



CORDAID'S POST-DISASTER SHELTER STRATEGY IN HAITI: LINKING RELIEF AND DEVELOPMENT

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Abstract

Haiti was struck by a heavy earthquake in 2010 and international aid poured into the country. News reports in 2011 were not very positive about the results of post-disaster reconstruction: "The relief efforts are only putting Haiti on life-support instead of evolving into the next stage of development". One of the non-governmental organisations (NGOs) involved in Haiti was Cordaid, implementing a 'transitional shelter strategy' to support the transformation of neighbourhoods from a state of life-support into a state of self-sustaining development. The strategy was implemented in both a rural and an urban area. The main feature of the strategy was the provision of structures that could be adapted from simple shelters to permanent houses. Since the results of the strategy were mixed and ambiguous, a comparative case study was conducted to evaluate the shelter strategy in both areas. The objective was to draw lessons about what has to be taken into account when formulating future urban shelter strategies. The case study is discussed in this article. The main finding from the case study is that producing the intended number of shelters within the financial and time budgets that were set (efficiency), was more difficult in the urban area than in the rural area. But the conditions for linking relief and development (effectiveness) are more favourable in the urban context. NGOs may achieve long-term (effective) results in the urban context when a lower efficiency can be justified. That is why NGOs need to engage in a debate about the extent to which they are able to focus on long-term shelter or housing strategies. The important element in the debate is communication with the donors who are often focused on short-term relief measures. However urban areas cannot be rebuilt with only short-term interventions. The link between relief and development has to be made by a process-orientated approach focusing on capacities of local participants.

Keywords: Haiti, LRRD, Post-Disaster Reconstruction, Shelter Program.

INTRODUCTION

A heavy earthquake struck Haiti on 12 January 2010. The scale of damage and the number of casualties were unprecedented. That was mostly due to the poor condition of the buildings as in the widely quoted adage: "Earthquakes don't kill people, but poorly built buildings do."

International aid poured into the country and to non-governmental organisations (NGOs) that assisted in the rebuilding of Haiti. However news reports in 2011 were not very positive about the results because the relief efforts are only putting Haiti on life-support instead of evolving into the next stage of development (Price, 2011). This touches upon the question how to 'Link the stages of Relief, Rehabilitation and Development', known as 'LRRD' (Christoplos and Hilhorst, 2009), often very hard to achieve in practice (Cordaid Shelter Program Manager, 2012).

O'Donnell et al (2009) conclude that most examples of post-disaster reconstruction in the literature deal with rural areas. Analyses of (transition)

strategies for urban areas are scarce. The most likely reason is that natural disasters in the past mostly happened in rural areas. Since the world is becoming more and more urban, future disasters will occur in urban contexts on a wider scale. It is therefore necessary to enlarge the knowledge about post-disaster reconstruction and the transition from relief to development in an urban context.

One of the elements of post-disaster reconstruction, together with other elements such as education, health, nutrition and WaSH (Water, Sanitation and Hygiene), is shelter. According to the LRDD-vision the transition from relief to development should also be supported by shelter strategies. In these strategies the transition should be made from providing provisional shelter against the elements (relief) to permanent dwellings that facilitate the social and economic participation of the residents in society (development). The implementation of shelter or housing strategies in urban areas is often more difficult than in rural areas. Rural areas offer more space, which makes it easier to create temporary shelter and a permanent house on the

same building plot. Dense urban areas usually do not offer that space, what often leads to the well-known large refugee-camps in public areas like parks and squares. Urban areas are also more complicated to operate in because they comprise houses with multiple tenants, informal ownership and illegal building plots.

