

NICARAGUA-HONDURAS | 2022

technical review mission

of swiss solidarity supported projects

shelters and public buildings in multisector projects

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mobilstudio

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IMPORTANT NOTE !

This evaluation is a technical review and as such is a qualitative rather than a quantitative evaluation, where the evaluator tries to highlight areas where the partner could improve its implementation, focusing on the construction component.

Each project is first analyzed remotely through the project's documentation (project proposal, interim reports, drawings, etc.) followed by a 1-3 days field visit. The field mission for this technical review lasted 10 days, covering three projects in two countries.

This type of technical review is normally carried out during project implementation, but in this case, due to covid-19 and country elections, the evaluation had to be postponed and the visit was made after the projects were completed.

The present version is an anonymized version intended for publication. For this purpose, the names of the Swiss NGO partners have been abbreviated as CH-NGO 01 to 04 and the local implementing partners as LP or L-NGO.

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INTRODUCTION

1.1 General context

In November 2020 and within two weeks, two strong hurricanes, Eta (Cat.4) and Iota (Cat.5), severely hit Honduras, Nicaragua, and other Central American Countries, causing intense wind-related damages, landslides, and flooding. The estimated numbers of affected people vary significantly among sources, but it appears that more than 7.5 million people in Central America have suffered damages from the Hurricanes. 92'000 houses were destroyed in Honduras and 43'000 in Nicaragua, many public infrastructures such as roads, bridges, schools, or health facilities were severely damaged, and millions of hectares of crop were lost or damaged. This emergency happened during the COVID-19 pandemic, which already weakened the socio-economic systems of both countries and made reconstruction efforts particularly challenging.¹

In both Honduras and Nicaragua, difficult access to remote communities made assessments challenging, and the general lack of reliable data on level of damage and needs reduced the accuracy of the initial assessments for project proposals. Additionally, in Nicaragua, the difficult collaboration with the government hampered the efficiency and flexibility of projects implementation.

1.2 Mission outline

The present Technical Review Mission took place one and a half year after the two hurricanes hit the region. This evaluation concerns four projects funded by Swiss Solidarity of Swiss NGOs involved in the reconstruction or repairs of shelters and public buildings, in assistance to the local population. The field mission took place between the 01st and the 14th of February 2022, including 5 days of field visits in selected communities and 4 days of discussions with INGO's, implementing partners and other relevant actors. The detailed schedule of the visits is found in the annex of this report. One of the projects could unfortunately not be visited during the mission due to security reasons, hence a virtual meeting was organized with the CH-NGO to discuss the project.

The Swiss-NGOs and projects visited during the missions are:

- ➔ **CH-NGO/01** with a project to support affected families in two northern departments of Honduras (Santa Barbara & Colon), using a cash methodology to provide food/NFI, shelter, livelihood, and water systems.
- ➔ **CH-NGO/03** with a project in central Nicaragua (Matagalpa) assisting rural affected families through distribution of food/NFI, construction material and livelihood assistance, including technical support.
- ➔ **CH-NGO/04** with a disaster-resilient shelter reconstruction project in southern Nicaragua (Carazo).

The NGO and project evaluated only by desk study and remote discussion is:

- ➔ **CH-NGO/02** with a health facility repair project in the department Gracias a Dios in northern Honduras.

1.3 Objective of the mission

The purpose of this Technical Review Mission (TRM) was to evaluate the results of the housing and public building repair and reconstruction components of four projects implemented by SwS' partner NGO's, assessing safety, efficiency, and technical adequacy of the constructions. As the projects were completed at the time of the visit, recommendations highlight lessons to be learnt, possible improvements for future projects and potential follow-up actions to the visited projects.

As stated in the Terms of Reference, TRM specific focus points were:

Local adequacy, durability, and resilience to climatic hazards

- ➔ Evaluate the adequacy and coherence of technical constructive choices.
- ➔ Evaluate the safety, appropriateness, and durability of the buildings, as well as their resiliency against natural hazards.

Technical support, capacity building and local enhancement

- ➔ Evaluate the quality and adequacy of technical support and improvement of the awareness and response capacity of local partners and communities on cyclone-resistant reconstruction.

Community inclusion and participatory approach

- ➔ Evaluate the level of interaction and collaboration with beneficiaries and communities at each stage of the project.

¹ Sources: 6-months operation update: Eta & Iota, IFRC / final reports for SwS and CH-NGO/01-04

Adequacy of the construction component and coherence within the project

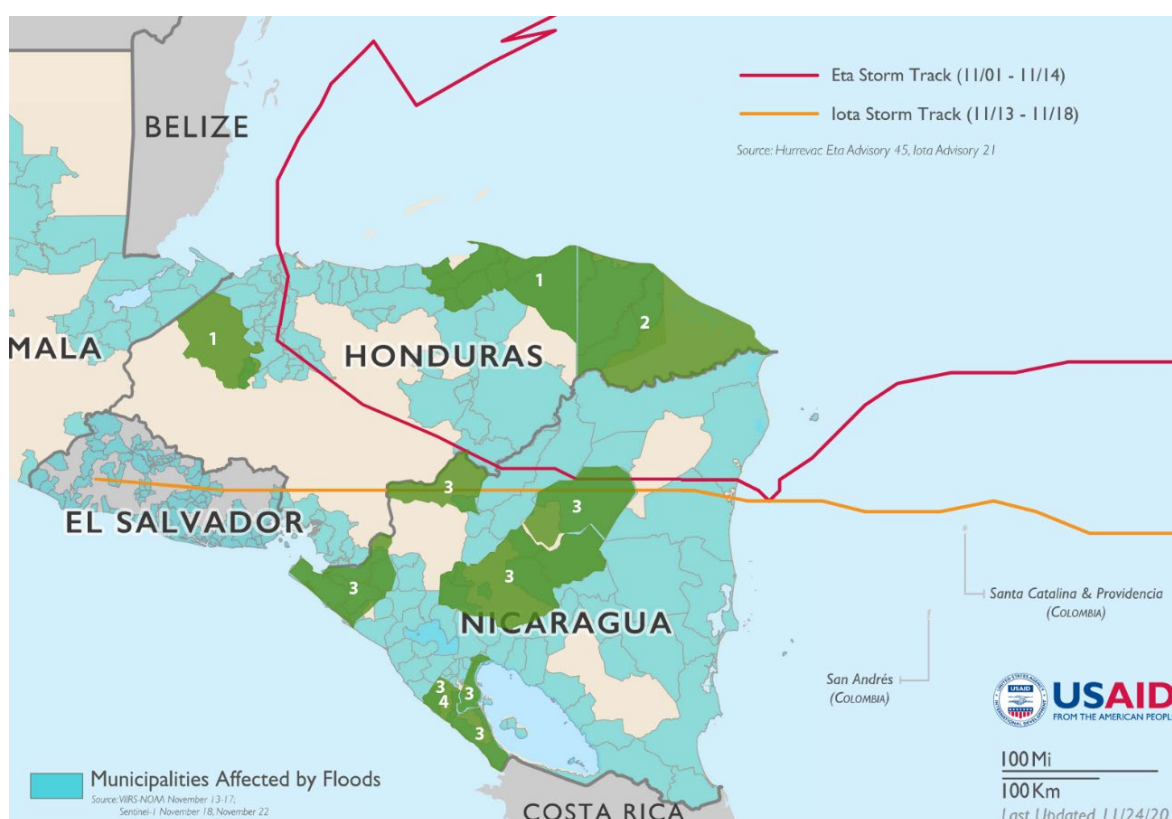
- ➔ Evaluate the integration and complementarity of housing repair and reconstruction component within the project if it also had other parts.

1.4 Content and limits of the report

The objective and content of this report concentrates on the technical analysis of the repair and reconstruction component of four emergency and early recovery projects of Swiss NGOs funded by SwS. For that matter, the general context is only outlined in this introduction. Constraints, challenges, and recommendations are described comprehensively in each project assessment sheet. Some main recommendations for SwS are also summarised hereafter.

As such, this report focuses mainly on the technical construction aspects and does not look indepth at the other components, such as food/NFI, livelihood, water, or health support, of CH-NGO/01, CH-NGO/03 and CH-NGO/02 respective projects. Due to the COVID-19 pandemic, the evaluation could not take place during project implementation. Furthermore, the visit was postponed several times and ultimately took place several months after the closure of the projects. While the downside is that recommendations cannot contribute to project improvements during implementation, it does present the advantage of seeing the evolution of a project beyond its completion, providing insight into its durability and acceptance by the beneficiaries. Given the late visit and the limited time, this evaluation does not claim to be complete nor to have covered all the necessary aspects for an optimal comprehension of the existing challenges. In view of this, some inaccuracies and omissions may persist. Therefore, certain recommendations and propositions should be analysed in their global context in order to verify their relevance and feasibility.

1.5 Map of project localizations



Source base map: USAID Response to Storms Eta and Iota – 24.11.2020. Adapted by mobilstudio

Nr	Country	Department	Partner NGO
1	Honduras	Santa Barbara & Colon	CH-NGO/01
2	Honduras	Gracias a Dios	CH-NGO/02
3	Nicaragua	Matagalpa	CH-NGO/03
4	Nicaragua	Carazo	CH-NGO/04

MAIN RECOMMENDATIONS FOR SWISS SOLIDARITY

Favour inclusive beneficiary selection and include top-ups for the most vulnerable

Considering the dire situation and prior vulnerability of most affected people in the visited regions, as well as the relative homogeneity in their living conditions, assistance ought to use more inclusive selection criteria or prioritize a blanket approach in lieu of a targeted one. This will limit the tensions in the communities and foster greater solidarity among inhabitants. Additional support can be provided to the most vulnerable in the form of a top-up to the initial support, which may be defined later in the project to ensure better targeting. Project proposals should be submitted accordingly, anticipating this need for flexibility.

Prefer limited geographical coverage for easier follow-up

Focusing a project on a limited geographical area will contribute to improved accuracy of assessments, limit logistical challenges, facilitate close monitoring by the partners and enable a blanket approach, thus reducing tensions. As a donor, and where it makes sense, SwS can advise partners when submitting their project proposals to focus on a limited area.

Do not cut on budget for site improvements and safety

In disaster-prone regions, improving site safety when providing shelter assistance is an imperative. Project proposals should include minimum safety site improvements such as proper drainage for all and around all shelters as well as slope consolidation where required. The necessary budget should not be reduced. In particular if a relocation is required, land tenure processes need to be clear, provision of WASH should be secured either as a component of the project or in coordination with other actors' projects, and access (proximity) to essential public services should be ensured to guarantee the sustainability of a resettlement in the long term.

Promote locally available and replicable building techniques

As a donor, SwS has the position and authority to advocate and prioritize projects that promote local building cultures. Advocating for low-tech and locally adapted and available construction techniques, particularly in owner-driven reconstruction projects will foster better building practices and therefore promote replicability and facilitate self-recovery, while ensuring acceptance and appropriation from the communities.

Request experienced technical expert presence or backstopping

Disaster-resistant reconstruction projects require an adequate technical expertise on-site to ensure safe implementation. Project proposals should demonstrate through their set-up, the availability of technical expertise and proper supervision capacity, and/or plan experienced engineer backstopping when needed. A well-qualified construction expert (notably an expatriate) will not only ensure quality control but can also build the expertise of local staff and local partners.

Include training local partners to emergency response mechanisms

While the Swiss NGO partners of SwS often have a good expertise in humanitarian aid, their local representation and local partners may be more experienced in development projects and might not have previously been exposed to emergency response. In contexts where emergencies are assumed by development actors, project proposals should include a training of the local staff and partners on humanitarian aid tools and mechanisms for assessments, decision-making, implementation, and quality control.

Building local capacity and raise awareness on BBB principles

Training and building skills are an essential and crucial part of owner-driven housing projects, as they strengthen the resilience of beneficiaries by enhancing communities' self-recovery. Partners should put emphasis on training when submitting shelter projects and plan for the required set-up and budget. Awareness raising campaigns including key BBB messages should be included in the project implementation.

Keep some flexibility

One must be conscious of evolving needs and price fluctuations. Preliminary assessments are often imprecise, market prices for construction material can vary quickly and considerably, which may require to adapt the strategy between the time of project approval and its implementation. To minimize risks of an inadequate response, plan for some flexibility in the budget as well as in the outcomes to allow partners to shape the project to evolving needs and adjust to potential price increase. Furthermore, one must also be aware that prices for shelter repairs/reconstructions may greatly vary depending on the level of damage and prior deterioration of the houses.

CH-NGO 01**Humanitarian assistance for vulnerable people affected by storms Eta & Iota**

Country:	Honduras	
Geographical area:	27 communities in 10 municipalities (6 in Santa Barbara - NW and 4 in Colon - NE), remote areas without much other support	
Response type:	Early response fund - Multiple cash approach	
Sectors:	Cash for i) food/NFI (household items), ii) house repair, iii) agriculture, iv) water supply systems Provision of technical assistance	
Total budget:	637'881 CHF (excl. PAA)	
SwS contribution:	181'818 CHF (+10% PAA, total 200'000 CHF)	
Planned vs effective:	<i>planned 461'000 CHF – budget increase through additional funds</i>	
Project dates:	10.12.2020 – 31.08.2021 9 months	
Planned vs effective:	<i>scheduled 6 months, end date 30.06.21 reasons for delay: assessments longer and damages to houses more important than planned. Cash instalments for agriculture delayed adapting to planting season</i>	
Beneficiaries:	planned	effective
Total	1'000 HH (5'000 people)	1'320 HH (5'000 people)
NFI / food (14%*)	800 HH	1'000 HH
Shelter repair (60%*)	380 HH	420 HH
Agriculture (24%*)	1'000 HH	1'002 HH
Water systems (2%*)	20	13 (bigger systems, 2'200 HH)
(* % of total budget)		
Planned vs effective:	<i>project budget increase, average HH size smaller</i>	
Implementation mode:	local implementing partners with strong supervision from CH-NGO/01	
Partner organizations:	2 local partners: LP-01 for Santa Barbara and LP-02 for Colon	
Setup CH-NGO:	2 national staff (1 project officer, 1 finance/admin + occasional coordinators)	
Setup local partners:	each 1 coordinator, 2 field technicians (+ 1 admin assistant in LP-01)	

Objectives according to LogFrame:

General: Contribution to the socio-economic recovery of the peasant families in the north region of Honduras affected by the tropical storms Eta and Iota

Specific 1. Beneficiaries with priority of urgent needs for humanitarian aid purchased food and essential household items

Specific 2. Beneficiaries with priority of shelter repair managed to improve condition of housing

Specific 3. Beneficiaries with priority to rehabilitate agricultural production succeeded to do so

Specific 4. Beneficiaries with priority to repair community water systems succeeded to repair it

Visit schedule: February 2-5th, including 2 days field visit of 2 communities in Santa Barbara detailed schedule in annex

Participants: SwS evaluation team with CH-NGO/01, LP-01, local authorities (in Rio Frio/ San Nicolas), reconstruction committees, beneficiaries

2.1 Maps of the project

HONDURAS

3 Colon
16 Santa Barbara



COLON

01 Trujillo

Panama (28)
Nueva Vida (22)
Rigores (0)

05 Saba

Orica (14)
Luxon (9)

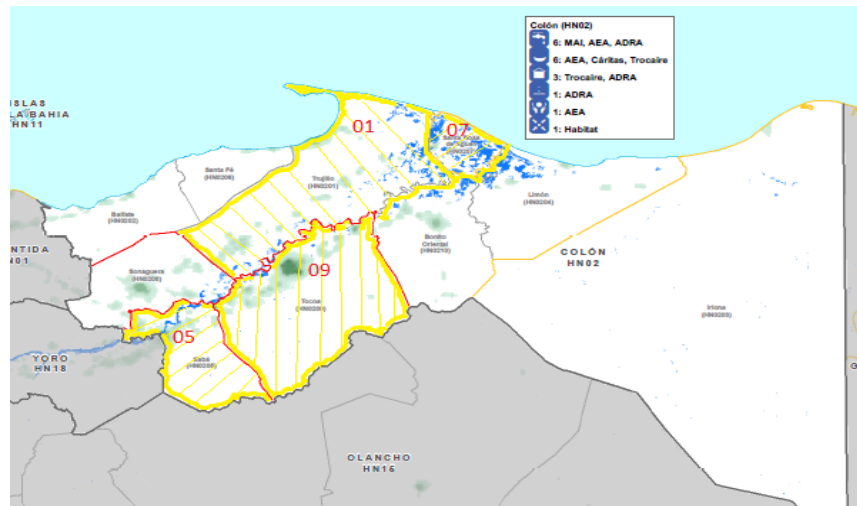
07 Santa Rosa de Aguan

Villa Hermosa (22)

