Benin Floods 2010

Shelter Strategy Report

First Draft

Cotonou, November 25th, 2010
Emergency Response Team

The present document is a report outlining CARE International's possibilities of emergency response in the shelter sector to the flooding that occurred in Benin in September 2010. The purpose of this report is to provide technical information and personal recommendations in regards to shelters; this report can be used as a basis for proposal writing and as a stepping stone for further action. It is important to note that this report limits itself to the shelter component of CARE's intervention in Benin. Furthermore, this report builds on the extensive information already accumulated by the CARE Benin office in regards to the other interrelated sectors such as WASH and Food Security, and does not wish to reiteration this information.

1 Table of Contents

2 - INITIAL CONTEXT 4

2.1 - In a nutshell 4

2.2 - Regional concerns 4

2.3 - Shelter options 4

2.4 – Relief response 5

3 - CURRENT CONTEXT 6

3.1 – In a nutshell 6

3.2 – Regional concerns 6

3.3 – Shelter options 6

3.4 – Relief response 6

3.5 – Problem tree 6

4 - GENERAL REORIENTATION OF STRATEGY 7

4.1 - Current strategy 7

4.2 - Reorientation phase 1 9

4.2.1 - Adapted emergency shelter repair kits 9

4.3 - Reorientation phase 2 9

4.3.1 - Cash for work 10

4.3.2 - Building back better 10

4.3.3 - Advocacy for relocation 11

5 - TECHNICAL INFORMATION REGARDING SHELTERS 11

5.1 - Shelter Type 1 (River banks) 11

5.1.1 – Specific building materials and techniques 11

5.1.2 – Local DRR practices 12

5.2 - Shelter Type 2 (Valley) 13

5.2.1 – Specific building materials and techniques 14

5.2.2 – Local DRR practives 14

5.3 - Shelter Type 3 (Highlands) 15

5.3.1 – Specific building materials and techniques 16

5.3.2 – Local DRR practices 16

6 - SPECIFIC INFORMATION REGARDING STRATEGY 18

6.1 - Shelter strategy for phase 1 18

6.1.1 - Logframe 18

6.1.2 – Narrative summary 19

6.1.3 – Time frame 20

6.1.4 – Target group 20

6.1.5 - Budget allocated to shelter materials 21

6.1.6 - Human resources CARE 24

6.1.7 - Partners and institutional capacity 25

6.1.8 – Shelter program phase 1: overall budget 27

6.2 – Shelter strategy for phase 2 28

6.2.1 - Logframe 28

6.2.2 – Narrative explanation 30

6.2.3 - Estimated time frame 33

6.2.4 - Target group 33

6.2.5 – Human resources CARE 35

6.2.6 – Potential partners and institutional capacity 35

6.2.7 – Estimated global budget needed for phase 2 36

7 - CONCERNS AND RECOMMENDATIONS 38

7.1 - General concerns 38

7.2 - General recommendations 38

7.3 - Concerns phase 1 38

7.4 - Recommendations phase 1 38

7.5 - Concerns phase 2 40

7.6 - Recommendations phase 2 40

8 - ANNEX 41

8.1 - Shelter kits justification for material use 41

8.2 – Household assessment forms (first and second) 42

8.2 – Autre Vie team composition chart 43

8.2 - Ideas for improved housing design 44

2 INITIAL CONTEXT

2.1 In a nutshell

In September 2010, Benin experienced the worst flooding in its history since 1963. The levels of water in some areas exceeded the 3m mark and the results were devastating. According to an assessment carried out by UNDAC on October 21st, 2010, "680,000 people[1] (about 136,000 households) in 55 of Benin's 77 municipalities, were affected by the flooding, nearly 250, 000 of whom have been displaced"; moreover, it is estimated that a total of "55, 000 houses have been destroyed".

2.2 Regional concerns

The flooding had significantly different consequences on housing depending on the inhabitants' geographical location.

Inhabitants living in areas around lake and river banks are accustomed annual flooding and use local coping strategies and building practices to counter this problem; however, this year, the water rose to unexpected levels defying all local risk reduction techniques. As a result many homes were completely destroyed or partially damaged.

In the areas known as the highlands annual flooding does not occur. For this inhabitants do not use local building practices to prevent potential damages caused by floods or excessive exposure to water. The homes in the highlands are adobe monolithic structures. These housing units were submerged for a prolonged period and inevitably collapsed; as result, most of the homes were completely destroyed.

It is important to note that in both circumstances, some of the building materials can be salvaged and reused for the reconstruction and rehabilitation of future homes.