This paper is based on a study conducted in 2011 of the work of the Dutch NGO Cordaid in Haiti. Cordaid was implementing a 'transitional shelter strategy' to support the transformation of neighbourhoods from a state of life-support to a state of self-sustaining development. The strategy was implemented in multiple areas, among which was the rural area 'Septième Gérard' and the urban area 'Villa Rosa'. The main feature of the strategy was the provision of structures that could be adapted from simple shelters into permanent houses. In the rural area tangible results had been achieved: a substantial number of new dwellings had been constructed, but the contribution to the social and economic development of the residents was not clear. In the urban area only a small number of damaged dwellings had been reconstructed after adaptation of the building method. But developmental results could be observed during the building process, in better organisation of residents and more cooperation between them.

The mixed and ambiguous results were a reason to conduct a comparative case study to describe and evaluate the shelter strategy of Cordaid in both areas. The objective was to draw lessons from the comparison on what has to be taken into account when formulating a future shelter strategy that supports the transition from relief to development. The reason for this focus on urban shelter strategies was the scarcity of knowledge about strategies in urban areas. The case study is discussed in this article, structured along three main questions:

- What are the main features and results of Cordaid's shelter strategy in the rural and urban areas?
- How can the strategy be evaluated using the general evaluation criteria of effectiveness, efficiency and support?
- What lessons can be drawn from the evaluation for future shelter strategies for urban areas that support the link between relief and development?

In the following section some of the main concepts from the literature about post-disaster reconstruction and the role of shelter strategies are discussed to elucidate the objective of the transitional shelter strategy: supporting the link between relief and development. After that, the methodology used in

the case study is presented: the set-up of the case study and the operationalisation of the evaluation criteria, followed by the case study. The implementation of the 'transitional shelter strategy' in the rural and the urban area is described and the results are compared and evaluated, addressing the first two questions above. The concluding section addresses the last question.

KEY CONCEPTS ON POST-DISASTER RECONSTRUCTION

Disasters can be defined as crises that overwhelm, at least for a time, people's capacities to manage them and cope with them (Krimgold, 1976). Or in other words, a disaster is born when a society fails to cope with a crisis (Anderson and Woodrow, 1998). A crisis can be managed by a society itself, but when disaster happens, external aid is necessary to restore a controlled situation (UNISDR, 2009). Capacity can be defined as the ability to use resources, and vulnerability as the lack of access to resources (Lizzaralde et al, 2010). Two types of resources can be distinguished: 'hard' resources, tangible and physical, such as food, buildings and infrastructure, and 'soft' resources, nontangible or non-physical, such as employment, education and information. It is often necessary to pair hard and soft resources to increase capacity or reduce vulnerability. A building, for example, can be used as a school to teach people to build new buildings.

An analysis of capacities and vulnerabilities in a region that has been met by a disaster can be used as a tool to organise an approach for reconstruction. The analysis can determine what needs could be addressed by the society itself and what needs have to be provided by external aid. The stricken society has to be enabled to rebuild itself by strengthening its capacities in line with the observation by Hilhorst (2007): "Societies reconstruct, they are not being reconstructed." In the end, external support needs to move away and to leave the region to let the damaged society become independent and self-sustaining, succinctly stated by a Cordaid Rural Shelter Manager (2012): "The paradox of the ideal NGO is that they are very good in making themselves unnecessary."

Lizzaralde et al (2010) define post-disaster reconstruction as: "The process of improvement of pre-disaster conditions, targeted to achieving long-term local development and disaster risk reduction through the pairing of local and external resources, thus giving residents increased access to 'hard' and 'soft' resources (see figure 1). Both local and external resources to improve the present capacities and to diminish vulnerabilities are critical ingredients of