09 Tocoa

Cayo Campo (4)
Guapinol (3)
Nueva Lempira (1)

TOTAL 103 houses



SANTA BARBARA

01 Santa Barbara

El Aguatacal (19)
Las Crucitas (19)
La Zona (0)

02 Arada

Brisas de Oro (29)
Candelaria (19)
Casco Urbano (0)

07 Concepcion del Sur

El Aguaje (19)
Ojo de Aguita (16)
Pinabete (15)

TOTAL 317 houses

11 Ilama

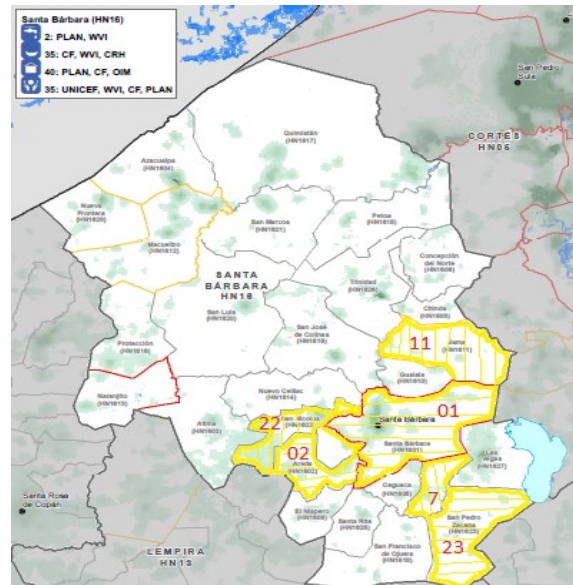
San Jose de Oriente (44)
La Mica (11)
El Ocote (9)

22 San Nicolas

Cruz Grande (29)
Rio Frio (25)
Plan del Higo (12)

23 San Pedro Zacapa

Canculuncos (24)
San Antonio (17)
El Zapotal (10)



*Location of municipalities supported in the project and names of selected communities
In brackets number of houses repaired/reconstructed in each community*

2.2 Project description, context & evolution

Context of the partner and its project

CH-NGO/01 is active in Honduras since the 1980's, and already responded to a large-scale disaster with Hurricane Mitch in 1998. In response to ETA and IOTA, they shifted their operations to the north and west of the country and liaised with local implementing partners. Away from the focus of most of the humanitarian aid partners in the coastal areas, CH-NGO/01 decided to intervene in severely affected but more neglected departments of Santa Barbara and Colon.

Type of project (multiple cash approach)

CH-NGO/01 decided to provide assistance to the affected population of the two above-mentioned departments with emergency and early recovery support for food and basic household items, contribution to repair of houses, rehabilitation of agricultural production and repair of community water supply systems. To that end, the organisation used a multiple sector cash approach, where each instalment targeted one of the specific identified sectoral needs.

- ➔ *Definition:* The modality implemented by CH-NGO/01 in this project, differs from a multipurpose cash approach (as it is conventionally defined) where families decide freely on the use of the money given to them. In the case of the chosen methodology (cash restricted to specific sectors such as food, shelter or agriculture), it requires significantly more follow-up.

Evolution of the project during implementation

The extent of the damage (number of affected people in the targeted communities and severity of the damage to the houses) proved significantly higher than first expected. Due to impeded access to the affected areas in the first weeks, thus of lack of reliable information, this was not identified at the time the project was submitted to SwS and CH-NGO/01 had to adapt it to respond to the actual situation. Indeed, more than 50% of the houses had to be reconstructed and sometimes moved, and many others suffered heavier damage than expected, including to the structural parts. For that reason and with the intention of providing adequate assistance, CH-NGO/01 looked for additional funds (other donor) and requested a time extension.

- ➔ *Staffing:* due to project adaptation, the team was stretched, and it seems that an upscale of the team, with additional technical expertise and support to existing CH-NGO/01 staff, would have helped to cope with the supplementary work.
- ➔ *General advice:* when a housing project shifts from light repairs to heavy repairs and/or reconstruction, it is recommended to also revise the implementation strategy to be adapted to the new constraints.

2.3 Project strategy

Geographical coverage

The project was covering two departments outside of the main humanitarian response, but greatly affected by heavy rains and landslides. The population of these remote areas is very vulnerable to disasters with little possibilities of self-recovery, and many communities were heavily impacted. Due to the extent of affected people in each community and the logistic challenge this entailed, the initial target of 40 communities (30 in Santa Barbara / 10 in Colon) was narrowed down to the 27 most vulnerable ones (18 in Santa Barbara / 9 in Colon). To avoid raising false expectations, detailed assessments were realized only in the chosen communities.

Beneficiary selection

Preliminary lists of affected households were shared by local authorities, and served as a base for a house-to-house evaluation, to determine which households would get support according to the defined set of criteria, such as vulnerability (no fixed income, women-headed households, farmers with little/no land, etc.) and level of house damage (still inhabitable or not). These assessments helped narrowing down the number of beneficiaries to match the resources of the project.

The consolidated lists were then cross-checked with reconstruction committees in each community for validation. In some communities the selection created frustrations. In order to mitigate the situation, CH-NGO/01 staff hold sessions to answer questions and discuss choices.

In a few communities, other donors had announced that they would support a number of families, which were thus not selected by CH-NGO/01, but the promised assistance never came. As a result, several families were still without a proper shelter solution more than a year after the storms. Another factor that has left some

families homeless, was their absence during CH-NGO/01's assessment, as they had sought refuge elsewhere and returned only after the selection was finalized.

- ➔ Exclusions: beneficiary selection is always a difficult step and the "limit" of who is considered as vulnerable is not easy to define. In contexts where communities are quite homogeneous and most are vulnerable, a solution to avoid unforeseen inequities may be to reduce the number of targeted communities in order to support all affected households in the zones of intervention.
- ➔ Phased selection: in communities where potential beneficiaries have been displaced because of the damage, it is important to provide for mitigation measures to avoid leaving them out of the assistance. As such, planning a blanket or phased selection would be a sensible approach.

Methodology

The methodology chosen for this project was cash distribution, restricting each instalment to a specific sector. It was the first time that CH-NGO/01 was using this approach in Honduras. As such, and with regards to the preparation of the project, CH-NGO/01 Swiss team trained the country team on cash methodology, to help them implement the project. Conscious of the potential misuse of Cash, CH-NGO/01's team was very careful to keep a high level of transparency towards its HQ and donors. All invoices were controlled and filed.

- ➔ Multipurpose or multisector cash assistance: as said previously, multisector cash assistance with restriction on the use of the cash implies a stronger follow-up (since each sector is controlled separately) and limits the choices for the beneficiary. In this case, multisectoral cash has ensured that the restricted money be used for house repair/reconstruction. On the other hand, since no specific technical support was provided to ensure safe constructions, multipurpose cash assistance could have reduced the follow-up requirement from CH-NGO/01 or the local partners. Moreover, providing a multi-sector assistance where each sector is restricted should be an opportunity to assess and design modalities specific to each sector, cash not always being the best option for all.
- ➔ Technical follow-up: cash for rehabilitation/construction requires in general a stronger follow-up and technical expertise than for less technical domains. Especially when building new houses, all phases from the design stage, to preparing BoQ, organizing supply & transport, and supervising the construction, need support to ensure quality, safety and durability.

Cost effectiveness

The modality of cash often proves to be very cost effective. In this specific project, as the lack of access made it impossible to realize the actual level of damage at the time of project proposal, the needs and the price for repairs and reconstruction turned out to be much higher than initially foreseen in the project budget. Therefore CH-NGO/01 opted for partial support for reconstruction and, in some cases, collaborated with other partners and municipalities to complement their financial efforts. As said previously, CH-NGO/01 also found additional funding with another donor that allowed them to both increase their contribution per house and the number of beneficiaries. CH-NGO/01's contribution covered often between 50-70% of the total price for the house (depending on size and materials used) and the owner had to find other private funding to complete the house. It is important to note that the total cost of self-built houses do not include the recycling of material, which in some cases can represent a substantial amount. (In the case of L-NGO's joint project, CH-NGO/01's contribution only covered 25% of the total cost, see chapter 1.3).

- ➔ Advantages and risks of partial support: partial support can be a catalysator for people to start their recovery process and find other resources. In several cases, beneficiaries found means to build larger houses than they previously had, using easily available local materials. In a few cases though, families struggled to complete their houses. Another risk of partial support is that there is little control possible over construction quality. This can be mitigated with a proper information/awareness raising campaign on safer construction and disaster-resistant buildings, as well as strong technical support.
- ➔ Top-up for very vulnerable beneficiaries: CH-NGO/01 put aside an extra 3% of funding (approx. CHF 20'000.-) to support people who could not complete their houses. This is a sensible measure and could have even been previously planned, keeping up to 10-15% of the budget, to ensure a top-up for all selected beneficiaries who would have had difficulties to find other financial means. It could also have been used to include exclusion errors if observed during implementation.

Implementation / Setup

CH-NGO/01 worked with two local implementing partners (LP-01/LP-02, one in each department). They both are well rooted in the communities, which helped a lot in terms of implementation, but were not experienced in emergency settings and needed significant technical support from CH-NGO/01 (in assessment methods, cash approach, and technical expertise in construction). In some communities in Santa Barbara, an alliance with

other partners, the municipality and a local NGO (L-NGO), was set up to work together on a joint reconstruction project. In this particular project alliance, model houses were built using a conditional and restricted cash approach as well (further details in chapter 1.3).

- ➔ **Capacity building of local partners:** given that CH-NGO/01 had to work outside of its usual areas of operation and therefore find new implementing partners, the coaching of the local partners proved to be an important task. As for the expansion of the project, a strengthening of CH-NGO/01 team with additional staffing would have helped them to cope with the extra work.
- ➔ **Advantages and problems of alliances:** given that the needs were much higher than expected, and the project funds were not sufficient, the alliance was a good way to meet the set objectives. On the other hand, it required much cooperation time.
- ➔ **Cash or not cash:** usually, a cash approach allows to ease some of the steps and reduce the staffing need for the implementation of a construction project. In this particular case, with the complex setting, the alliances and large coverage, the cash approach could not benefit of these advantages.

2.4 Local Adequacy, Durability & Resilience to climatic hazards

The project covered many communities in various municipalities, with different team setups and implementation systems. Due to time constraints, the evaluators could only visit two communities that provided examples of very different responses. The observations are therefore mainly based on these visits, while repaired/reconstructed houses appear to have been even more diverse in other areas of the intervention.

Site selection

Some beneficiaries needed to be relocated within the community since their plots were too much at risk of other potential landslides or flooding. The relocation process was coordinated between the beneficiaries and the local communities/authorities (buying of new land, etc). CH-NGO/01 ensured a follow-up of the process and sometimes advised on the safety of location but had little influence on the final choices.

- ➔ **Unforeseen exclusions:** imposing relocation on beneficiaries without ensuring that they all have the means to find and pay for their land, can be a factor of unintended exclusion and/or of indebtedness. In the case of L-NGO's joint project, it seems only few families struggled to purchase land. Nonetheless, it is the responsibility of the aid agency to ensure mitigation measures, or alternative (contingency) solutions are in place.
- ➔ **Risk areas:** even though the relocation sites seemed safer than the previous plots and, in some cases were even validated by the technical department of the local authorities, the land movements needed for the construction in some cases increased the risk of landslides, and the mitigation measures put in place (such as planting) did not seem sufficient. Amongst others, this was observed in L-NGO's joint project, where model house typologies could not be adapted to the sites' natural topographies.
- ➔ **Follow-up action:** The evaluators recommend a technical review of all relocated houses potentially at risk be carried out by an expert as a follow up, to provide proposals for safety mitigation measures, including the budget for their implementation.

Design appropriateness

CH-NGO/01 housing program reveals two main project concepts: the "L-NGO's joint project" and the other repairs/construction interventions. As such, the observations and evaluation differ considerably according to the followed methodology.

In 3 municipalities of Santa Barbara, CH-NGO/01 teamed up with a local NGO (L-NGO) and the related municipalities to provide a coordinated response (36 houses / approx. 9% of the total nb of beneficiaries of shelter support). In this project setting, CH-NGO/01's financial contribution was integrated into L-NGO's project that proposed model houses in prefabricated concrete pillars and cement blocks, allowing for self-construction.

In 2 municipalities of Santa Barbara (31% of beneficiaries), the municipalities participated in the repairs/reconstruction efforts with various types of contributions. In the remaining municipalities of both Santa Barbara (35% of beneficiaries / 1 municipality) and Colon (25% of beneficiaries / 4 municipalities), CH-NGO/01 and its local implementing partners operated alone. In both cases, the beneficiaries chose the reconstruction design freely. Materials and construction techniques used were often mixed, with parts in concrete, cement blocks, wood, and mud (bahareque), depending on materials availability, financial resources, and various rooms' usage (bedroom, kitchen, etc.). When available and as much as possible, material from the former house was recycled in the new or repaired house.

- ➔ **Local building culture:** cement block masonry construction is frequent in the visited areas, especially in some more mountainous areas. However, wood and mud (bahareque) construction seem to be more common, especially among the target population (peasant families in rural communities).
- ➔ **Model houses (L-NGO):** a single fixed design allows for easier planning of implementation, rationalization of details, BoQ and order of materials (communities can organize joint purchase). On the other hand, the model does not adapt to the various sizes of households or shape of the plots. However, some flexibility was given to the beneficiaries for partitioning and other minor interior modifications according to their needs, which has led to a form of ownership.
- ➔ **Price comparison:** the model house costs about 90'000Lps (CHF3'800) for a 40m2 surface (financed 50% L-NGO / 25% CH-NGO/01 / 20% municipality / 5% private financial contribution and non-skilled work from beneficiaries). In comparison, the houses that beneficiaries were free to choose most often have cost between 26'000 and 40'000Lps (CHF1'000-1600.-) for 40-100m2 surface. As a reminder, CH-NGO/01 set a maximum contribution of 12'500Lps (CHF500.-) in Colon and 23'850Lps (CHF900.-) in Santa Barbara. Additional costs were at the expenses of the beneficiary, with or without external support (municipality/family/other). Even if the final costs of self-built houses are difficult to evaluate (among other things because of the recovery of part of the material), it is clear that the houses using local materials (wood, mud, often self-procured) were less expensive. However, it is important to note that an accurate comparison would require correlating two houses of the same size and with the same disaster resiliency, which in the case of the observed self-built houses is not possible, especially considering construction quality.
- ➔ **Choice to the beneficiaries:** when the choice was given to the beneficiaries, they most often decided to repair or rebuild with the same material and construction technique as before. This ensured the shelter was adapted to their individual needs and habits, thus strengthening the beneficiaries' ability for self-construction and fostering a self-recovery process.

Resistance to natural disaster

With the exception of some houses where L-NGO and municipality technicians supervised the reconstruction works, beneficiaries oversaw the entire construction of their houses, while benefiting from some preliminary advice mainly on material quality. In remote areas, where self-construction is the most common practice, local builders and beneficiaries often lack knowledge of disaster resilient building solutions and would require proper training and technical support to ensure safe reconstruction. This is particularly critical in houses where part is built out of concrete, as concrete frames structures require expertise to detail and execute safely. Even though wooden frame buildings are easier to implement and are more familiar to the area, awareness raising on simple details like drainage, bracing or proper connections between structural elements would have enhanced the resistance to cyclones and increase durability of the houses.