2.3 Shelter options

Depending on the severity and magnitude of the consequences caused by the flooding on each individual village, the disaster affected persons (DAPs) were left with three principal shelter options:

- Host families – residing with neighbours and family members within the same village if the homes were not as damaged and still somewhat liveable; or crossing the river/lake and residing with host communities until the water levels recede.

-Public centers – the physical use and occupation of public buildings such as schools by many DAPs from the same or nearby villages.

[1] This represents 8% of the total population

-Self-settled camps – the inhabitants of villages like Kpoto situated in the highlands, where a vast majority of their homes were completely destroyed, attempted to shelter a maximum of people in public buildings. The space in these buildings is very limited, so those DAPs not able to shelter themselves in public buildings were forced to create self-settled camps on the side of the road using leaves, plastic bags and salvaged building materials for shelter.

2.4 Relief response

The initial reaction from the international aid community in regards to shelter to this alarming situation was to provide emergency shelter kits to DAPs. Basically, these emergency shelter kits were meant to contain a combination of plastic sheeting and NFIs (cooking sets, sleeping mats, blankets, mosquito nets, etc.) to ensure the immediate shelter needs of DAPs.

3 CURRENT CONTEXT

3.1 In a nutshell

Today, in most previously flooded areas, the water has entirely or partially receded.

3.2 Regional concerns

In both types of areas, highlands and along the river banks, homes were either partially damaged or completely destroyed by the flooding.

Two distinct scenarios have occurred in villages along the lake and river banks. The first is that a portion of these villages, the water has completely receded, however the earth is still very damp and the rammed earth slab used as the foundation of their homes is still wet making their homes temporarily inhabitable. The second scenario is that the water has not yet fully receded; this is generally in villages where the homes are built on stilts. Because of the current presence of water, this makes reconstruction and accessibility onerous tasks.

In highlands the homes made from adobe were almost all entirely destroyed. The major issue now is to remove all the debris and begin levelling the sites so that reconstruction and rehabilitation can take place.

Again, as mentioned above in both geographical areas, a portion of the building materials can be salvaged and reused for the reconstruction and rehabilitation of future homes.

3.3 Shelter options

The shelter options for the DAPs has somewhat changed from the beginning of the emergency. The DAPs living in self-settled camps are now being greatly assisted by UNHCR who is setting up planned camps and other NGOs and agencies such as Caritas and the Red Cross whom are providing tents for these people.

As the water has considerably receded there have been an increasing number of permanent returns, and sometimes hosting with families within their villages of origin. Furthermore, many individuals residing with host families, inside host communities, are carrying out daily returns to work on the rehabilitation or reconstruction of their homes and sites.

3.4 Relief response

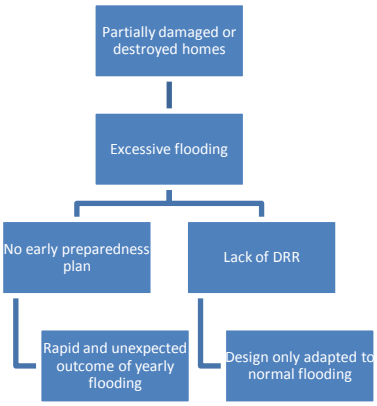
As mentioned above, some organizations working within the sector have tended directly to the immediate shelter needs, either by providing tents or planned camps.

Many organizations are beginning to rethink and question the relevance of their original saught out “immediate” emergency shelter kits; moving towards a more adapted and sustainable

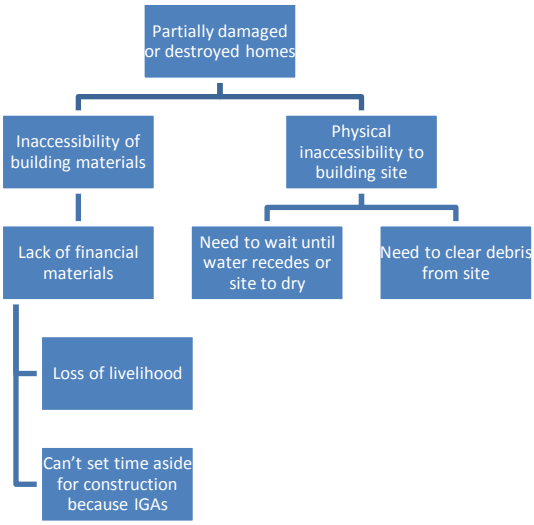
approach by supplying emergency shelter "repair" kits. The content, relevance and cost of these kits are further detailed in subsequent sections of the report.

3.5 Problem Trees

Causes



Effects



4 GENERAL REORIENTATION OF STRATEGY

4.1 Current strategy

Presently, CARE Benin is intervening in six communes. Below, please find a table with important figures regarding these communes.