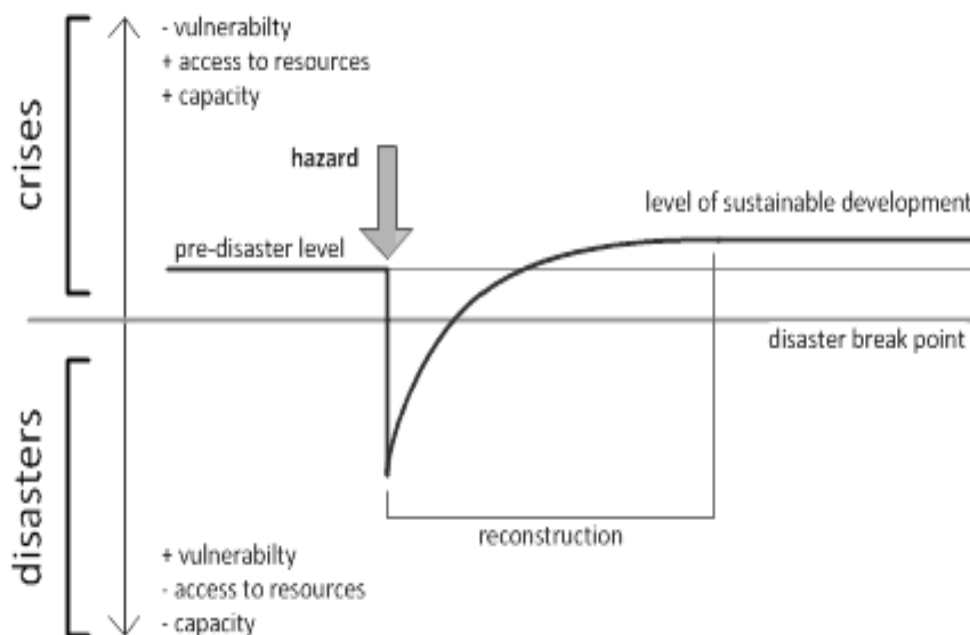


Figure 1. A process of reconstruction has to bring a post-disaster situation to a level of sustainable development (adapted from Lizzaralde et al, 2010).

a strategy to restore a society to its pre-disaster condition. Special attention has to be given to less-developed countries as they suffer most from natural hazards and therefore more in need of external (international) aid.

LINKING RELIEF AND DEVELOPMENT (LRDD)

Over the years, international NGOs have categorised aid interventions into two main areas: emergency relief and development. These two kinds of intervention often require specific skills and approaches, and specific timings (Lizzaralde et al, 2010).

The main issue is that both relief and development are necessary, but have a different perspective and lead-time, making it hard to link them in a sequence. Priority is often given to emergency relief, but relief measures can damage the prospects of long-term development, as observed by Eade and Williams (1995): "There is no such thing as relief projects that are neutral in terms of development. They either support it or undermine it." Relief for food and healthcare for example can save lives in the short-term, but can undermine the ability to develop local food distribution and healthcare systems over the long-term (Christoplos and Hillhorst, 2009).

Long-term development helps make a society self-sustaining, but it does not necessarily save lives in the short-term. The challenge is therefore to define effective relief interventions

that benefit the victims of an emergency crisis, but do not jeopardise development strategies (Dieci, 2006).

'Linking Relief, Rehabilitation and Development' (LRRD) refers to linkages in disaster response between immediate relief operations and subsequent efforts in rehabilitation and development (Christoplos, 2006). Rehabilitation as an intermediate phase is positioned between relief and development. Rehabilitation is defined as: "An overall, dynamic and intermediate strategy of institutional reform and reinforcement, of reconstruction and improvement of infrastructure and services, supporting the initiatives and actions of the populations concerned, in the political, economic and social domains, and aimed towards the resumption of sustainable development" (Dieci, 2006). It is an intervention that combines short-term and long term goals.

The benefit of the LRRD-vision is that it can diminish deficiencies and make each effort of post-disaster reconstruction more effective (see figure 2). As further observed by Dieci (2006): "Better 'development' can reduce the need for emergency relief, better 'relief' can contribute to development, and better 'rehabilitation' can ease any remaining transition between the two."