- ➔ **Repairs/reconstruction:** the chosen modality (cash, partial support) with little technical guidance is appropriate for partial and non-structural repairs (such as roofing, infill or partition walls, windows/doors) not involving structural changes or reconstruction. When heavy repairs/reconstruction are necessary, technical support, training and awareness raising for BBB key messages is imperative
- ➔ **Technical revision:** when working with other partners' house models, the SwS financed agency should take the responsibility to ensure models' safety and appropriateness, as such the partner's technical documentation needs to be verified by experienced technical expert from CH-NGO/01 for design appropriateness and technical adequacy (it could also be done remotely: HQ or consultant).
- ➔ **Model houses (L-NGO):** model houses include a design manual and helpful recommendations, including on site selection. Nevertheless, important messages such as connections between elements (base beam and reinforcements with columns, anchoring of the roof structure, etc.) are not described and on-site builders struggled to explain how they built it. Additional supervision and training would help beneficiaries to understand the need for building back better, it would also ensure that potential extensions do not harm the structural homogeneity, hence the future safety of the house.
- ➔ **Self-chosen/built houses:** in the current state, many houses visited are not disaster resilient, and some are particularly at risk (two stories with concrete 1st floor structure). However, adapting some details would enhance disaster resiliency of these houses (such as drainage, bracing and connections between timber pieces).
- ➔ **Follow-up action:** the evaluators recommend organizing a training on building back better and details for wooden construction to strengthen the communities' resilience, as a follow-up action of the project.

2.5 Technical support, capacity building and local enhancement

Technical support

As said previously, CH-NGO/01's country team and its local implementing partners do not have staffing with high construction expertise nor experience in reconstruction projects, therefore they could not offer technical support in resilient construction techniques. When the project was under a partner's "alliance" this task was taken over by L-NGO's engineers (model houses) or partly by the technicians from the municipality. It is however important to note that most of these technicians do not have a construction background and rarely have strong expertise in resilient construction. In the other cases, beneficiaries built themselves or hired local masons/carpenters. As a result, houses are often not resilient to disasters, and particularly at risk when built on two stories.

- *Need for technical expertise*: in cash-for-shelter projects, technical support is paramount to ensure that the "do no harm" principle is respected, and avoiding that houses are built as disaster-prone or even more than before. Supervision of constructions and training of constructors are therefore imperative.

Capacity building of local implementation partner

CH-NGO/01 trained the local partners in assessment and project management methods, both with training days (training for assessments and beneficiary selection using KOBO) and with constant follow-up through field visits. The cash distribution (cheques) and control were handled by CH-NGO/01 for accountability reasons. Building the capacity of local partners is one of the key concepts of localizing aid, particularly with partners that are embedded in the areas with long-term development programs. Such projects are also opportunities to train them not only in emergency-specific tools but also in sectoral technical skills (in this case resilient construction).

- *Training on technical support*: to build on this local strengthening effort, coaching both local partners in resilient construction trainings would have been a great opportunity to strengthen the communities' capacity for self-recovery.

Empowering of communities

Beneficiaries were very much involved in the design and construction process, choosing materials and design (except in model houses), organizing joint procurement and purchase, and offering non-skilled workforce. Being the main actors of the reconstruction of their houses ensures ownership and helps regaining confidence. In this sense CH-NGO/01's project has acted as a catalyst of self-recovery. Assisting and collaborating with municipalities to help them providing support to their communities is also paramount to building local empowerment. This project has put many efforts in building alliances, fostering collaborations and creating an enabling environment.

2.6 Community inclusion and participatory approach

Cash is in itself a modality fostering community inclusion and empowerment in that it allows a form of choice on the part of the beneficiaries, hence participation. After the cyclones, reconstruction committees were formed in each community to organize self-recovery and coordinate external support. The committees were intensively involved in all phases of the project, from assessment and beneficiary selection, house design (in the cases without model houses), budget (BOQs), material purchase, to house construction. CH-NGO/01 together with its implementing partners helped the committees organize themselves in each phase of the project. Moreover, the communities often mobilized themselves to help the members who could not provide manpower or also collected spare material to build additional houses. Given the short time of the visits, it was difficult for the evaluators to assess if the reconstruction committees were inclusive of all members of the community, but according to CH-NGO/01 and its implementing partners, they tried to cover the entire communities during assessments to ensure inclusion.

- *Design flexibility*: as previously said model houses do not offer the same flexibility and adaptation potential as owner-chosen houses. As such, and particularly in cash for shelter, the design of the house should be inclusive of the beneficiaries' preferences as it will better match each specific needs, allow for higher level of ownership and be consistent with the local building culture.

2.7 Adequacy of the construction component and coherence within the project

This project demonstrates a particular sensitivity to the combined vulnerabilities of affected communities in remote areas, in that it proposed to support people affected by the cyclones with 4 distinct actions, implemented with cash distribution:

- cash distribution to cover immediate needs (in all 27 communities, food & NFI, 14% of total budget)
- contribution to house repair/reconstruction (mainly in 20 of 27 communities, 60% of total budget)
- rehabilitation of agricultural production (in all 27 communities, 24% of budget)
- repair of water supply systems (in 13 of 17 communities in Santa Barbara, 2% of total budget)

The implementation was quite different in Colon than in Santa Barbara, depending on the expressed needs and the partners, but also on the size of the operation (approx. 65% in Santa Barbara, 35% in Colon), as well as on the planting season. In Colon, nearly all people receiving cash for shelter (12500Lps = CHF500.-) also received cash for food and agriculture (7500Lps = CHF300.-). Instalment for agricultural production was mainly made in February (90%), while food and shelter support were essentially distributed in May-July (food in May, shelter in May-July). In Santa Barbara most people received cash either for food & agriculture support (4400Lps = CHF170.-) or for shelter (approx. 20-23'000Lps = CHF800-920.- depending on price of works, with a maximum set at 23'900Lps = CHF950.-). Some instalments for houses were made in February-March (14%), and the rest in May, June, and July. The last houses were finished in November, about one year after the cyclones.

- ➔ ***Timely assistance***: as a general rule in emergency response, immediate needs (such as food) are to be covered in the first weeks (unless people have reserves). When providing cash, it is important to ensure that at the time of distribution the need is still present; adaptation of the purpose is always possible. As such, the modality of multipurpose cash without restriction offers more flexibility and adaptability. Reconstruction of permanent shelter usually is a long process that needs several months to achieve. When doing so, it is critical, where possible, to ensure people have a suitable temporary solution (temporary shelter, host family, accommodation centre, rental agreement, ...) while waiting for their durable house to be build. Nevertheless, the interviewed beneficiaries seemed satisfied with the timing and added that part of the slowness in the reconstruction process was related to their need to work during harvest periods.
- ➔ ***Holistic response***: after a disaster, families have often multiple needs to cover. Proposing a project with several components allows to cover and encompass the different needs of a community. It is a particularly sensitive and appropriate approach for remote areas where no other agencies are active. It would nonetheless be interesting to discuss with the communities if, according to them, it makes more sense that most vulnerable families receive support in all different sectors (as in Colon) or if help is distributed within the community according to priorities (as in Santa Barbara). The latter option reaches more beneficiaries but may not cover basic needs for the most vulnerable.

❖ Conclusion

General impression

CH-NGO/01's country team shows a strong sense of dedication and empathy. Despite the small team and local implementing partners needing important support, they managed a complex project and revised it to give the most appropriate answer to the situation. Their capacity to adapt to the evolving situation, including finding additional funds, helped overcome important challenges in the suitability of the response. The staff did an impressive and strenuous work of follow-up to ensure transparency and cost efficiency of the cash action, though having no prior experience with the methodology. The choice of cash as an implementing methodology seems very adequate and allowed important participation of the population to its recovery.

The choice of remote communities in departments receiving little humanitarian support seems very appropriate and sensitive, as well as the partnerships with other donors and authorities to propose harmonized support and joint efforts. Considering the scope and level of the damages, the choice of communities and beneficiaries was difficult; a blanket approach may have been easier to justify, while restricting the number of communities supported.

The major changes of the project that were required on the basis of the detailed assessment (showing the need for many houses to be rebuilt from scratch), and that were made after the approval of the project would have needed a step back to rethink the strategy and adapt the response, including human resource quantity and expertise. A more transparent communication with the donors on these changes may have helped to also adjust the funding in line with a reconstruction project rather than a roof repair project.

Recommendations for project follow-up

1_ Engage a DRR expert who can verify the safety of sites and propose mitigation measures for sites at risk. Awareness raising in the communities can also be integrated. (see point 2.3)

2_ Engage a construction expert who can organize trainings & capacity building for local NGO's and in the communities, as well as sensibilization to BBB key messages. (see point 2.4)

Recommendations for future projects

3_ Simplify cash methodology with less restrictions if they are not of added value (either a simple multi-purpose cash; or restricted to shelter which requires specific cash project design and proper follow-up). Ensure coherence and adequacy of the method, especially when instalments are delayed. Proposing model houses does not seem very adapted to cash support. (see point 2.2)

4_ Selection of beneficiaries: clarify criteria to avoid that some similar family profiles are included or excluded, or prefer blanket approach (see point 2.2)

5_ Keep a certain percentage of the initial budget to adapt beneficiary selection in a second stage and mitigate unforeseen exclusions (see point 2.2)

6_ In project design plan a contingency budget to ensure a top-up for very vulnerable people and avoid uncompletion of their houses (cash, in-kind, skilled labour, or other) (see point 2.2)

7_ Adapt staffing requirements and expertise to the size and type of project. Especially in construction projects, expert technical follow-up is needed in the organization (see point 2.1)

8_ Verify design appropriateness and technical adequacy with experienced technical support from the organization when using model houses. (see point 2.3)

❖ Project documentation : Rio Frio (san Nicolas)



Typical damages to local buildings. Several buildings were also completely destroyed



The alliance with L-NGO allowed to build 23 new model houses. 3 additional houses could be built with rest materials



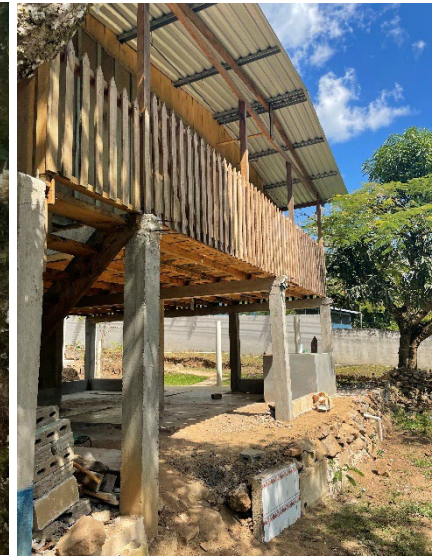
Water and toilets are included in the house, and sometimes partition walls

Earth movements sometimes augment risks

❖ Project documentation : San Jose de Oriente



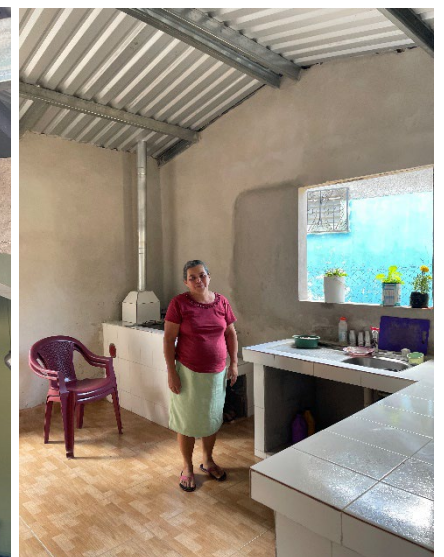
Houses were built according to local skills and traditions



Construction is often not disaster-resistant



Recycling of former house materials such as wood helped the beneficiaries having enough resources to rebuild their home



Some houses were partially damaged, and could be repaired and / or extended on a safer side

CH-NGO 02 Emergency response to the vulnerable population affected by Eta & Iota

Country: Honduras

Geographical area: Department Gracias a Dios (2 municipalities)
 (22 communities: 19 for distribution and 6 for repairs)
 Municipalities: Puerta Lempiras (4 HP) | Ramón Villeda Morales (2 HP)
 (Lakunka, Prumnitara, Ujumbila and Tikirraya | Usibila and Raya)

Response type: Emergency response – Direct implementation & Distribution

Sectors: i) repair of health facilities and related water supply
 ii) distribution of hygiene kits and hygiene promotion

Total budget: 285'210 CHF (excl. PAA) (2/3 for health facilities repairs)

SwS contribution: 181'819 CHF (+ 10%, PAA total 200'000 CHF | 67% of total budget)

Planned vs effective: planned 271'018 CHF (+ 14'193 CHF) (reallocation repair fund of the 6thHP)

Project dates: 01.12.2020 – 30.04.2021 | 5 months

Planned vs effective: planned dates 01.11.20 - 28.02.21 (4 month)

Beneficiaries:	planned	effective
Hygiene Kits	2'500 HH (13'362 people)	2'786 HH (18'109 people)
Repairs	6 health posts (16'491 people)	5 health posts (12'363 people)
Capacity building	3 hygiene promoters	19 community leaders

Planned vs effective: CH-NGO/02 only repaired five health facilities as the sixth (in Tikirraya) had been repaired by another organization. (Planned vs effective = -25%)
 The population was larger than originally planned therefore more hygiene kits were needed and purchased. (Planned vs effective = +35,5%)

Implementation mode: direct implementation through contractors

Setup CH-NGO: 5 expatriates: 3 G-ERT, 1 project coordinator and 1 logistics/admin
 3 national staff: health coordinator, technical and logistics officers

Service providers: 3 local contractors

Objectives according to LogFrame:

General: Improve hygiene and disease prevention through rapid support of emergency basic needs and services to targeted vulnerable populations most affected by the Hurricanes Eta and Iota in Gracias a Dios Department in Honduras.

Specific 1. Improve access to essential health care services by repairing health facilities affected by the hurricanes, and ensure safe water supply to health facilities

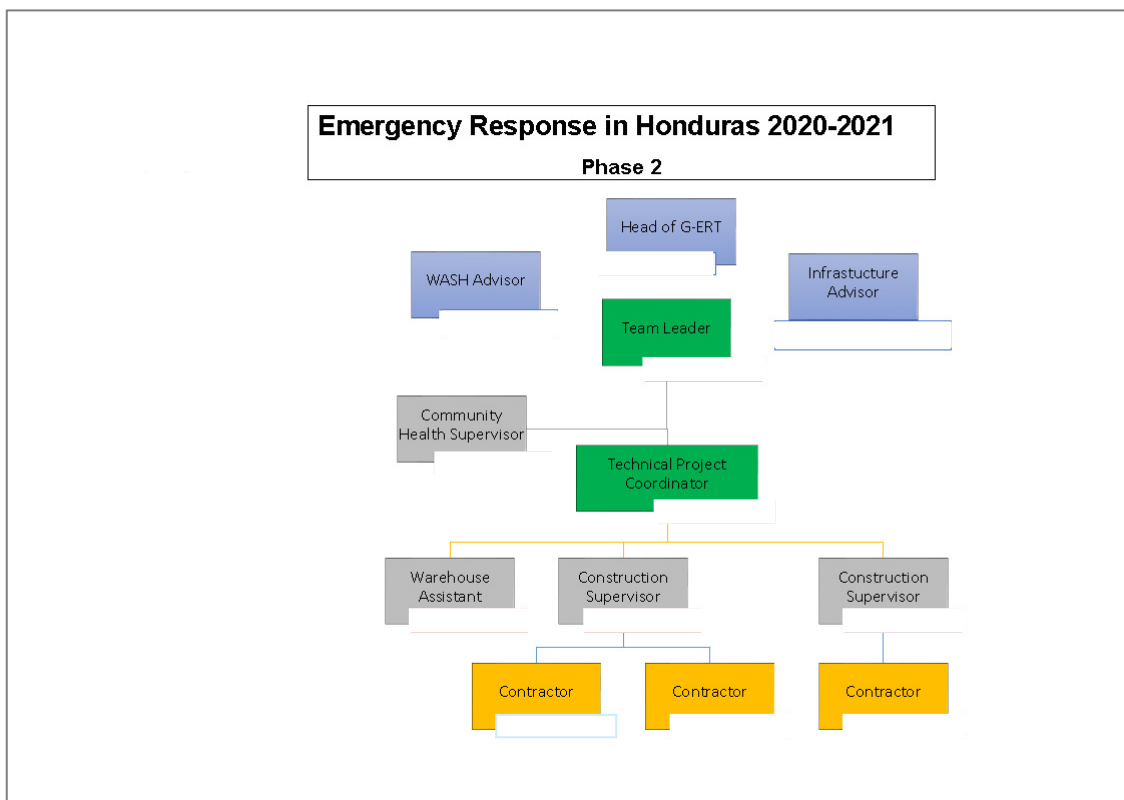
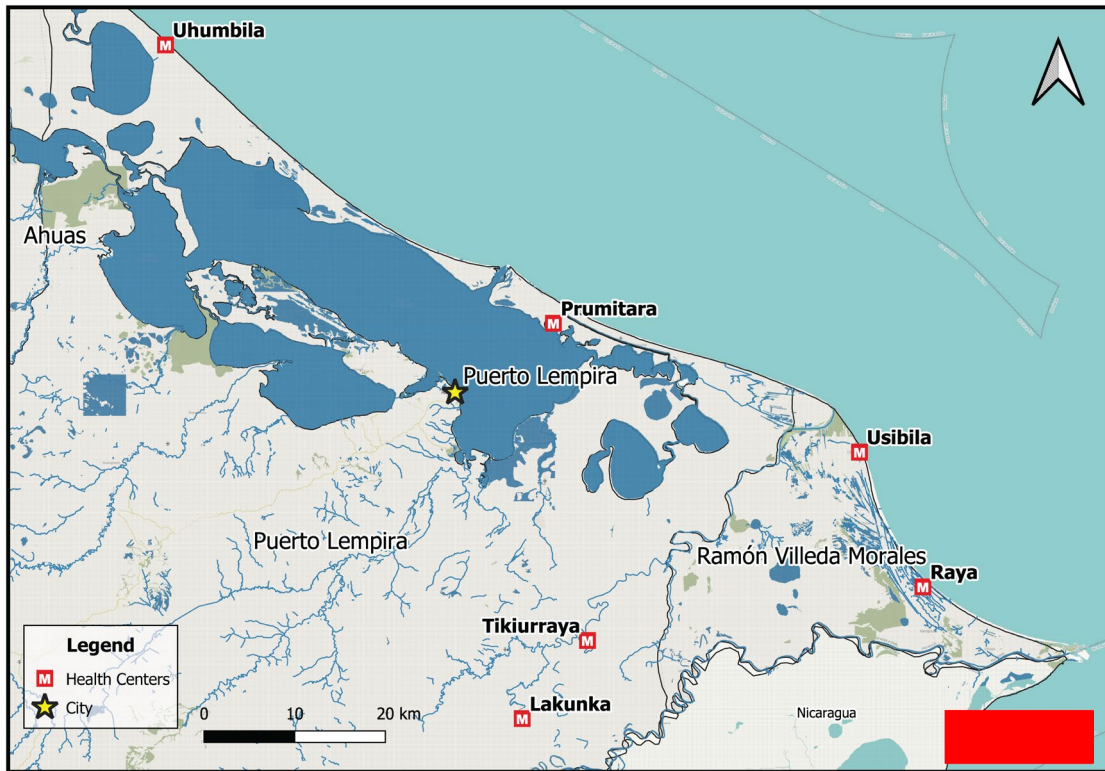
Specific 2. Distribute hygiene kits and disseminate essential hygiene promotion messaging to reduce transmission of diseases (incl. COVID) among affected communities