Locality	Communes	Estimate Population 2010	# of registered DAPs	# of affected HHs	Total # of villages	# of affected villages
Ouémé	**Aguégué**	35 693	34 237	6 847	21	**21**
	Dangbo	86 031	60 106	12 021	41	**30**
	Adjohoun	72 863	25 000	5 000	55	**24**
	Bonou	38 626	4 761	952	28	**21**
Zou	**Zagnanando**	47 405	8 660	1 732	37	**13**
	Ouinhi	49 689	19 894	3 979	28	**14**
Total:		**330 307**	**152 658**	**30 532**	**210**	**123**

*Fiche de présentation de l'intervention CARE

The table below provides an overview of the different programs carried out by CARE in the six communes of intervention; it also details who is the primary donor for this zone.

Primary Donor	Communes	Water and Sanitation (WASH)	Food Security	Shelter
ECHO	**Aguégués**	- Distribution of hygene and water purification kits (8580 HHs) - Hygene awareness/promotion campaigns	- Assess most vulnerable HHs - Food and/or cash distribution (3435 HHs)	- Assess destroyed HHs - Distribute emergency shelter repair kits (860 HHs)
	Zagnanado			
DFID	**Adjohoun**	- Distribution of hygene and water purification kits (10 000 HHs) - Hygene awareness/promotion campaigns and « child to child » training - Sanitization of wells - Distribution of malaria kits (mosquito nets and affected women and children go to health clinic)	- Assess most vulnerable HHs - Food distribution (1600 HHs) - Identification of malnurished persons	- Assess destroyed HHs, - Distribution of emergency shelter kits and cooking sets (1000 HHs)
GATES Fondation	**Dangbo**	- Distribution of hygene and water purification kits (7932 HHs) - Hygene awareness/promotion campaigns - Sanitization of wells	- Assess most vulnerable HHs - Food distribution (2711 HHs) - Grain distribution (corn, tomato, peppers – 1000 HHs)	- Assess destroyed HHs - Distribution of emergency shelter kits (732 HHs)
	Ouinhi			
	Bonou			

*Fiche de présentation de l'intervention CARE

In general the target group for CARE Benin's shelter program is: 10% of the most vulnerable affected households in the six communes of intervention. This target group is meant to receive the shelter kits and also to receive training on the proper use of these kits.

In regards to the time frame allocated to each phase of the intervention, for the first phase, it ranges from one to six months depending on the donor. The second phase could potentially be a six month to one year depending on the funding received and the activities to carry out.

In practical terms CARE Benin has partnered up with a local NGO called Autre Vie whose staff is doing much of the implementation of CARE Benin's emergency programmes in the field. More information regarding this NGO and other partners can be found in section 6.1.7.

4.2 Reorientation of phase 1

The initial phase of CARE shelter program in Benin will consist of an "emergency" intervention, with a duration of approximately 5 months, which will focus primarily on the quality of the intervention. Unlike other actors within the shelter sector, CARE has identified that the actual emergency shelter needs are not to provide emergency tents in planned camps and self-settled camps (as UNHCR, the RC and Caritas are covering these needs); but rather to provide DAPs with adapted emergency shelter ***repair*** kits. Staying in line with the Sphere Standards, CARE ERT in Benin believes that planned camps which may create long term dependency should be sought as a last option for displaced persons. Furthermore, as mentioned in section 3 of the report, the majority of DAPs have either returned to their villages since the water has sufficiently receded or are temporarily settling with host families.

4.2.1 Adapted emergency shelter repair kits

Based on notion that there are three different types of housing units in the various zones of intervention, CARE has developed adapted shelter kits to respond to the context specific shelter needs. Please note that the exact content of these kits is outlined in section 6 of the report. The kits were conceived to respond to two central priorities:

- To help DAPs return to their original site by providing them with material support so that they can begin to repair and rebuild their damaged and/or destroyed homes.

- To help ease the burden of hosting families by providing DAPs with sufficient building materials that can be used to construct a temporary shelter on the land of the host family; and later be used to reconstruct their homes.

4.3 Reorientation of phase 2

The second phase of CARE's shelter program in Benin should have a duration of approximately one year. This phase will focus on providing support to DAPs to initiate sustainable recovery through rehabilitation and reconstruction of their villages.

Detailed information regarding this phase is further discussed in section 6 of the report; however a more general description can be found below.

4.3.1 Cash for work

The proposed cash for work program would consist of providing a targeted number of, physically able and willing, DAPs from the highland region with the possibility of temporary employment (income generating activities) which would principally entail removing debris and levelling the ground of the site to deliver accessibility for potential reconstruction. We could also forecast a project consisting of digging drainage canals to ensure that the village is better equipped when faced with excessive flooding.