TRANSITIONAL SHELTER STRATEGY

Finding a balance between the efforts of relief and development was also one of the main issues when Cordaid was designing their shelter program in a

Post-disaster reconstruction:

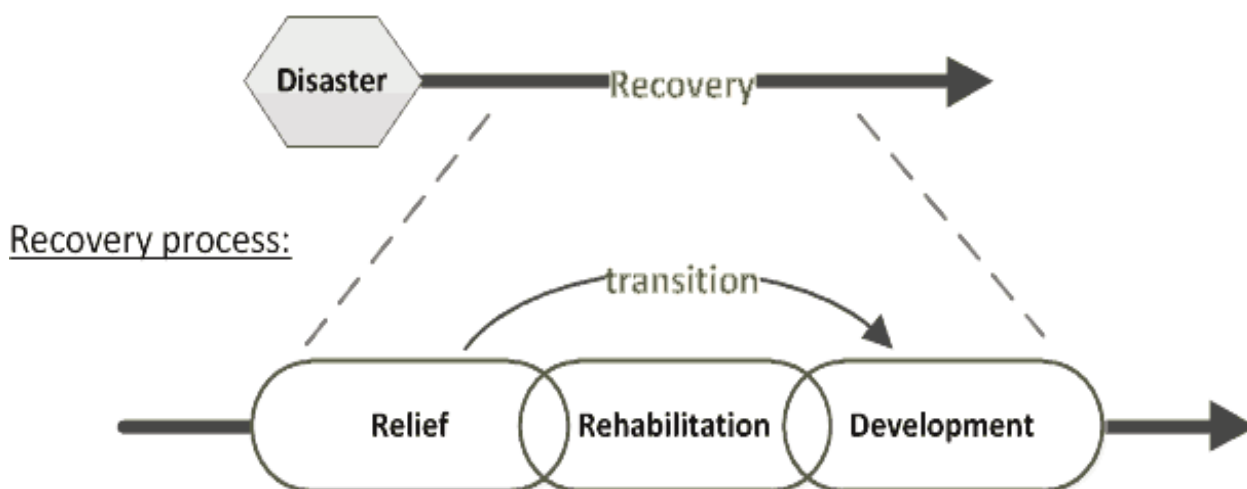


Figure 2. The LRRD-vision has to optimise the subsequent efforts to recover from a disaster.

response to the Haiti earthquake of 2010. The result was a transitional shelter (T-shelter) strategy, which had to supply the beneficiaries with a pre-fabricated structure in a short-term, fit for living during the first phase of emergency relief. The wooden frame and roof could be erected within 12 hours and were certified to be hurricane-proof. In the second phase additional cladding could be added to the frame that would upgrade the shelter to a semi-permanent house, and interventions in infrastructure and WaSH could be implemented. In this way the strategy supported a beneficiary with basic conditions, leading to an independent and self-suffi-

cient existence after the departure of Cordaid. The strategy started early in the relief phase and overlapped the phase of rehabilitation and the first part of the development phase (see figure 3).

METHODOLOGY

The comparative case study describes, compares and evaluates Cordaid's transitional shelter strategy for the rural and the urban areas. Figure 4 depicts the design of the study.



Figure 3. The Cordaid T-shelter, constructed with solid walls (source: <http://haitinu.nl/projects/huizenbouw-programma/>, 2012).