Visit schedule: Not possible due to the insecurity of the project area

Online meeting: 16th of December 2021 with head of G-ERT, CH-NGO/02 Infrastructure advisor and CH-NGO/02 technical project coordinator)

General Note: The following project had not been visited due to insecurity reasons. The present evaluation is only based on documentation provided by CH-NGO/02 and an online discussion with the team, and as such is more of a project description than a proper evaluation. This explains the reduced number of recommendations compared to the other three partner's projects sheets.

3.1 Maps of the project



3.2 Project description & Context

Context of disaster and humanitarian aid

CH-NGO/02 is a Swiss NGO specialized in emergency and recovery responses, with previous experience delivering humanitarian assistance in Central and South America, in the sectors of health, nutrition, WASH and with a particular expertise in emergency shelter. Soon after the hurricanes, CH-NGO/02 sent its Global Emergency Response Team (G-ERT) to Honduras to carry out a rapid needs assessment. The team identified the Department of Gracias a Dios in the north-east as being badly affected and with limited presence of international aid actors, while revealing high level of poverty and with most of its population living in remote and risk-prone areas. In the selected Department, more than 16'000 people (the second largest number of people) had to be evacuated after Eta and Iota hit the country, and reports mention some 40'000 displaced to emergency shelters and with limited access to health care as many basic health facilities in the area had been severely damaged.

Type of project (direct intervention: distributions and repairs)

Following their rapid assessment, the G-ERT team, including CH-NGO/02's global Infrastructure advisor, identified the health sector as being one of the most critical need and gap in the identified Department. Hygiene supplies were no longer available in accessible markets and 46 % of basic health care facilities had been heavily affected reducing safe access to essential health services in the midst of the pandemic, while leaving population at increased risk of water and vector borne diseases as most safe water supply infrastructures had been damaged. CH-NGO/02, in consultation with the Ministry of Health, decided to support the affected population of remote communities in Gracias de Dios by distributing hygiene kits, providing hygiene promotion and repairing six health facilities including their rainwater harvesting systems.

Evolution of the project during implementation

The project was planned in two phases, the first providing 2'500 hygiene kits in two municipalities of Gracias de Dios, which turned out, after further onsite investigation, not to be representative of the real population size. As a result, the number of distributed kits were increased to 2'800 to cover all the targeted communities.

For the second phase, CH-NGO/02 had planned to rehabilitate six health facilities covering the areas of the hygiene kits' distributions. While starting the project they discovered another organization was repairing the facility in Tikirraya without any prior coordination. This led CH-NGO/02 to reassess other potential health facilities, but as none was found damaged enough to justify CH-NGO/02s' intervention, the decided to reallocate the saved amount to complete rehabilitation works in the five health facilities, install a new water tank in one and repair the school roof in one of the targeted communities.

Furthermore, the project was originally planned to run for four month and start in November. But due to challenging logistical constraints, particularly the difficulties to bring heavy construction material to remote communities by boat, CH-NGO/02 requested to delay the start to December and add a one-month extension which was agreed on by SwS.

- ➔ Flexibility to evolving needs: The capacity to adapt to the evolving needs is crucial in emergency response, particularly when difficult access coupled with urgency reduces the reliability of needs assessments results and coordination is not prioritized by other organizations. As such CH-NGO/02 not only demonstrated flexibility in adapting the project in light of the changes discovered, but also discernment in the reallocation of funding to consolidate its support.

3.3 Project strategy

Geographical coverage

The Department of Gracias de Dios, considered as the poorest and most remote department of the country, was identified by the G-ERT as being one of the most severely affected by the cyclones, and prioritized as little assistance was being provided by the government, international NGOs and local civil society. Based on the G-ERT assessment and in coordination with the Ministry of Health, 6 health facilities in two municipalities were found as requiring urgent repairs and prioritized for their strategic locations as they were the only ones in their respective communities, far from the department capital of Puerto Lempira, only accessible by boat, but also in a certain proximity to each other thus somehow reducing the logistical burdens. Their catchment areas covered 22 communities which were targeted for health care and of which 19 for hygiene support.

Beneficiary selection

CH-NGO/02, with the help of local doctors and its newly hired community health supervisor, selected 6 health facilities of the list of 12 proposed by the Ministry of Health which, as mentioned earlier, were heavily damaged and strategically located. Only those health facilities that were in service, staffed and equipped with medical supply prior to the cyclones were targeted. With regards to the hygiene component, CH-NGO/02 targeted all 19 communities in the catchment area of the 6 identified health facilities and distributing hygiene kits to households based on needs assessment. As items were no longer available in the accessible markets, the necessity was quite generalized and as such most families were eligible for assistance. In the municipality of Villada Morales CH-NGO/02 conducted a blanket distribution to respond to area-wide needs and avoid inequities. Furthermore, the population in the targeted area belong to the Miskito minority, an indigenous minority that has been subject to discrimination and human rights violation for many years and for which the cyclone on top of COVID-19 further exacerbated their vulnerabilities.

→ Adaptation to real needs: As said previously, CH-NGO/02 adapted the number of kits from the preliminary assessment to the actual number of beneficiaries in need and excluded one of the health facilities to avoid overlaps with another agency.

Cost effectiveness

CH-NGO/02 excluded CASH modalities as the interruption of supply lines and importation hampered the supply of local markets further reducing access to basic items, already challenged by restricted access. Construction material also had to be purchased in the adjacent Department where larger markets were less affected by the cyclones. The repair works were directly implemented by the INGO by hiring local contractors.

→ Advantages versus cost of direct implementation: Distribution and direct implementation are often less cost effective than cash modalities and implementation through a local partner, particularly when considering the part of the total budget allocated to expatriate personnel. Nevertheless, these choices of implementation modalities allowed CH-NGO/02 to ensure a timely response to allow for health facilities to quickly resume service, but also quality control, which is crucial when repairing public buildings, particularly in remote areas where technical expertise skills are often challenging if not impossible to find.

Implementation / Setup

As mentioned previously, CH-NGO/02 opted for a direct implementation modality using a contractor-led approach. This choice makes a lot of sense as the agency has extensive construction expertise and even so more considering the remoteness of the targeted area as well as their lack of technical skills for such type of repairs.

The set-up put in place seems quite efficient with a transversal technical supervision from the contractors to headquarters. At field level two national Construction Supervisors were each assigned specific sites to closely monitor the three hired Contractors. The Construction Supervisors together with the Warehouse Assistant were under the direct supervision of the Technical Project Coordinator (expatriate) and above the Team Leader (expatriate). Furthermore, a remote support with high-level expertise was available from HQ through CH-NGO/02's Infrastructure and Wash Advisors. According to reports, inspections were carried out at all critical phases, from material selection to the implementation of crucial details (trusses, straps iron sheets, etc.). In order to ensure competent and cost-effective companies, contractors were appointed through a transparent and standard tendering process and urged to hire unskilled labour from the community and skilled labour when found. To mitigate logistical challenges, the team was able to procure all heavy construction material from a single supplier in La Ceiba, which reduced the logistical burden on transport to the warehouse. From the warehouse, Contractors, with the help of CH-NGO/02, forwarded the material to the sites by boat. Local materials, such as wood, were sources by the affected communities.

With regards to the distribution of hygiene kits, particular attention was given to protection issues as well as the ability of beneficiaries to travel to distribution sites, which led CH-NGO/02 to change its distribution strategy despite the additional cost, from a single central site to community-to-community distribution.

3.4 Local Adequacy, Durability & Resilience to climatic hazards

Site selection

As CH-NGO/02 chose to repair existing health facilities that were damaged but not destroyed, the question of site selection was not applicable. However, the evaluation team took the time to verify that potential flooding risks could not affect the structure of the building as well as its operationality.

→ Access to facility as shelter: when repairing existing public facilities, the site and implantation are a given. Nevertheless, it is crucial to ensure access is not impeded in the event of a storm, especially if that same facility serves as a shelter for its surrounding community.

Design appropriateness

According to CH-NGO/02, the local building cultures of the region seems to be mostly light constructions techniques (in wood/thatch). Public facilities such as health posts and schools are the only building in concrete or cement-like structures, and as such can serve as shelters in the event of a disaster. In line with their overall objective, CH-NGO/02 focused its repairs on strengthening the resistance of the existing buildings to ensure the rapid resumption of these services as well as their use as storm-shelters. Therefore, no significant new technologies were introduced, besides simple disaster-resilient details, as main works aimed at rehabilitating the facilities to their pre-hurricane conditions. Still, structural integrity (particularly foundations), potential structural overload, as well as resistance to heavy wind loads were checked or integrated into the repair designs, which were then transmitted to ministry of health for approval.

Repairs mainly included the replacement of roof sheeting, false ceilings, painting of outer walls as well as the installation of water supply systems consisting of a rainwater harvesting system (gutter and piping), the construction of reinforced concrete water towers and the installation of 6000L water tanks (with PVC outlets and the provision of water filters). CH-NGO/02 adapted their interventions to each facility based on repair needs, community specific requests but also manage to find creative solutions to extend their support, such as using leftovers of roof sheeting to repair the roof of an adjacent school. CH-NGO/02 also paid particular attention to the purchase of materials from responsible sources, especially wood, to avoid deforestation while having it procured locally.

Resistance to natural disaster

As per their project proposal, CH-NGO/02 focused its repairs on strengthening the resistance of the health facilities by providing quality materials and disaster-resilient details (such as hurricane straps) to “ensure safety (physical) and security (protection) by retrofitting resilient buildings”. As mentioned previously, repairs mainly including the roofing and water supply systems. But the team technically assessed each facility and identified additional needs due to structural failure risks or long-term neglect for which they adapted their interventions. For instance, in Lakunta the whole roof structure was replaced as well as large section of the floor, doors, windows.

Quality control seems to have been prioritized in every step of the response. First by designing specific earthquake/hurricanes resistant detailing for each building, based on thorough technical assessments carried out by local structural engineers and reviewed by CH-NGO/02’s Infrastructure Advisor, while ensuring compliance with the Honduran building code. Then by the chosen approach and set-up, hiring outside contractors that have the necessary skills to rehabilitate reinforced concrete structures. Followed by the procurement of the best available material (treated lumber, galvanized iron roof sheeting, etc) in large markets or locally, when possible. Lastly ensuring close monitoring of contractors by the Construction Supervisors and Technical Project Coordinator, while adding an extra level of quality assurance through punctual field visits of the Infrastructure Advisor.

- ➔ **Mainstreaming quality control:** from repair design to the monitoring of the implementation, through the choice or approach, the set-up and the purchase of material, as CH-NGO/02 put it place, is key to ensuring structural integrity and disaster resiliency of a public facility.
- ➔ **Proper maintenance:** CH-NGO/02 highlighted that in several cases heavy damages were due to a prior lack of maintenance. Indeed, proper maintenance has a direct impact on the sustainability thus resistance of a building. In most cases, and if the management system allows it, it is recommended to couple a public building reconstruction/repair project with a maintenance awareness component. Nevertheless, and particularly in centralized management systems, maintenance requires budget at the ministry level, which unfortunately is rarely the case.

3.5 Technical support, capacity building and local enhancement

As mentioned previously, CH-NGO/02 put a special effort in building a solid technical team to closely monitor the contractor’s work. The local engineers could benefit from the high-level expertise of both the Technical Project Coordinator and the Infrastructure Advisor, enhanced by recurrent interactions and their sharing of the Spanish language. Similarly, contractors benefited from the support of the INGO’s technical team to increase the quality of their work. As the type of rehabilitation implemented was not representative of the majority of local light constructions, CH-NGO/02 did not consider it appropriate to include a BBB component, also in light of the short duration of the project and reduced funding. On the other hand, in line with its main objective to improve health, the INGO prioritized hygiene capacity building by training health facility staff in maintaining the

water system and implementation of water chlorination protocols, as well as raising community awareness on hygiene through hygiene promotion messaging.

→ Capacity building to enhance localization: When implementing a reconstruction/rehabilitation project, particularly in remote places where most houses were damaged, it is a great opportunity for capacity building on BBB local techniques to reinforce community resilience and self-recovery. Considering CH-NGO/02's extensive experience and expertise in vernacular building techniques, as well as their community acceptance, awareness raising of the targeted communities on basic BBB messaging could have had a significant impact in the capacity of families to self-repair their houses. In this sense, CH-NGO/02 mentioned that they had planned to strengthen community skills in both construction and PASSA in a second phase which unfortunately did not take place due to lack of funding for the recovery phase.

3.6 Community inclusion and participatory approach

Even though this type of project of short duration rarely fosters participation, especially when the construction technique requires external skills, CH-NGO/02 took every potential opportunity to include the communities. The team closely worked with a team of local doctors, one of which they hired as Community Health Supervisor, to gain access into the communities and build acceptance. Prior to the distributions, key informants and focus group discussions were organised to ensure cultural appropriateness of the content of the hygiene kits. Distributions were done in close collaboration with local authorities and communities mitigating security and safety risks. Community leaders were trained to be hygiene promoters in each of the 19 distribution sites and COVID-BCC messaging disseminated in all communities.

As for the rehabilitation component, in each community a representative was designed to form a committee that served as communication intermediary and acted as feedback mechanism. Communities were asked to participate in the rehabilitation of the health facilities through various means, which included the transport of material, the sourcing of local material (such as wood), and unskilled labour (only one skilled labour). Furthermore, these committees allowed the affected population to alert the CH-NGO/02 on problems that were occurring with the contractors and enabled the team to act accordingly (such as in Lakuka where they the contractor had to be dismissed) and to convey specific needs to which the team tried to answer creatively to best of their capacities and resources (such as in Raya where they gave the material so that the community could build the additional latrine themselves).

