structures, with a high number of participants, they are organized in small groups working in alternation, either in the early morning when the weather is cool or in the evening before dark.

At the same time, HEKS/EPER's commitments are noted and displayed. At this preparatory stage, the input consists mainly of providing tools (shovels, picks, seals, wheelbarrows, etc.), technical support for the settlements, or backfill for the rehabilitation or development of the access road, for example.

Experience shows that, in general, the community core is made up of people aged 50 to 60 and elder, who mobilise the younger ones.

The notes on the Flip Chart are important and constitute the memory of the successive sessions. These notes can be consulted at any time, like a logbook. They are set collectively during the meetings to explain what is being done, what will be done, how and with whom. On these posters, participants volunteer to write their names.

During these community meetings, the projection of photographs, taken at other sites where other communities are active, digging, digging, crushing, etc., can be organized.

The audience watches with attention, and sometimes surprise, what happens in other communities. The various aspects of the activities observed are widely commented on, whether they be technical points, mobilisation of people or organisational aspects. This approach stimulates reflection and discussion.

This approach allows for the development of awareness of **a community's capacity for self-management** and the dynamics that can result from it. These sessions also show that participation is not so extraordinary and is not necessarily a sacrifice. Each targeted community realises that it is not alone in its efforts to build a school and a common good.

The sharing of experience through photographs also facilitates the evolution of the communities' perception of themselves: **from the status of passive beneficiaries to that of a responsible community who is an actor in its own project** and in the life of its village.

Take away messages:

- *Absolute transparency at the various stages of the process is the sine qua non for the success of the project. Everyone must know what is going on and what is being decided in order to be able to make an informed commitment. No one is relegated.*
- *Persons, committees or authorities may not initiate the work of others or decide for them so that everyone feels concerned and gets involved in tasks of common interest.*
- *At no time should the issue of money be raised. Everything is voluntary.*

Results achieved

In the case of the gabion schools, two classrooms were built per school at a cost of USD 20,000 per class, including furniture. There were significant savings on transport and logistics, as well as a significant reduction in administrative work related to orders, contracts and other payments. The execution time of the operation was reduced by six months.

Thus, these actually less expensive constructions are also more respectful of the environment, and allow the full involvement of the targeted communities and their appropriation of the infrastructures.



*Interior of the gabion schools of Bras Gauche and Duri.*



*The building is also a meeting place for the community.*

In the case of the post-emergency semi-temporary schools, eight wooden classrooms, built according to the local woven wooden slat method, were erected at a cost of USD 6'000 per structure.

The construction of wooden classrooms was carried out on sites where schools were destroyed by Hurricane Matthew. The temporary shelter consists of two classrooms, each measuring 5.5mx6m, according to a calculation provided by a renowned national design company. It is a wooden structure, bolted, nailed and counter-ventilated, covered with corrugated sheets. The floor is made of beaten earth. The walls, made of braided wood, are made by the communities with palm trunks felled by the hurricane and harvested in the area. They are transported on people's heads and quickly assembled on the ground (in a little less than a month, including the earthwork).

This type of construction

- quickly offers the inhabitants two multi-purpose classes to resume school, religious or other activities
- uses a fast and replicable technique, based on simple and reversible materials
- involves the community in the work
- is seismic and resistant to medium-intensity cyclones, for a minimum duration of 2 to 10 years
- is practical and durable: a simple building, of basic technique, easily repairable by the population (with easily accessible materials), not very expensive.



*Semi-temporary school of Gobin, rear view*



*Interior of the semi-temporary school in Pinquet*