Research design

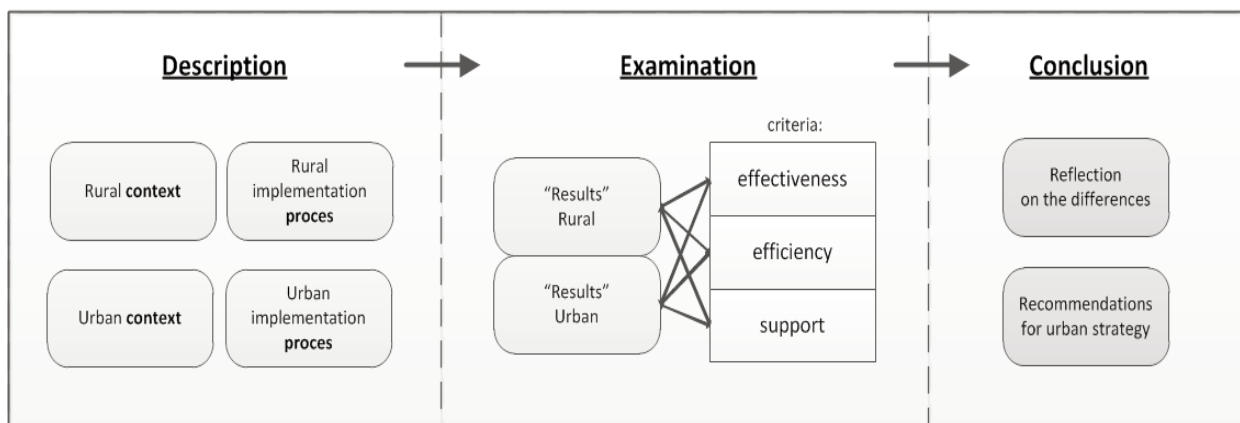


Figure 4. Research design.

The first part of the case study is a description of the context and the implementation process of the shelter strategy for each of the two areas. The second part is a comparative evaluation of the results using the general evaluation criteria effectiveness, efficiency and support.

The objective of the case study is to highlight specific occurrences and results that can be connected to the rural and urban contexts and to find out how the context influenced the possibility to connect relief with development. Given this objective the general evaluation criteria have been operationalised as:

- 'Effectiveness': This criterion looks at the extent to which the strategy has been able to link the phase of relief with the phase of development; the extent to which a community is supplied with resources to increase its internal capacity and reduce vulnerability; and the extent to which the dependence on external resources has been reduced and the social and economic participation of the residents has grown.

- 'Efficiency': This criterion looks at the relation between input and output. Given the restricted means it is important to find out which strategy realises the objective with the least amount of money and time.

- 'Support': The appreciation of the program by the beneficiaries and the local society. This support is important for the execution of the strategy and is a condition for the transition from relief to development

The evaluation of the strategy however has its limitation for a number of reasons:

- The results are interpreted by relating them to the context and the implementation process. Other possible causal factors were not taken into account.

- Quantitative data indicating the results were only partially available. The number of shelters built was known, but developmental results are hard to quantify (Jansen and Molenaar, 2011). Therefore the authors have assessed the cases comparatively on the basis of 'which case scores better'.
- The evaluation regards only two cases.

THE CASE STUDY

The description below is derived from a more substantial description of density, geography, accessibility, economy, policy, social conditions, NGO performance, local stability and local capacity as reported elsewhere (Janse, 2012).

Location and main characteristics of areas

The epicentre of the earthquake was located under the mainland of Haiti, near the capital Port-au-Prince. The selected cases are both situated in the region that suffered severe damage. The first case 'Septième Gérard' represents the rural area and the second case 'Villa Rosa' the urban area (see figure 5). Table 1 gives some of the main characteristics of the cases.

	'Septième Gérard' (rural)	'Villa Rosa' (urban)
Area	74 square kilometre	0.25 square kilometre
Population (approx.)	2000 families, 10,000 people	2000 families, 10,000 people
Density	135 residents per km ²	40,000 residents per km ²
Earthquake damage	40% of houses destroyed; 30% in need of repairs	40% of houses destroyed; 20% in need of repairs

Table 1. Main characteristics rural and urban cases.