As a result of all these efforts, CH-NGO/02's team was able to gain acceptance of affected population and seems to have effectively mobilize the communities to participate and take ownership of their health facilities.

3.7 Adequacy of the construction component within the project

From the final report, the support provided consisted in two components both with a focus on the health sector: focus on ensuring a safe access to basic health care of the communities and to reduce risk of transmission of diseases through hygiene distribution/promotion support

- First phase: Distributed hygiene kits to 2'786 HH in 19 communities in Villa Morales Community including chlorine solutions to treat water and water storage containers and awareness raising on hygiene practices including message about COVID-19.
- Second phase: support to 12'363 individuals through the rehabilitation of 5 health facilities in Villeda de Morales and Puerto Lempira municipalities including building repairs and installation of water systems and training staff to properly use and maintain those systems.

In this project, and following needs assessments, CH-NGO/02 identified health as being a critical lifesaving need and gap in aid delivery that the authorities, undergoing a serious economic crisis, were not able to respond to. The INGO therefore decided to focus on this sector proposing a comprehensive response that would both tackle the access to health services through the rehabilitation of basic health facilities, including the improvement of hygiene practices and the access to safe water, thus ensuring availability of drinking water and reducing the risk of water and vector-borne diseases.

In this regard, the construction component appears to be a crucial and sustainable way to achieve the health objective and perfectly complements the WASH and hygiene components. In addition, CH-NGO/02 has been careful to combine each distribution with awareness raising on the use and maintenance to extend durability.

❖ Conclusion

General impression

CH-NGO/02 brought its extensive reconstruction experience and technical expertise to bear on a particularly vulnerable population through a comprehensive health project. Its choice to target a department heavily affected while off the radar from the humanitarian community, and further selecting particularly remote communities with extremely difficult access and pre-existing discrimination, seems very relevant. As does the decision to focus the intervention on a life-saving sector, serving the entire population of the area, by designing a project whose components complement each and introducing awareness and training to promote the sustainability of the support. This allowed a single project to meet a triple objective: access to basic health care, reduction of disease risks (through hygiene promotion and water supply) but also the provision of shelter to communities in case of a storm.

To this end, and mindful of the importance of ensuring quality control in rehabilitating public buildings to be disaster-resilient, CH-NGO/02 prioritized and mainstreamed technical expertise throughout the response. Starting from the choice of a direct implementation hiring skilled contractors closely supervised by a strong technical team, to the disaster-resilient detail design and the purchase of quality material. With such a high-level technical expertise, it would have been a great opportunity to complement the project with a capacity building component on safer local constructions to increase local resilience and self-recovery.

However, in this challenging project, where urgency was coupled with very difficult access on top of the pandemic COVID-19, CH-NGO/02 not only showed great flexibility in adapting the project to the actual needs, but also creativity in dealing with extreme logistical constraints, learning as they went along. In addition, and in line with their particular vision on participatory support, they stressed their ability to listen while including the affected population in all project stages, solving and mitigating problems, always with the aim to consolidate their support and ensure community empowerment.

This sensible approach has allowed CH-NGO/02 to gain acceptance of the affected communities and build a relation of trust which sadly could not serve as a base for a second phase, as wished by the INGO. Despite newly and pre-existing identified needs, the INGO left Honduras after completion of their emergency response mainly due to lack of funding for the recovery phase. Nevertheless, as mentioned previously, the team made sure to integrate into the project components that would ensure long-lasting impact on the communities.

Recommendations for project follow-up

1_If a second phase was to be planned, training local carpenters in build back better/safer (BBB/S) with local construction techniques and sensitizing communities through workshops on simple risk mitigation measures to foster more durable constructions, would be a valuable project addendum. (see point 3.4)

Recommendations for future projects

2_ Ensure physical access to a public facility to all and at all times, including in the event of a disaster and particularly if that building serves as storm-shelter (see point 3.3)

3_ Ensure a maintenance awareness component is associated to every public facilities reconstruction/retrofitting project. If the responsible entity does not have the budget, income-generating activities could be proposed together with the facility staff (see point 3.3)

❖ Project documentation



Situation: floods & high winds due to hurricanes and pre-vulnerabilities of structures due to lack of maintenance



Damages to buildings (roofs, walls, windows & doors) and water supply systems (rainwater harvesting, water tanks, pipes.)



Lakunka health facility: before and after repairs

❖ Project documentation



Repairs to structural elements and roofs



Repairs of latrines and rainwater harvesting systems



Rehabilitations: Usibila health facility and Lakunka school roof

CH-NGO/03 Tropical storm Iota: emergency support in rural areas in Nicaragua

Country: Nicaragua

Geographical area: 7 departments (27 municipalities / 225 communities):
Matagalpa (10/130), Rivas (6/26), Chinandega (4/6), Granada (4/26), Carazo (1/21), Nueva Segovia (1/6) and Atlántico Norte (RAAN) (1/10)
(initially planned 134 communities / 17 municipalities)

Response type: Emergency response - Distributions

Sectors: Distribution of i) food, ii) livelihood goods and iii) shelter construction material, including technical support for livelihood and reconstruction

Total budget: 227'242 CHF (excl. PAA)

SwS contribution: 172'562 CHF (+ 10%, PAA total 189'818 CHF)

Planned vs effective: planned 239'378 CHF – minor difference of -12'136 CHF (evolution of exchange rate)

Project dates: 01.12.2020 – 31.05.2021 | 6 months

Planned vs effective: end date 31.05.2021, as planned

Beneficiaries:	planned	effective
Total	1'712 HH (8'290 people)	2'858 HH (14'290 people)
Shelter material (22%)	285 HH roofs 200 HH toolkits	289 HH roofs 197 HH toolkits
Food security (40%)	480 HH for 4 months	1'068 HH for 4 months
Livelihood (38%)	1'350 HH for 6 months	2'014 HH for 6 months
Capacity building	9 partner organizations	9 partner organizations

Planned vs effective: more beneficiaries could be served from the same budget for food and livelihood programs because quantities distributed and duration of support per family was less

Implementation mode: direct implementation with local implementing partners

Partner organizations: 9 local partner organizations, long-term partnerships
(abbreviated in the text by LP)

Setup CH-NGO: 3 local staff (1 accountant, 1 program officer, 1 agriculture technician)

Setup local partners: The setup of each partner varied depending on the number of communities served.

Objectives according to LogFrame:

General: Improve living conditions and support the recovery of economic activities of poor farmer families most affected by cyclones Iota and Eta in Nicaragua.

Specific 1. Ensure adequate housing conditions for the most affected families in the targeted communities

Specific 2. Reduce food insecurity for the most affected families in the targeted communities

Specific 3. Reinforce capacities of partner organizations for the aid delivery

Visit schedule: February 7-9th 2022, including 2 days field visit of 4 communities in Matagalpa

Participants: SwS evaluation team with CH-NGO/03, LP-01 (in El Corozo and El Carmen), LP-02 (in Azancor y La Bailadora 2), reconstruction committees, beneficiaries

4.1 Project Map

Proyecto Emergencia NC 2/20/03

Mapa por Departamentos y municipios



Departamentos	Matagalpa	Rivas	Chinandega	Granada	Nueva Segovia	Carazo	Atlántico Norte
Municipios	Matagalpa	Rivas	Chinandega	Nandaime	El Jicaró	La Conquista	Waslala
	Esquipulas	Belén	Somotillo	Diriá			
	Ciudad Darío	San Juan de Sur	Villa Nueva	Diriomo			
	San Dionisio	Tola	El Viejo	Masaya			
	Terrabona	Cárdenas					
	San Ramón	Potosí					
	Muy Muy						
	Tuma - La Dalia						
	Matiguás						
Rancho Grande							

4.2 Project description & Context

Context of disaster and humanitarian aid

CH-NGO/03 is active in Nicaragua since 1981, in the four regions of Matagalpa, Las Segovia, RAAN and Pacific Sur. They support rural communities in developing sustainable agriculture processes, together with long-standing local partners who are well rooted in the communities. In response to ETA and IOTA, CH-NGO/03 proposed emergency assistance in the most affected areas, upscaling their already existing collaborations. They chose to intervene mainly in severely affected but more neglected department of Matagalpa, and in a smaller scale in Atlantico Norte and Pacifico Sur, away from the focus given by the humanitarian community to the coastal areas.

Type of project (distributions)

CH-NGO/03 decided to support the affected population of the three above-mentioned regions with emergency distributions of food, construction materials and agriculture material. Technical support for agriculture projects was also included, and to a lesser extend for repairs, the inclusion of which seems to have varied among partners (and thus departments). Distribution as a methodology allowed CH-NGO/03 and its local partners to provide rapid assistance to remote communities that have limited access to markets.

Evolution of the project during implementation

First assessments were carried out very soon after the disaster, often remotely with phone contact to the communities, due to access difficulties. After the first distributions (12.2020) CH-NGO/03 and its partners decided to distribute assistance among a larger number of beneficiaries (2'858 instead of 1'712) and in more communities (225 instead of 134). Hence, as an example, some beneficiaries got food parcels during 2 months instead of 4, to allow another family to receive the 2 remaining food parcels.

→ Reporting: the reports show the increase in beneficiaries but not the diminution in support per beneficiary, which makes it complicated to understand and thus evaluate. (also see point 4.6)

4.3 Project strategy

Geographical coverage

The project covered 225 communities (initially planned 134) in 27 municipalities mainly in the central part of the country: Matagalpa, Autonomous region of Atlantico Norte (RAAN), Pacifico Sur, as well as to a lesser extend Las Segovia. In these areas, CH-NGO/03 was already present with long term development activities through trusted local partners well anchored in the communities.

The central area of the country was severely hit but did not benefit from governmental support, as they concentrated their limited resources in the most affected area on the Caribbean Coast. As such, CH-NGO/03 and its partners were the only aid actors in the region, and seeing the extend of the needs, and the absence of other actors, CH-NGO/03 decided to support each of its 9 partners requesting support

→ Niche: it is interesting for a relatively small organization to operate in a “niche”, where with a limited number of humanitarian actors there is less need of coordination. This avoids being swallowed by other larger operations, and ensures the support truly meets the need.

→ Large coverage: it seems difficult for a small team to properly monitor a rehabilitation project that spans across 225 communities, with 9 partners in different regions, not to mention COVID-19. The reduction of budget per community also implies an additional challenge in beneficiary selection (to be fair, avoid frustration, etc.).

Beneficiary selection

Beneficiaries were selected following an assessment of all communities done by local partners. First assessments were often performed remotely (by phone), followed by an on-site assessment considering multiple criteria including the level of damage (to houses and crops) and vulnerability (women-headed families, elderly, disabled people, etc). In each community, the Juntas Directiva, the local leaders, and the local partner's technician were directly involved in the beneficiary identification and selection process, often proposing a list and validating the amendments advised by CH-NGO/03. With these two phases, assessments took longer than initially planned and the project had sometimes to be adapted accordingly.

In some communities, among other reasons, due to the great freedom entrusted in the local partners (given their knowledge and experience of the affected communities), criteria for beneficiary selection seem rather inconsistent. For example, in the community of Azancor, all families who took refuge in the communal shelter during the storm received construction material to rebuild their house regardless of whether they were actually damaged, while families who did not take refuge in the communal shelter (sometimes because they lived too

far away) did not get reconstruction support. Nevertheless, in most cases the selected beneficiaries appear to fit the basic criteria of vulnerability and level of damage. The assistance thus was not wrongfully distributed but there are, in some cases, inequities or omissions.

- ➔ **Clarify and harmonize criteria:** it is important to have clear, transparent, and harmonized criteria for all local partners, to ensure that the selection can be justified. Partners accustomed to development projects need to be trained on emergency aid mechanisms and, while it is good to work together with Juntas Directivas, it is necessary to keep a certain level of independence and control to avoid potential inequalities in a community.
- ➔ **Exclusions:** beneficiary selection is always a challenging task, especially when time and access are limited, and when needs and vulnerabilities are so extensive. The risk of exclusion errors can be mitigated by reserving approx. 20% of the budget to adapt and expand the selection if later needed (percentage that can be adapted depending on the available project amount).

Cost effectiveness

The methodology chosen was to distribute goods (food, livelihood and construction material) as targeted communities were very remote with rather difficult access to local markets. This modality ensured quantity and quality of distributed goods, and allowed for price negotiation for large quantities. Each partner was in charge of organizing the procurement and purchase of goods in local markets.

Distribution is often less effective in terms of costs compared to CASH modalities, but since items were purchased on local markets and prices negotiated on large quantities, the cost effectiveness could be well managed. Transportation costs were covered by CH-NGO/03 which guaranteed a better service particularly to the very remote and vulnerable families avoiding long and costly logistical challenges.

Due to the limited budget and the high number of affected people, CH-NGO/03 opted to cover more beneficiaries with a small support, thus helping as many people as possible to get back on their feet. Consistent with this choice, the distribution of zinc sheets to support the reconstruction process seems appropriate, as a mean to contribute to people's self-recovery.

Implementation / Setup

As mentioned previously, CH-NGO/03 implemented the project through nine long-term local partner organizations, well implanted in the targeted communities. The partner's staff dedicated to the project depended on the number of communities served, but on average they committed 2 persons for the field and 2 persons in charge of administration and logistics. Local partners were in charge of identifying the needs and beneficiaries, as well as selecting the beneficiaries in coordination with the community leaders and following up on the delivery of the different types of support provided by the project. They were trained on assessment and reporting tools, and tablets for the assessments were made available to them. While having a constant presence in the communities through the technicians (thus direct communication), the partners had planned to visit each community quite often (three times a week), and CH-NGO/03 three times a month. Due to COVID-19 restrictions and with the large number of supported communities, visits were complicated to organize and could not be carried out as often as planned. As such, part of CH-NGO/03's follow-up with the communities was organized remotely (by phone calls).

- ➔ For all the above-mentioned reasons and the lack of information on the local partners' precise setup and monitoring process, it is difficult for the evaluators to assess the relevance and quality of the implementation strategy and the potential difference between regions/partners. According to CH-NGO/03, local partners organized accompaniment and monitoring in the affected communities in close coordination with community leaders and on a permanent basis. The difference between regions and partners seems to be mainly due to the level of remoteness, the difficulty in access and whether the communities were much or less affected.

4.4 Local Adequacy, Durability & Resilience to climatic hazards

Site selection

In most cases, beneficiaries reconstructed their house in the same place as before, including in areas at risk. Some were relocated in neighbouring plots less at risk, as part of a community-led process. CH-NGO/03 and its local partners did not interfere in the relocation process but advised certain families to move to a safer area.

- ➔ **Risk-prone areas:** some of the visited houses are built in areas at risk of landslides or flooding. When providing repair/reconstruction assistance it is essential, and should be of the responsibility of the organisation, to inform beneficiaries on mitigation measures to improve the safety of their plots (such as correct drainage, building terraces, or slope consolidation), to avoid putting them further at risk.

- **Follow-up action:** The evaluators recommend an information campaign on safety mitigation measures be carried out by technical expert staff in all communities as a follow up action of the project.

Design appropriateness

Many houses were destroyed and had to be rebuilt from scratch. CH-NGO/03 distributed roofing material (zinc sheets and nails), while beneficiaries were in charge of the reconstruction, including the purchase of local material (wood, mud) for the repair/reconstruction of the wooden, the walls, doors, and windows. Some materials could be recycled from the old house, and sometimes wood could be used from fallen trees. The availability of free wood varied greatly by area, which did not give everyone the same opportunity for the repairs/reconstruction. Families gained the resources for the reconstruction by selling their crops, working outside their community, or receiving help from relatives (with wood or other construction materials).

The shelter component of the project consisted in distributing 12 zinc sheets and 150 nails to each of the targeted 289 households. At a later stage (in 2021), 197 toolkits were also distributed to help the reconstruction process. The toolkits were shared within the communities and not given to all families, as not all were qualified to do construction works. The initial plan of CH-NGO/03 was to distribute 14 sheets per family, and communities proposed to reduce to 12 to increase the number of beneficiaries. In the visited communities, beneficiaries were extremely poor with very basic houses, as such, most often, the 12 zinc sheets were enough to cover the core house, and old zinc sheets or leaves were used for annexes (kitchen, additional room, etc). In some houses, the new zinc sheets were also used as wall material to protect the façade most exposed to wind and rains.

- **Local adequacy:** zinc sheet is very commonly used, considered as quality and long-lasting roofing material. Proposing good quality sheets to cover the core house and leaving the rest to build in local material, including annexes, is a sensible solution that ensures people will build according to their local building culture.
- **Price comparison:** the roofing material costs about 180 USD or 165 CHF/family, which allows to support many households on a small budget. Nevertheless, as the most expensive construction material, it is an excellent starting point for beneficiaries to recover.

Resistance to natural disaster

Beneficiaries were free to choose the design of their house and were responsible to purchase local materials and to oversee on their own the repair/construction works. CH-NGO/03 or their partners did not have the technical skills in-house to train the beneficiaries in safer reconstruction. As a result, the houses were built with the same details as before, and most often they are not resilient to disaster, lacking proper connection details and bracings.

Although the project does not comply with SwS minimum standards for reconstruction, it is important to note that living conditions have significantly improved for many of the supported families who previously did not have a proper house with zinc roof and wooden walls, but rather a shelter made of plastic sheeting. In this sense, the distribution of roofing material served as a catalyst to rebuild the entire house to a higher standard than before.

The project's final report mentions that "a small number of families were able to rebuild their walls and doors" which, according to local partners, corresponds to less than 30% of the families (approx. 80 out of 296) that managed to complete their houses within 6-12 month after the hurricane. We must therefore assume that most families in the municipalities where homes were destroyed (Matiguas, Esquipulas, San Ramón) will live for some time with only a roof over their heads, until they have the resources to build the rest of the house.

- **Risk of partial support:** at the time of the final report, it seems many families had not yet been able to repair/rebuild the walls. It is not clear to the evaluators how long it will take them to finalize their houses and be fully protected. A risk to anticipate when providing partial support for shelter is the inability of some of the poorest families to complete their homes in a timely manner, putting them at risk of debt, or by lack of materials, at risk of rebuilt houses that are as unsafe or more than before. Ensuring families have the available resources for necessary construction material or planning for additional support for most vulnerable can (partly) mitigate this risk.
- **Nails or screws:** in general, the most effective method to fix zinc sheets to the structural elements is with screws. However, in communities without access to electricity, screws are difficult to use. In addition, where structures are weak, especially at the anchor point, fastening the zinc with nails can act as a fuse and in the event of a storm will allow the roof to fly off without tearing the structure, thus preventing the house to collapse.
- **Repairs versus reconstruction:** the chosen modality (distribution of material and partial support) with little technical guidance is appropriate for partial repairs that do not involve structural changes. When heavy

repairs/reconstruction are required, technical support, training and awareness raising on Build Back Better/Safer (BBB) key messages are crucial.

- **Follow-up action:** as such, many of the visited houses are not resilient to disasters. However, adapting some details (such as drainage, bracing and connections) would significantly enhance their strength. The evaluators recommend trainings or workshops on BBB to be organized in the covered communities as a follow-up action of the project.

4.5 Technical support, capacity building and local enhancement

Technical support

CH-NGO/03 and its local implementing partners lack construction expertise to technically support the families in safer reconstruction. Although the project proposal includes “technical support”, in the visited communities it did not appear to be specific to construction/repairs but rather to livelihood.

In addition, due to the large number of beneficiaries compared to the organization’s staff and the difficulties in access, it was challenging to make enough time available to support the families in the reconstruction process. The defined indicator of success is “roof material and toolkits were distributed” but does not include following-up on the families to ensure that they were actually able to safely repair/reconstruct their houses. To guarantee that the goal of a house being repaired or rebuilt is met, the indicator should have been modified.

- **Technical expertise:** when it comes to repair/reconstruction, even in a project distributing material, technical support is paramount to ensure the “do no harm” principle is respected. Supervision of constructions and training of builders/carpenters are crucial.
- **Human resource:** a reconstruction project requires a sufficient number of skilled technical staff within the (I)NGO. They can then train the local implementing partners on BBB key messages and ensure quality control.

Capacity building of local implementation partner

The report mentions that CH-NGO/03 trained local partner organizations in the implementation of humanitarian aid actions. Several training sessions were given, but it is not specified what type of trainings were held or when. It is also unclear whether the trainings were conducted before or after the assessments, and whether the partners were already trained before the project started. This said, it needs to be acknowledged that due to the restrictions imposed by COVID-19, it was difficult for CH-NGO/03 and partners to provide trainings.

The partners appear to be competent and demonstrate the required skills for the development projects they are used to carry out. Nevertheless, emergency actions have different mechanisms for all phases of the project, including the assessment phase, than those of a development project. As they take place in emergencies, preparedness is key to ensure their proper execution

- **Training on technical support:** if repair/reconstruction support is foreseen in the next years, and CH-NGO/03 and partners plan to be active in this sector, they would greatly benefit from being trained in resilient construction methods and knowledge transfer of BBB key messages to communities.
- **Follow-up recommendation:** Knowing that the possibility of similar events occurring will increase in the coming years due to climate change, it would be useful for CH-NGO/03 and its partners to strengthen their skills in emergency response.

Empowering of communities

Roofing material (zinc sheets) is often a big obstacle for poor families to repair or build their houses, as it is the most expensive and difficult item to purchase locally. In this regard and as said previously, the distribution of zinc sheets worked as a catalyst for families to start reconstructing their houses, while maintaining the responsibility and ownership of the beneficiaries, thus helping them regain confidence.

A roof offers protection from the elements but is also symbolically the first step in rebuilding oneself, and restoring dignity to an affected family, as such it appears as essential in the process of community self-recovery.

4.6 Community inclusion and participatory approach

The Juntas Directivas (of the ongoing development projects) and the local leaders were the coordinators of the assistance in their respective communities. As representatives of the community, they had an important impact on the selection of beneficiaries. While in some communities the effort to identify the most vulnerable outside of existing project stakeholders was visible, in some areas the selection did not appear very

transparent to the evaluators and sometimes seemed to have been a bit rushed. It is clear that given the pressure to deliver and limited access to areas for assessment, it was difficult for CH-NGO/03 to monitor. Since the implementing partners have long-term relationships with the majority of supported communities, and are often from the area, they are familiar with the local habits and needs. In addition, through the existing long-term livelihood project, communities are very much included in the process of improving the efficiency and sustainability of their plantations. The emergency project was also an opportunity to include more people in the ongoing long-term livelihood project thus providing them with a potential longer-term support.

Regarding the construction project, many communities organized themselves to help the beneficiaries rebuild their houses, and also assisted some families that were omitted from the list but in dire need. Toolkits were shared and carpenters helped with skilled works and advice on the reconstructions. This level of participation and inclusion is clearly linked to the longstanding presence of CH-NGO/03 and its local partners in building community resilience and governance through their long-term livelihood projects.

4.7 Adequacy of the construction component and coherence within the project

Coherence of initial project

From the report, the project planned to respond to three complementary needs in the targeted area:

- *Reconstruction*: distribution of shelter material and toolkits, with technical support, for 285 HH.
- *Food security*: distribution of food packages for 4 months to 480 HH (until next harvesting season)
- *Livelihood*: support to restart agricultural activities for 6 months, for 1350 HH (distribution of seeds, fertilizer and tools, repair/improvement of irrigation system, capacity building for more sustainable agriculture).

There appears to be a good coherence and complementarity between the different components of the project that ensured a comprehensive assistance to the targeted communities. The repair of houses allowed families to remain in their community, and not abandon their possessions and agricultural activity. Food distribution served as a bridge to allow time for plants to regrow, and for beneficiaries to concentrate on agriculture and house repair.

Differences in implementation

During the implementation phase, the project was adapted to actual needs and larger coverage, with families receiving less assistance in order to spread support to more families in need. Some areas (dry zones of Matagalpa region) were more affected than others and required more time until the next harvest. Additional support was therefore shifted to this region, while others needed less support with the next harvest due to happen earlier. As mentioned previously, the differences and disparities in implementation across regions was difficult for the evaluators to assess given the limited descriptive and precise data per partner, as such only overall changes are referenced below.

Type of support	Planned Nr beneficiaries	Planned average CHF/beneficiary	Implemented Nr beneficiaries	Implemented average CHF/beneficiary
Shelter	285	175	289	165
Food	480	171	1068	77
Livelihood	1350	61	2014	39

The reasons for the adjustments per sector are the following:

- Shelter: there was less needs for nails and the unit price of zinc sheets turned out to be slightly lower than planned
- Food: the support planned 4x45USD parcels/family but when implementing 55% of the beneficiaries received 1x42USD parcels (those with better production conditions as they didn't require long-term food assistance) and the remaining 45% of beneficiaries received 3x42USD parcels (those in the dry zone at high risk of food insecurity and whose food production depends on the rainy season).
- Livelihood: the support was adapted according to seasonality and needs which appeared to be less expensive than planned.

The flexibility given to the partners did not affect the consistency of the project, as needs were assessed case by case to tailor the distribution of food and agricultural assistance. Families receiving shelter material most often also received food support (as they represented for most part the families with the higher degree of

vulnerability), and sometimes livelihood support if they had an agricultural activity. About 1/3 of the support in all three components was distributed in December 2020, 1/3 in January-February 2021 and the remaining 1/3 in March-May 2021. Many people who received zinc sheets in December or January needed an additional two more months before they started building, as they needed time to procure the remaining material. The delivery of the zinc sheets was carried out in those municipalities whose houses suffered total damage to their roofs (most affected municipalities). Between December to February shelter material distribution was given to the families whose roofs were completely destroyed.

→ *Timely assistance*: When the timing of the distribution did not correspond to the planting season, people could receive money instead of seed to pay the rent for their plot. CH-NGO/03 adapted the assistance to the delivery challenges (difficult access, spread communities) to ensure that the support was adequate at the time of distribution. Furthermore, CH-NGO/03 prioritized the distribution of zinc sheets in the first three months to families whose houses were destroyed.

→ *Flexibility*: the adaptation of beneficiary selection for food and agriculture support to meet the actual needs, demonstrates a great effort of the project. It would have been useful to keep such flexibility in the shelter distribution, keeping 20% of the overall budget to correct exclusion errors.

Upscaling for emergency in an existing long-term project

As mentioned, CH-NGO/03 and its local partners have a longstanding project in the covered regions to improve durable livelihood systems and strengthen community work. The emergency response was also an opportunity to include additional families in the ongoing development project (seeds bank, ecological and diversified agriculture, etc.), fostering long-term improvement of their living conditions. This demonstrates the benefit and opportunities of building on existing deep-rooted projects and networks and thus the value of promoting “nexus-conducive settings” enabling both development and humanitarians to work together and build on each other experiences.

❖ Conclusion

General impression

Being a long-term actor in the region, CH-NGO/03 has acquired a well rooted network and privileged relationships with strong local partners and local communities. The organisation's choice to consider their existing projects as a base for scaling-up and proposing emergency support through complementary components, is a thoughtful response strategy. This fostered the inclusion of the affected communities in the choices and implementation of the assistance. CH-NGO/03's flexibility regarding implementation and confidence in its local partners greatly helped in ensuring adequacy and contextualisation of the response, even if the adaptations are not always made clear in the reports. In line with the decision to provide limited support but cover a large number of beneficiaries, the choice of distribution as a modality seems coherent and particularly suited to remote communities with difficult access to markets, while ensuring that sourcing is maintained in local markets.

Choosing remote communities in departments receiving little humanitarian support, seems very adequate and sensitive, although spreading the assistance over 200 communities makes it difficult to manage, especially during COVID-19 times, where monitoring seems to have been challenging to ensure. The wide coverage also seems to have made it difficult to select beneficiaries in a harmonized way. Conscious that the decision to select communities to help or not to help is extremely difficult to make, however, limiting the number of covered communities may have prevented people in need being left out within the same community. The high level of trust in the local partners sometimes led to weaker monitoring, as the partners had strong experience in development but less in emergency response and its various mechanisms.

While the technical support in agriculture seemed very adequate, in shelter it was weaker, leaving beneficiaries to assume the responsibility of rebuilding back better on their own. As a result, the shelter response is less sustainable than it could have been. Nevertheless, the choice of distribution of zinc sheets seems to have been an insightful way to support the families in their own recovery process and empower them

Recommendations for project follow-up

1_ Train local partners in build back better/safer (BBB/S) and sensitize beneficiaries through workshops on simple risk mitigation measures to foster more durable constructions. (see point 4.3)

2_ In the communities where zinc sheets were distributed, identify very vulnerable and affected households that were not covered by the project, but would be in dire need of support. Then evaluate if they could be assisted with a project top-up, to ensure a better equity in these communities. (see point 4.2)

3_ Build on CH-NGO/03's long-term presence and strong local network to strengthen the capacity of NGOs and local partners in preparedness for future emergencies (sectoral knowledge and emergency management methodologies and tools). (see point 4.4)

Recommendations for future projects

4_ Avoid spreading shelter assistance in too many communities, especially when budget is limited, to ensure a more equitable coverage in the targeted communities. (see point 4.2)

5_ Selection of beneficiaries: clarify criteria to prevent families with similar profiles from being treated differently (included or excluded), or adopt a blanket approach (see point 4.2)

6_ Keep a percentage of the initial budget to adapt beneficiary selection (mistaken exclusions or omissions) and/or top-up for the very vulnerable. (see point 4.2)

7_ Particularly important in emergencies, better monitor local partners with frequent field visits to every location. (see point 4.2)

8_ When providing support in the field of construction, it is essential to have expert technical follow-up in the organization, who can deliver capacity building and sensibilization trainings. (see point 4.4)

❖ Project documentation



Many houses were partially damaged, with roofs flying away and walls partially destroyed, while other collapsed completely



Target communities are very remote, many houses were difficult to access, especially with roads damaged by the storms



The 12 zinc sheets distributed were most often sufficient to rebuild the roofs. Wood had to be procured by the beneficiaries

❖ Project documentation



Wood could often be reused from the former house; the zinc laminates sometimes also served to protect the exposed wall



In some cases, the zinc was used to cover the main house and annex buildings are covered with leaves



Many houses are not disaster resistant. Simple improvements as drainage or bracing could enhance their resistance

CH-NGO 04

Hurricane response in Nicaragua

Country:	Nicaragua	
Geographical area:	Department of Carazo, South-West Nicaragua 3 communities in Santa Teresa Municipality: La Pinuela, El Quinal and Aguas Calientes	
Response type:	Emergency response	
Sectors:	Reconstruction of hurricane resistant shelter and training of masons	
Total budget:	221'845 CHF (excl. PAA)	
SwS contribution:	174'514 CHF (+10% PAA, total 191'965 CHF)	
Planned vs effective:	<i>planned 231'130 CHF – minor difference of -9'285 CHF</i>	
Project dates:	01.01.2021 – 30.09.2021 10 months	
Planned vs effective:	<i>scheduled 6 months, end date 30.06.21 reasons for delay: administrative difficulties with a law passed by the Nicaraguan government complicating the registration of NGO's.</i>	
Beneficiaries:	planned	effective
Shelter	60 (300 ben.)	60 (256 ben.)
Training	6 masons	6 masons
Planned vs effective:	<i>HH smaller than planned so less beneficiaries while number of shelters as planned</i>	
Implementation mode:	local implementing partner	
Partner organization:	L-NGO (abbreviation)	
Setup CH-NGO:	2 local staff, part-time (1 response manager, 1 finance & admin)	
Setup L-NGO:	5 local staff, part-time (1 architect/technician, 1 engineer/supervisor, 1 instructor/on-site manager, 1 finance & admin, 1 social support)	

Objectives according to LogFrame:

General: Contribute to meeting basic shelter needs for the most affected people by the hurricanes in Nicaragua.

Outcome: 300 affected people live in improved, hurricane resistant shelter.

Visit schedule:	<i>February 10-11th, including 1 day field visit of 2 communities and visit of L-NGO's ferroement factory. Detailed schedule in annex</i>
Participants:	<i>SwS evaluation team with CH-NGO/04 project manager, L-NGO project team, reconstruction committees, trained masons and beneficiaries</i>

5.1 Map of the project

Map of Santa Teresa municipality.