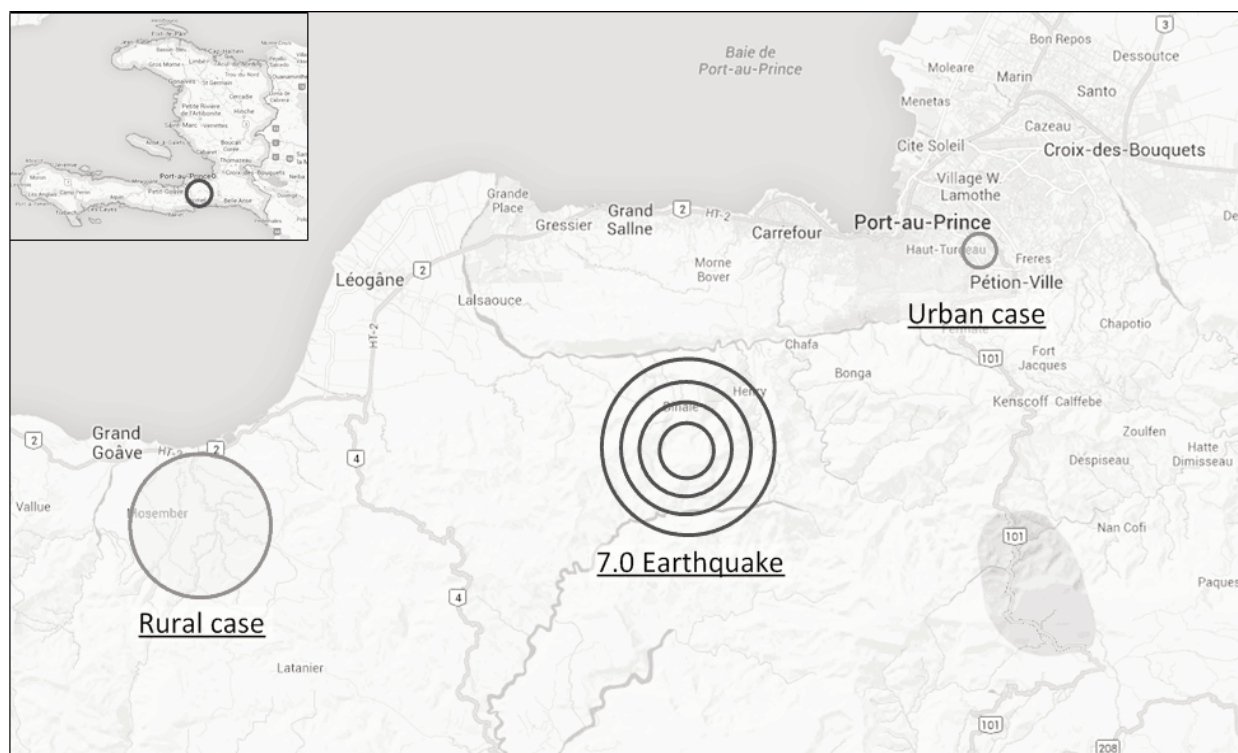


Figure 5. Epicentre of the 2010 earthquake and location of cases (adapted from Google Earth).

Program descriptions

'Septième Gérard'

Septième Gérard is a collection of small villages, located between the coast and mountains, west of Port-au-Prince. Parallel to the coast runs a national highway served by public transport. Connections from this road to the south (up into the mountains) are unpaved and run partially through riverbeds. Most of the villages within the mountains depend on the rivers for fresh water supply. Travel time for children to commute to school can be more than 4 hours a day.

A program to erect 1,200 shelters for the area of Septième Gérard started in October 2010, several months after the earthquake. The implementation of the program took until January 2011. In this period the decision was made to add solid walls and floors directly to the basic T-shelter, without an intermediate phase in which the shelter could become clad with tarpaulins. Intended measures to improve WaSH failed because partnering NGOs were hard to find. The construction of the basic T-shelters in Septième Gérard (the wooden skeleton) grew from 20 shelters a week in November 2010 to 10 shelters each day in January 2011. The construction of the solid walls and floors started in April 2011. Many T-shelters were not being used for months, until the construction of walls and floors were finished. Some of the beneficiaries lost faith in Cordaid and thought that

Cordaid would never finish the shelters (Janssen and Molenaar, 2012).

The original goal of Cordaid was to replace all destroyed houses in Septième Gérard with T-shelters. But the estimated amount of shelters was only sufficient to replace 75% of the destroyed houses. The underestimation of the number of residents in need for a shelter hampered the preparation process, which involved the local community. The originally intended process of assessing the residents would have taken Cordaid two years to complete. A compromise was made in executing 'emergency assessments' conducted by community representatives. Ideally the most vulnerable families should have been selected, but it also occurred that the representatives gave preference to their relatives.