The communities identified are:

El Quinal, Aguas Calientes and La Pinuela



5.2 Project description, context & evolution

Context of the partner and its project

CH-NGO/04 is active in Nicaragua since the 1980's. Primarily focused on agricultural production, social justice, and gender equality development projects; they have already responded to a large-scale disaster with Hurricane Mitch in 1998. Shelter being one of CH-NGO/04' core sectoral competencies in emergencies, they opted to rely on their expertise in response to ETA and IOTA, and chose to intervene away from the focus of most humanitarian partners, in the department of Carazo on the Pacific Coast which suffered heavy rainfalls and floods. As the INGO's structure in Nicaragua is small and lacks strong in-country shelter expertise, they decided to work with the local NGO (L-NGO) as implementing partner specialized in construction. L-NGO is carrying out shelter projects in the region for 40 years amongst others through its construction factory spin-off, which fabricates ferrocement elements.

Type of project (construction of core housing/storm shelter)

CH-NGO/04 decided to provide assistance to the affected population in Carazo with emergency and early recovery support by building storm shelter as core housing units for affected families. To that end, the organization used an implementation approach through a local partner, including a training component for unskilled masons in the targeted communities on the specific implemented construction technique.

Evolution of the project during implementation

Soon after the two storms, the Government of Nicaragua passed a new law² drastically limiting the flexibility of INGO's work and the possibility to transfer international funds. This law had a significant impact both on time it took to implement the project, as well as on the possibilities to adapt the selection of beneficiaries and the planned actions. Additionally, the start of construction had to be postponed due to impeded access for the delivery of construction materials. For this reason, CH-NGO/04 requested a time extension, while not having much leverage to adapt the initial project to the evolving needs.

5.3 Project strategy

Geographical coverage

While the majority of the emergency aid went to the Caribbean coast, which suffered the most damage, the Central region and Pacific Coast, which were also severely hit by heavy rainfalls and floods, received no help from the Government and were little targeted by international organizations.

Within the department of Carazo, the Municipality of Santa Teresa was identified having the highest needs in the shelter sector, a remote and very vulnerable population. Based on detailed assessments and due to logistic and budget constraints, CH-NGO/04 and its local partner chose to support 3 communities (out of 13), which seemed to be the most affected and were close to one another.

² According to CH/NGO-04 explanations, also corroborated in our discussion with COSUDE Nicaragua, the law n° 1040, "Law for the regulation of foreign agents", requires all NGO to undergo an additional registration as "foreign" agents. Additionally, lists of beneficiaries and detailed budget need to be submitted to the Government at the onset of the project and cannot be adapted afterwards.

Beneficiary selection

The initial needs assessment shared in CH-NGO/04's project proposal mentions a total of 106 damaged houses in the 13 municipalities (28 destroyed and 78 partially damaged), from which 38 are situated in the 3 communities selected afterwards. According to this assessment, 75% percent of the damaged houses needed to be rebuilt, raising the need for new shelters to approx. 85 houses, from which CH-NGO/04, proposed to cover 60 with the available budget. Later, a preliminary list was shared by local authorities raising to 70 the damaged households in the most affected communities of in El Quinal, Aguas Caliente and La Pinuela.

Hence, the project team decided to focus on these 3 adjacent communities and underwent a house-to-house evaluation to assess the level of damage and vulnerability. Since the vulnerability profiles did not greatly differ among community members (mainly farmers renting their agricultural land), the selection was mainly based on the level of damages to the house and the accessibility of the terrain. From the initial 70HH, the 60HH with the most damaged houses were selected for shelter support, which often implied relocation to a safer and accessible area. According to CH-NGO/04, few potential beneficiaries decided not to integrate the project to avoid relocation. After finalization, the selection process identified 16 beneficiary families in El Quinal, 11 in Agua Calientes and 33 in La Pinuela.

- Target versus blanket approach: CH-NGO/04 and its local partner opted for a broad selection of beneficiaries within the targeted area. This limits the risk of exclusion and frustrations and is often an adequate response when the level of vulnerability is homogenous. Indeed, where budget allows it, it is advised to adopt a blanket approach when targeting a defined and limited area.
- Alternative: the project of CH-NGO/04 did not propose an alternative solution for families who did not want to move to a safer area. One of the consequences is that some families (only two identified during the visits) registered for the project but then repaired and moved back to their former plots, leaving the newly constructed houses for secondary use or storage only. This is a recurrent and delicate problem faced by those involved in reconstruction projects that involves relocation, which requires raising awareness of the beneficiaries on the importance of safe locations and often facilitating community discussions with local authorities in order to find suitable solutions for all.

Cost effectiveness

CH-NGO/04 opted for full shelter support through the construction of model (core) shelters. The choice of a single shelter design, using locally produced construction elements (ferrocement panels) and the development of simple construction details contributed to reduce the cost of each housing unit. From our discussions with the communities, it seems that the local traditional houses using mainly wooden structure are less expensive, but the price comparison is not obvious considering their self-construction and therefore the lack of quality control, particularly with regards to disaster resilience. Also, to ensure the proper implementation of the houses, L-NGO had to call on skilled masons who came from other regions, which proved to be more costly than a technique that could have been implemented locally.

- Price comparison: the core shelter costs about CHF2'880 for a 17.5m² surface, including logistics and labour costs, excluding CH&L-NGO's costs. It is financed 100% by the CH-NGO while the municipality provided the plots and partially equipped some relocation areas. The beneficiaries contributed with non-skilled work and the community supported with logistic, repairing the streets and transporting materials. As said previously, final costs of self-built houses are difficult to evaluate (among other things by the recovery/reuse of part of the material), although it seems that the houses using local materials (wood, mud, often self-procured) could be built at smaller cost for a bigger size. However, it is important to note that an accurate comparison would require correlating two houses of same size and same disaster resiliency, which in the case of the observed self-built houses is not possible, especially considering the quality of the construction.
- Advantages and disadvantages of full support: full reconstruction support through the direct implementation of shelters ensures quality control and generally eases timely implementation. On the other hand, not relying on people's capacity for self-recovery limits their involvement in the project and therefore their sense of ownership. Also, full support does not offer the flexibility to adjust the amount for particularly vulnerable beneficiaries. While cost control is more easily ensured, the higher costs linked to full reconstruction often limit the size of potential constructions (hence core shelter where former houses were often bigger) and the number of beneficiaries. It is a fine and difficult balance to find between the risks of partial support (including self-construction) and the limitations of full support.

Implementation I Setup

As CH-NGO/04 did not have the necessary technical knowledge in-country for a shelter construction project, they looked for external local expertise. They partnered with a local NGO (L-NGO), whose base is near to the target area in Jinotepe, and thus familiar with the region. In addition to its solid technical expertise, L-NGO is part of an international network which implements construction projects in several countries of Central and South America all of which represented many advantages for a successful implementation. They could rapidly begin the assessments in the field to corroborate the local authorities' list and advise on construction techniques for which they had the expertise and the experience implementing them in the region. L-NGO's project team was composed of five people including three technical staff (architect, civil engineer, and on-site manager) who implemented the project on site together with a social support officer, and an administration manager who oversaw the process.

For its part, CH-NGO/04 provided the project with two part-time staff: a response manager and a finance/admin manager to oversee the work of its local partner. Thus, the entire technical and quality control was the responsibility of L-NGO. Despite logistical and access constraints, the local partner ensured the supervision of the implementation with a constant on-site follow-up and regular communication with CH-NGO/04 which proved their solid expertise.

- **Technical expertise and quality control:** looking for external technical expertise through implementing partners is a good solution to complete a limited in-country project team. Nevertheless, it is important that the INGO review designs, BOQs and technical documentation to ensure quality control. If the country office does not have the technical expertise, Headquarters should take responsibility to confirm the technical documentation corresponds to the needs, awaited quality and objectives.

5.4 Local Adequacy, Durability & Resilience to climatic hazards

Site selection | Site planning

Few fully damaged shelters could be rebuilt on the same location, but often families needed to be relocated to a new area since their former plots were at risk of flooding or landslides. Local authorities oversaw the relocation process and proposed new lands for their relocation in nearby areas on higher grounds. They equipped the new areas with few facilities to ease the relocation process, including a new school to replace the former one which was destroyed during the hurricane. Beneficiaries were consulted and received a property act together with the new shelter; this process was coordinated together with CH-NGO/04 & L-NGO, who made efforts to favor a gender equitable distribution of properties.

Crucial basic infrastructures such as access to a durable water source and sufficient sanitation facilities were not included in the project, which hampers the sustainability of the new settlement in the long-term. Partly because of this, some people decided to return to their former plot and keep the new shelter as a secondary refuge. Conscious of the problem, CH-NGO/04 planned a second phase to ensure water supply to the relocated areas which unfortunately could not be implemented for lack of funding.

- **Shelter alone is not viable:** imposing relocation to beneficiaries without ensuring the conditions for long-term establishment are secured may compromise the benefits of the project. Particularly in La Pinuela, where access to drinkable water proved to be problematic, several families decided not to live in the new shelters. For a sustainable project, one should ensure site adequacy, and if additional components are necessary, develop a strategy to complement the project within the agency or through other partners.
- **Environmental protection:** Furthermore, not proposing an adequate and sustainable solution of water supply in a relocation area can lead families to resort to harmful solutions for the environment. This is of particular concern near ecologically protected areas, such as in La Pinuela which is close to a natural reserve for turtles.
- **Follow-up action:** The evaluators recommend carrying out an updated assessment of the current situation in the three communities and if found necessary to implement a wash intervention to ensure long-term sustainability of the new settlements.

Design appropriateness

For reasons of budget, speed of execution and structural integrity, the shelters were planned with a single design and construction system using Ferrocement; a technique commonly used by L-NGO though its spin-off construction company. Families were not involved in the choice of house design and building technique but consulted on small variations on the basic design, such as position of windows and doors, or orientation of the house on the new plot.

As the shelter built by CH-NGO/04 & L-NGO is meant to be a storm-resistant core house it is single-sized, based on emergency standards³ and hence often smaller than the former house. Extending the shelter by building annexes is possible and promoted for better ownership but depends on the resources available to each family.

- ➔ **Design flexibility:** while most families are composed of 3 to 4 members, some have up to 10 members. With such important variations, it would have been sensible to propose an alternative solution, either designing two different sizes of shelter or by providing 2 shelters for big households.
- ➔ **Local building culture:** The construction materials and design of this ferrocement shelter, while well implanted in the region, do not reflect the local building culture, particularly in rural and remote areas, which commonly consists of using wooden structure and walls on a stone base. As a result, constructing self-built extensions using local materials on a ferrocement structure proved to be more complicated as connections between both structures were not familiar to the beneficiaries. Several beneficiaries expressed that the new shelter felt safe, but the atmosphere inside was less comfortable than in their traditional house (too dark, hot and not enough ventilated). It seems that not so rarely the new shelter was used as storage and potential refuge in case of storm, and beneficiaries built another house nearby where to live. Nevertheless, in many cases it was also used as an additional room to the newly built house, especially in extended families.

Resistance to natural disaster

CH-NGO/04, through L-NGO and its experienced construction team, developed a disaster resilient design. Even with tough access conditions and COVID-19 induced movement restrictions, CH-NGO/04 and its implementing partner ensured close follow-up of the construction works, coaching local masons and beneficiaries. The proximity of L-NGO's base in Jinotepe (approximately 1h from the communities) and the choice of concentrated locations proved to be important advantages for construction supervision thus quality control of the shelters.

- ➔ **Extensions:** while the core house is very storm-resistant, its design is fixed and modifications, such as additional opening or rigid concrete extensions may compromise the structural integrity, thus hamper its resistance to disasters. When opting for a core-housing approach, one must anticipate incrementality allowing adaptations of the houses. As such raising the awareness of the beneficiaries on BBB principles and providing them with technical guidance on safe extensions (particularly if using concrete/blocks/bricks) is crucial to ensure the sustainability of such projects.
- ➔ **Follow-up action:** the evaluators recommend developing a technical guidance for modifications and extensions in form of a booklet that can be distributed to the beneficiaries together with a basic training, to strengthen the communities' resilience, as a follow-up action of the project.

5.5 Technical capacity building and local enhancement

Capacity building of local masons and communities

The beneficiaries sometimes participated in the construction process as unskilled labour, although this was often limited to transport and some occasional works since the technique requires mainly skilled labour.

L-NGO has a strong technical expertise and has been running a training program for local masons on ferrocement technique for twenty years. For this project, they used their long-term experience to train 6 masons in the 3 communities. The 6 chosen masons received a short theoretical training on construction techniques, including but not limited to ferrocement, before being trained on the job by integrating the construction team building two houses under the supervision and mentoring of more experienced masons. While the training on the ferrocement method seemed effective, its relevance for potential future job opportunities is not obvious, as ferrocement construction is a relatively expensive and not widely used in the local building culture.

- ➔ **Training on technical support:** adding a training component when implementing a construction project is always a welcomed initiative and is crucial for local empowerment. In this case, the trainings could have been more effective if also teaching other more common resilient construction techniques and including a component for the safe extensions of ferrocement shelters. With their great expertise, L-NGO would have been perfectly placed to deliver such trainings and improve local skills.
- ➔ **Capacity building of communities:** Capacity building through resilient construction trainings is a catalyst for local strengthening and in this sense (and from the evaluators point of view) it is crucial, if not more

³ The usable area of each shelter based on SPHERE standards for emergency response: 17.5m² for a family shelter, which corresponds to 3.5m² per person for an average family of five. Since the design is unique, the size does not adapt to the size of the family.

so than construction itself, to ensure the recovery of affected people after a disaster. Moreover, it gives to these often unprivileged and self-relying people the tools not only to recover but also to improve their pre-disaster condition by learning how to build safer houses.

5.6 Community inclusion and participatory approach

Beneficiaries were involved to a greater or lesser extent throughout the process, from the beneficiary selection process, relocation choice, design adaptations and finally construction where they provided unskilled labour. Communities also organized the repairs of the access roads and the transport of materials to the warehouses and to each construction site. Nevertheless, their participation was limited due to several factors: the first steps were supervised by local authorities who, representing the strict policy of the Government of Nicaragua, did not leave much room for the selection of beneficiaries and relocation sites. As for the design and construction stages, the chosen method of ferrocement leaves little flexibility for adaptations. In this sense the project has a very minimal focus on inclusion and participation, even though the communities seemed very happy with the assistance provided by CH-NGO/04 & L-NGO with whom they managed to establish a good and trusted relationship.

5.7 Adequacy of the construction component and coherence within the project

The present project is purely focused on shelter reconstruction with two clear outcomes serving the objective of supporting vulnerable communities affected by the cyclones:

- Construction of 60 hurricane resistant shelters in the 3 targeted communities
- Training of 6 masons in the chosen construction technique

Preliminary assessment could be done quite quickly after the cyclones thanks to the presence and proximity of L-NGO's base, which helped CH-NGO/04 & L-NGO to quickly set up a well-defined project proposal. The initial proposal already mentions the need for water supply and sanitation. As mentioned previously, conscious of the criticality of the WASH component for the viability of the construction project, CH-NGO/04 & L-NGO have been, and were still looking at the time of the evaluation, for solutions through other organizations or additional funds.

To consider the adequacy of the project it is important to consider the unforeseen impacting events. The implementation process was significantly slowed down because of administrative difficulties related to the "Law for the Regulation of Foreign Agents". Which at the same time made it very difficult for CH-NGO/04 & L-NGO to adapt the project proposal to the evolving context. Additionally, road access for material delivery to certain places was impossible during months and delayed even more the implementation. As a result, houses were constructed according to access opportunities and community readiness, starting mid-May in El Quinal (15.05-30.06), continuing in Aguas Calientes (15.06-30.07) and finishing in La Pinuela (15.05-30.08) with the last house completed by the end of August 2021.

Furthermore, the local authorities decided to provide additional support in the community of La Pinuela, which suffered human losses. They distributed construction material (zinc sheets) and approved the free use of fallen trees for reconstruction purposes, which allowed many beneficiaries to rebuild a new house. As CH-NGO/04 & L-NGO were not informed of this initiative they could not coordinate their action with the support of the Government, nor adapt their project later on.

- ➔ ***Adaptation to evolving needs:*** although the delays are difficult to attribute to the NGOs, they had a significant impact on the adequacy of the response as many beneficiaries in La Pinuela already had reconstructed their house before receiving CH-NGO/04 & L-NGO's shelter because they felt support would no longer come. With better coordination and sufficient flexibility, the response could have been adapted to contribute, for example, to reinforce the resilience of the self-built houses, and/or provide WASH infrastructures. But again, this was made impossible by the very limited space given to NGOs in Nicaragua following the cyclones. Nevertheless, while some of the shelters are not used as primary homes, they still offer a safe place to take refuge in the event of a disaster, as well as to store grains and food or other valuables.
- ➔ ***Enhanced coordination:*** in emergency responses, close coordination amongst all aid actors, including humanitarian organizations, government and beneficiaries is essential to avoid gaps and overlaps. Where official coordination mechanisms are in place, they require an active participation of the partners. If not the case, mapping the actors at the time of assessment and a regular contact can contribute to a more adequate and effective response.

❖ Conclusion

General impression

CH-NGO/04 is experienced in emergency reconstruction programs and partnered with a strong technical local partner well anchored in the target area. Despite difficult circumstances, both of them monitored the project implementation very closely, which resulted in excellent quality work. The selection of this remote but severely hit area seems very appropriate, as does the choice to concentrate the intervention on the 3 most affected and adjacent communities, allowing for a blanket approach, avoiding the risks of tensions in the communities and simplifying the logistics.

The core-housing and storm shelter approach is a relevant concept, allowing over time for later self-built extensions according to the beneficiaries' needs and resources. With this in mind, structural risks associated with self-construction are to be anticipated and included in the project through awareness and capacity building. Considering the difficulties for INGOs to implement emergency projects in Nicaragua following the new law post-hurricanes, CH-NGO/04 & L-NGO shaped their proposal to optimize the duration of implementation, choosing a construction technique where availability of materials, logistics and construction process were well-known and under the control of the local implementing partner. While lacking flexibility and not reflecting local typologies (openings, sizes, etc.) and construction techniques, the ferrocement technique allows for safe and resilient buildings.

The delays in implementation, although not imputable to the NGO, and the unforeseen overlap with governmental support, had a substantial impact on the adequacy of the response. The choice of a less time-consuming and rigid support modality than full shelter provision (direct reconstruction) may have allowed for more flexibility to adapt the response to the evolving situation and needs.

Recommendations for project follow-up

1_Sensitize communities to build safer extensions by producing an illustrated guidance booklet and providing community trainings. (see point 5.3)

2_As a complement to the shelter project, implement a WASH component including access to drinkable water and sanitation facilities to allow for long-term resettlement. (see point 5.3).

Recommendations for future projects

3_Adapt the design of the model shelter to be more flexible and allow for safe incremental houses (considering auto-construction). Ensure consistent involvement of the beneficiaries at every step to facilitate their ownership. (see points 5.3 and 5.5)

4_Always pair a construction project with a capacity building component. Expand the trainings to include local building cultures, teaching disaster resiliency using traditional construction techniques. This will allow trained local masons to access more work opportunities, while building community resilience. (see point 5.4)

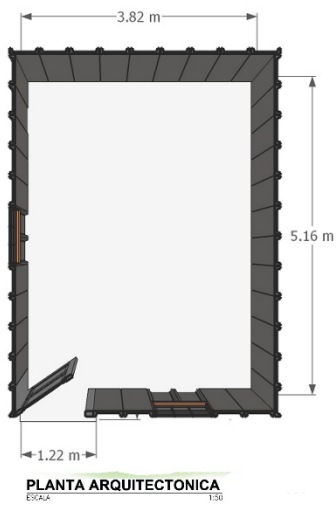
5_Analyse the advantages of prefabricated vs locally used techniques, even in emergency situations, as local building techniques are likely to be more sustainable on the long term. (see point 5.3)

6_Build on this experience and technical expertise of L-NGO to develop together a competence centre to advise other organizations on preparedness and emergency shelter response. (see points 3.3 and 5.4)

7_Ensure that shelter projects that include relocation are treated with a holistic approach (including WASH but also livelihood consideration/support) for enhanced viability and sustainability. (see point 5.3)

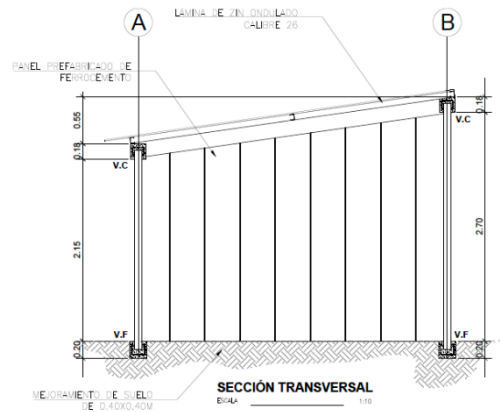
❖ Project documentation

Módulo Habitacional

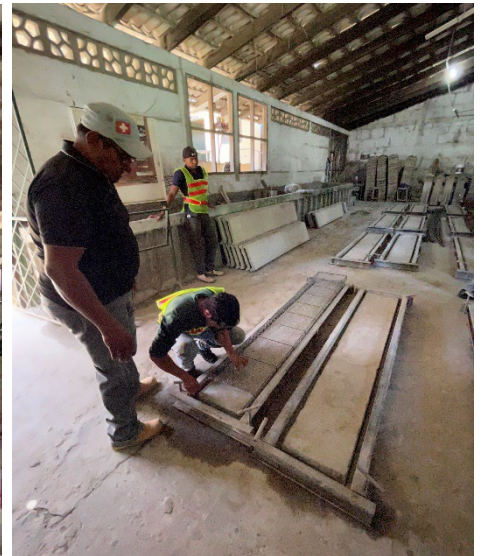


Características:

- Paredes de losa prefabricadas de ferrocemento
- Cubierta de lámina de zinc ondulado calibre 26
- Puertas y ventanas metálicas con estructura de varilla de hierro lisa con forro de zinc liso
- Piso de cascote de concreto
- Estructura metálica de cubierta



Layout, axonometry and section of the resistant core shelter implemented



The ferrocement panels are produced locally by L-NGO, allowing for good control of availability and quality

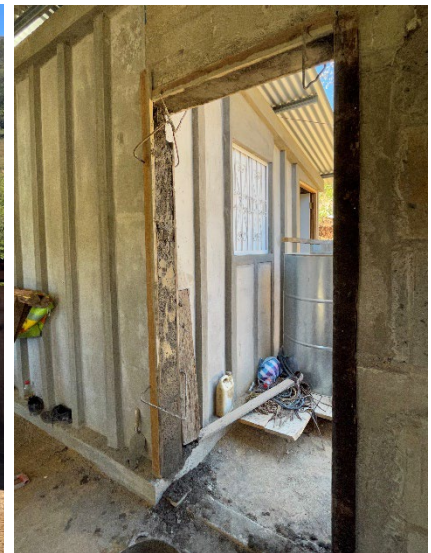


A single design was implemented with limited possibilities of adaptations, but beneficiaries personalized their new home.

❖ Project documentation



Compared to traditional houses, the interior is more enclosed and darker. Since the house is small, partitioning is difficult.



If the beneficiaries can afford it, extensions are possible but need some knowledge to avoid weakening the structure



Some shelters are used as the core of a new home, as an additional bedroom for extended family or as storage for goods



ETA/IOTA 2020 - NICARAGUA AND HONDURAS

TECHNICAL REVIEW MISSION – HOUSES & BUILDING REPAIRS AND RECONSTRUCTION

Terms of Reference

Background

Nicaragua and Honduras were hit by two strong hurricanes, Eta and Iota, in November 2020. Heavy winds and rains caused damages and inundations. It is estimated that one of three inhabitants of Nicaragua suffered damages, which amounts to 1.5 million persons. In Honduras, 3.8 million persons were affected.

In response to this disaster, Swiss Solidarity co-funded 6 projects in Nicaragua, Honduras and Guatemala for a total contribution of about CHF 1 million.

Purpose

This mission aims at assessing the results of the housing and public buildings repair and reconstruction components of four projects in Nicaragua and Honduras.

Scope

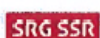
The scope of the review will concern the following projects:

Project reference, Organisation	Location	Project content	Project dates	SwS contribution
CH-NGO/04	Nicaragua Department Carazo	Agency-led construction of 60 houses	1.1.2021 - 30.09.2021	CHF 200'000
CH-NGO/03	Nicaragua, Matagalpa department	Distribution of shelter materials to repair roofs (in the framework of a wider livelihood recovery project)	1.12.2020 - 31.05.2021	CHF 200'000
CH-NGO/02	Honduras Department Gracias a Dios	Repairs and reconstruction of health posts	1.12.2020 - 30.04.2021	CHF 200'000
CH-NGO/01	Honduras, Department Santa Barbara	Cash transfers for housing repairs (in the framework of a wider CVA programme)	1.12.2020 - 31.07.2021	CHF 200'000

Review questions

The evaluators are requested to assess the projects in light of the following questions:

1. Are the technical constructive choices and the designs adequate and coherent for the context, are they durable and appropriately resilient to climatic hazards? Did the works that were carried out comply with the designs and are they of sufficient quality?
2. Have the skills and competencies of the beneficiaries, the communities and the local partners for cyclone-resistant reconstruction been improved?



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3. Have the communities and beneficiaries been consulted and has their view been considered in all relevant stages of the projects?
4. In projects that also had other components, has the housing repair and reconstruction component been integrated in the project in a coherent and complementary way?

Methodology

The reviewers are expected to:

- Review project documentation and other accessible relevant information prior to visit
- Visit project sites, assess repaired or (re)constructed houses and buildings (except for the project of Medair in Honduras project where only interviews and documentary review will be possible)
- Discuss with beneficiaries and representatives of local authorities
- Interview project managers, engineers and trainers of the local implementers
- Meetings with representatives of the Swiss NGOs that were responsible for the projects
- Other meetings as appropriate

SwS kindly requests its partner organisations to assist the evaluators by facilitating the above.

Outputs

- A draft report. SwS will send the draft to the concerned ONGs for factual corrections.
- A report in English that includes a general analysis, findings and comments and presents the following elements for each project:
 - Observations
 - Conclusions
 - Recommendations

SwS will arrange for translation of the final version of the report into Spanish.

The inclusion of photographs is encouraged.

Timing

- Field mission planned from 11.01.2022 to 24.01.2022
- Draft report to be submitted by 15.03.2022
- Final report expected by 15.04.22, or not later than two weeks after receipt of comments by NGOs

Security

The evaluator will abide by the security regulations of the partners that organize the respective project visits.



Ge *PR*
GR ²



MINIMUM STANDARDS CONSTRUCTION AND RECONSTRUCTION

These standards apply to the permanent construction or reconstruction of private housing or public buildings with a minimum lifespan of 20 years.

If (re)construction is part of a project it needs to meet the following standards explicitly. If it does not comply with a standard, explain why.

At the end of this document is a list of compulsory annexes to funding request for (re)construction projects or projects with a (re)construction component, and references that you may find useful.

A) Standards

1. Justification of construction and implementation approach

- a. Explain and justify the lifespan of the selected construction design.
- b. Justify the chosen construction and implementation approach (contractor driven, owner driven, cash approach, etc.).
- c. Divide large construction projects into two or more phases, to enable revisions and to make it possible to learn from experience.

2. Risk mitigation

- a. Site selection: Ensure that the construction site lies outside risk areas, considering risks such as flooding, landslides, erosion, and soil contamination or instability. Assess and report risks, particularly regarding earthquake zone level, cyclone and storm strengths, but also regarding level of snow fall, possible recurrence of flooding, geology of slopes, possible conflict proximity, UXO or mine presence, health hazards, etc.
- b. State the measures that will be taken to enhance the resilience of structures to identified risks, especially earthquakes, storms or floods. This includes the choice of static system, the dimensions of load-bearing elements and structural details.
- c. In the case of public buildings, take measures to ensure the safety of users such as emergency exits and escape routes.

3. Land tenure

Clarify and secure land tenure for each structure prior to construction. For housing projects ensure, when possible, that both men and women hold title to land.

4. Design

- a. For housing projects, there must be access to the road system, health services, schools and livelihood for beneficiaries at a reasonable distance from the site.
- b. Social and cultural appropriateness: choose a design that is appropriate to the context in terms of material choice, architecture, square metres per person, family size or students per class. Hold consultations with local people, taking into account gender, vulnerability and disability. A variety of options is preferable to a single design, in order to accommodate different sizes of family and avoid uniformity.
- c. Ensure that comfortable temperatures can be maintained inside the building and that proper measures are taken against heat (through ventilation) or cold (through insulation and heating).
- d. Assess the possibility of repairing existing buildings, both for economic reasons and to prevent the creation of a historical and cultural "tabula rasa".
- e. Employ professionally qualified persons (architects or engineers) to design and supervise permanent construction projects.
- f. Ensure compliance with the local construction code regarding earthquake resilience. If none is available, refer to Swiss SIA norms as a basis for calculation.
- g. Where local risk calls for earthquake-resistant construction systems, make sure the drawings are checked and signed by a qualified engineer and that specific monitoring is put in place during construction.

5. Environmental impact

- a. Avoid materials such as asbestos that pose a danger to health in construction or retrofitting.
- b. Wherever possible, purchase construction materials locally. Take the ecological footprint into account, e.g. by paying attention to the production technique for bricks.
- c. In the case of new settlements, avoid contributing to deforestation as a result of the gathering of fuel for cooking or heating.
- d. In cold climates, apply insulation measures with ecological sensitivity. The planting of trees is encouraged as part of any construction project.

6. Ownership and maintenance

- a. Make sure beneficiaries are able to maintain, repair and extend new structures in the future. To promote ownership, know-how and technology.
- b. Obtain approval of the construction site and the final design from the beneficiaries and authorities
- c. Provide technical training to the construction workers
- d. Hire local contractors and local manpower
- e. Provide information and training regarding maintenance

7. Quality control

- a. Use a tendering process that is neutral, fair to all parties and that avoids creating tension and conflict. Make sure it conforms to either the organisation's own tendering standards or the existing legal requirements. It serves to ensure quality.
- b. Quality control: Identify all actors and partners in the construction process and define their roles and responsibilities, e.g. through a flow chart of the chain of command. Define who is in charge of technical supervision, the required technical background level, the frequency of quality control checks, the milestones, the final quality guarantee insurance, handover procedure and documentation.



8. Provision for Water, Sanitation and Hygiene (WASH)

- a. Include a response to WASH issues (water supply, excreta and waste disposal, drainage) as part of the project or make sure they are taken care of by another agency. Describe in the proposal the strategy by which WASH needs will be met.
- b. If applicable, make sure the minimal standards on "Sanitation" or "Water supply" are respected.

9. Compliance

- a. Confirm compliance with government policies (master plan, building code) and cluster recommendations.
- b. Confirm existence of a construction permit or ongoing building approval procedure / Memorandum of Understanding (MoU).
- c. Confirm compliance with laws on labour (including child labour) and safety standards. Indicate measures taken to ensure compliance.

10. Creation of settlements (more than 20 buildings in the same location)

- a. Document the approval of the construction site by the local population and the authorities
- b. Confirm that fire fighting measures are provided for.

11. Reconstruction of public buildings

- a. Clarify operational aspects (such as assignment of teaching or health staff etc.) with the authorities (and set them out in an MoU) before construction work starts, in order to ensure proper functioning of the public institution after the project.
- b. Include the drawing up an effective maintenance concept (running cost estimate, clear division of roles etc.) as an integral part of the implementation process from the beginning, and make sure the necessary resources will be made available.
- c. Make the ground floor accessible to people with disabilities.

B) Compulsory annexes

- a) Submit the following documentation for the construction design:
 - Situation plan, plans for each level, cross-sections and elevations at appropriate scale in a readable format with legends in English, French or German
 - A description of the type of foundation, the materials used, the type of structure, the type of roofing, the equipment, and a bill of quantities for the structure
 - Structural details such as details of structural nodes from roof to foundation and of all relevant points at which loads are transferred can be submitted at a later stage for approval, but shall be submitted before construction begins
- b) If new settlements are created or for re-settlements (more than 20 buildings in the same location), provide the following physical planning maps:
 - Location plan, showing the original housing location and the new location. Include existing villages.
 - Area map showing the topography, watercourses, green areas, infrastructure, land use, main activities and geology.
 - Settlement map, showing public transport, green areas, public space, public facilities, water supply, power supply, areas in which activities take place, waste and wastewater disposal, drainage, topography and cemeteries.
 - These illustrations can be simple hand drawings.



C) References

You may want to consult the following sources:

- a. The Sphere project: Humanitarian Charter and Minimum Standards in Disaster Response, especially chapter 4 about shelter and settlement
- b. *For baseline standards but also of interest with regard to minimum standards for community facilities*: UNHCR Handbook for Emergencies, chapter 12: site selection, planning and shelter