The beneficiaries appreciated the T-shelter when the solid cladding was added. In their opinion Cordaid did not build shelters, but houses. Residents of neighbouring areas started to complain that they also wanted a Cordaid shelter. They were even willing to demolish the shelter they were given by another NGO, to be able to apply for a Cordaid shelter.

'Villa Rosa'

Villa Rosa is one of the many informal areas in Port-au-Prince dating from the 1970s. It never had an official zoning plan. It has grown near the border of the city as a relatively well-organised neighbour-

hood. Electricity and water is often available through informal means. Dwellings are stacked on each other and uninhabited pieces of land are very scarce. The area of Villa Rosa was selected as an operational zone, because Cordaid supported preceding projects in the area. This made communication with local NGOs and residents easier. Cordaid's initial plan was to build 1,200 T-shelters in Villa Rosa, but from the start of the program in November 2010, it was clear that these results could not be achieved due to lack of space. Force-fitting the T-shelters resulted only to maximum 400 shelters. They could not be erected on the majority of the building plots because of the small plot sizes and the incompatibility with multi-story buildings.

An alternative strategy, to collaborate with other NGOs and local committees, was developed in May 2011. This was called the integrated approach, including 'owner driven housing' to deal with individual houses. Owner driving housing included a tailor made solution for each beneficiary, for the same cost as of the T-shelter program. The program resulted into 680 retrofits, 102 T-shelters and 40 new-built houses.

The implementation of the integrated approach did address the multiple problems of Villa Rosa: rubble clearance, providing infrastructure and WaSH. The strategy that was adapted had to function as an example for future reconstruction projects. Cordaid undertook the coordination of the project to create a community development plan and dispatched an urban planner. The integrated approach was mostly dependent on the decision-making process in the neighbourhood committees, but as mentioned by a Cordaid Urban Area Manager (2012): "The community always came up with solutions, but they did not directly take the responsibility of the decisions that would make it possible not to rely so much on Cordaid."

The beneficiaries of Villa Rosa were extensively informed about the shelter process. The T-shelter was well-received in the neighbourhood during the first months. Later, beneficiaries became sceptical about retrofitting their houses, because they were expecting a T-shelter. A display of a retrofitted house shifted their preference from the T-shelter towards a retrofitted house.

The coordination of the integrated approach did take additional time and money, which lowered the output of the program. The coordination was handed over to the main neighbourhood reconstruction committee. Thereafter Cordaid left the project in June 2012.

COMPARATIVE EVALUATION

The general achievement of Cordaid can be considered successful. In some regions of Haiti people had been very hostile towards NGOs. Several organisations had to cancel their aid programs because they could not guarantee safety to their employees. Given these circumstances, the program although experiencing a few downfalls during the process eventually led to results that were locally appreciated, was in a sense an extraordinary achievement. In both the rural and urban cases the T-shelter strategy was, at least partially, successful. A substantial number of shelters had been constructed in both areas (see table 2). However the strategy had to be adapted to local conditions in both cases, which influenced the effectiveness and the efficiency.

	Rural case	Urban case
Intended number of shelters	1,200	1,200
Number of shelters built	1,200	822
Operation period	18 months	22 months

Table 2. Number of shelters per case.

Effectiveness

The shelter program in Septième Gérard predominantly supplied hard-resources, giving new houses to the most vulnerable people of the community. The program in Villa Rosa supplied soft resources next to hard ones and addressed various problems of the residential area. The latter program can be assessed as being more effective in terms of leading the community into development. The T-shelters given by Cordaid in the rural case only offered a (short-term) solution to a limited number of people. The shelters reduced the vulnerability of some individuals, as long as the shelters stood. Almost no other conditions of the community had been addressed to increase the capacity of the local participants. The urban shelter program reduced the vulnerability of the area by building local capacities through a process of participation and cooperation. Committees had been formed and appointed to be stakeholders in decision-making about the (long-term) reconstruction of their neighbourhood. That contributed to the local social and economic development through the shelter program, which can last in the years to come.

Efficiency

The efficiency of the rural shelter program was higher than the efficiency of the urban program. The supply of tangible (hard-) resources answered the need for shelter, the intended number of shelters was erected within the time and budget that were set, and overhead costs were below 15% of the total costs (Cordaid Rural Shelter Manager, 2012). The more substantial intervention, which became necessary to assist the majority of residents in the urban case, brought about additional costs. This investment resulted in an integrated urban plan for the area, which could facilitate additional aid programs next to providing shelter. But the results of the shelter program itself were low and had to be compensated in other areas. (Cordaid Shelter Program Manager, 2012).

Support

There were differences in the willingness to support the building process and the appreciation of the end results in the rural and urban case. Beneficiaries in the rural area were easier to please, while beneficiaries in the urban area were more critical. They wanted answers to many 'why' questions, whereas in the rural area beneficiaries wanted to know 'when' and 'how many'. Beneficiaries in the rural area were less educated and less informed, but more self-sufficient in comparison to the beneficiaries in the urban area who were more dependent, and thus were more able to assist in the adaptation of the shelter strategy.

CONCLUSION AND DISCUSSION

The last question mentioned in the introduction is concerned with lessons that can be drawn for future urban shelter strategies. The comparative evaluation of the case study is summarised in table 3.

The conclusion is that the implementation of the shelter strategy was more complicated in the urban area than in the rural area. In the urban area it was more difficult to reach objectives in an efficient way than in the rural area. But the conditions for effective strategies (linking relief and development by implementing soft-resources) were more favourable in the urban area. However it can be debated if soft-resources were necessary in the rural area. A common cause such as dealing with multiple damaged living conditions in the same (urban) area stimulates a variety of stakeholders who are willing to rebuild their residential area. In this context, participation and cooperation are needed to make it possible to rebuild an area from rubble.

The local society has to become enabled with soft-resources to create 'know-how' in order to rebuild their neighbourhood. A common cause, which can lead to a need for soft-resources, is less present in the rural context. Issues that require cooperation and participation are less in the rural context. This fundamental difference, resulting from the higher complexity in terms of problems and participants in urban areas, has to be taken in account when creating future shelter strategies.

Shelter strategies within the urban context, cannot be as efficient as strategies for the rural context. Urban shelter strategies require a process orientated approach because effectiveness needs the cooperation of local stakeholders. The integrated approach, which has been implemented in the urban case, can be taken as an example. Soft-resources had been supplied, in order to find realise implementation of hard-resources. The effective pairing of soft- and hard-resources in the urban case has started a promising long-term development process.

What does this mean for NGOs and for their communication with donors? NGOs need to engage in a debate about the extent to which they are able to focus on long-term (urban) post-disaster reconstruction strategies. Donors mostly prefer to give money for short-term results. "When a newspaper reports that thousands have become homeless, the reaction of international aid is to provide houses. Not even housing, but purely a roof" (Cordaid Urban Shelter Manager, 2012). However, effective long-term strategies in post-disaster reconstruction are essential to lower the necessity of efficient short-term interventions. NGOs need to be able to supply soft-resources and to accept lower efficiency. They have to find ways to communicate this to their donors. The experience from rural shelter strategies, which mainly incorporated the implementation of hard-resources, would not be able to help rebuild urban areas. The conclusion from this case study is that in urban areas the link between relief and development has to be made by a process-orientated approach focusing on capacities of local participants.

Criteria	Which case scored better	Reason
- Effectiveness	Urban case	High complexity and number of participants led to capacity building. Capacity is necessary for long-term development.
- Efficiency	Rural case	Low complexity makes fast implementation process within time and budget. There is less need for capacity building.
- Support	Neutral	Rural population is less well-informed. Urban population is more dependent. Both may have positive or negative opinions about the activities of NGOs.

Table 3. Summary of comparative evaluation.

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