Please note that the basic idea behind the cash for work program would be to temporarily divert a target amount of the population from their daily income generating (IGA) and livelihood activities (LA) towards a reconstruction initiative. Removing debris and levelling the site is a labour intensive activity. Up to date, there has been very little done in terms of these activities as DAPs are occupied with their other IGA and LA. Furthermore, it has been observed that the DAPs living in planned camps are not in a hurry to leave these tents and reconstruct their villages as there are heavy pull factors (distributions and comfortable shelters) and they are waiting for their different options from various relief organizations.

4.3.2 Building back safer

It is very important to note that the building back safer component of CARE's shelter program should not be seen as a physical infrastructure reconstruction program per say. The idea is to support DAPs by providing them with training and knowledge on improved building practices and techniques which build upon their local practices and techniques; it does not imply that CARE reconstruct entire villages.

CARE could achieve this by implementing the following activities:

- CARE could hire a short term consultant (structural engineer/construction specialist) to conceive plans for a standard prototype housing unit for each of the three types of houses found in the various regions of intervention. These standard building models would be based on improved building technics and practices, the promoting DRR measures, and would emphasize value of local building practices and the use of local building materials.

- Capacity building – providing training of trainers for local NGO staff, community members and local government authorities on building techniques and practices. Also carry out information and awareness campaigns on simple DRR measures for their homes and villages.

- The construction of a pilot house in each commune (or in each village if depending on funding) to be used as a live model.

4.3.3 Advocacy for relocation

For those DAPs living in very precarious areas with a high risk of flooding, CARE could potentially support these people by carrying out advocacy work in favour of their relocation to safer grounds.

5 TECHNICAL INFORMATION REGARDING SHELTERS

5.1 Shelter type 1 (River banks)

There is annual flooding in the regions where the homes are built on river banks. The water is present under the homes for approximately 6 months of the year. For this reason, all of the homes in these regions are built on stilts. Below is an image of a traditional housing unit found on the river banks using all-natural building materials.

A standard housing unit built on stilts to cope with the potential risks of annual flooding

Aguégués commune

5.1.1 Specific building materials and techniques

The materials used to build this type of housing unit are:

Foundation:

I. Wood beams are planted 0.50m deep into the ground during the dry season. Note that the floor of the housing unit is elevated at a height of 0.70m above the ground; however the inhabitants stated that they required an additional elevation of 50cm to have been safe during this year's flooding.

II. A rectangle floor made from different width bamboo is then placed on top of the stilts. The bamboo used for structure being thicker than that used for filling space on the floor.

Frame:

III. Wood posts (interchangeable with thick bamboo poles) are the primary support beams in the structural framework of the housing unit

IV. Bamboo sticks (split into four) are used as vertical intermittent studs for the framework, but are also placed horizontally to strengthen the wall.

V. Bamboo sticks (split into thin blades, approximately 1cm-2cm in width) are used as the wall panel (acting as plywood in a conventional light frame construction).

Roof:

VI. The structural frame of the roof (joists, ceiling rafters and collar beams) is made of bamboo sticks (whole taken from upper end of bamboo stick, diameter ranging from 5cm-10cm).

VII. The roof structure is then covered with straw

5.1.2 Local DRR practices

Local DRR practices which are incorporated in the building design are that all housing units are built on stilts to generally avoid the annual flooding. Those inhabitants who are "better off" will build the foundation of their homes from concrete (concrete stilts). Below is an image of a housing unit using concrete stilts.

Traditional housing unit built with concrete stilts

Aguégués commune

The picture below illustrates two additional DRR practices used to cope with annual flooding. Elevated gardens and pens for livestock and plants, as well as homes built entirely out of concrete.

Adapted elevated gardens and high ground used as pens for the livestock.

Aguégués commune

5.2 Shelter type 2 (Valleys)

Below is a picture displaying the standard traditional housing unit found in the valley regions within the communes of CARE's shelter intervention; it represents a basic raised floor wood frame construction.

A standard housing unit found in the valley regions.

Ouinhi commune

5.2.1 Specific building materials and techniques

The materials used to build this type of housing unit are:

Foundation:

VIII. Bamboo stick split into two, approximately 1.0m in length (50cm below ground and 50cm above ground) place in a rectangle of a desired surface area for covered living space. This rectangular bamboo frame is permanent, and is used as the formwork for a rammed earth foundation / floor.

IX. Earth mixture (sand, soil, clay and sometimes straw and manure) is used for the foundation / floor. This earth mixture is often covered with a coat of mud plaster to give it a nice protective finish. This creates a monolithic rammed earth slab.

Frame:

X. Wood posts are the primary support beams in the structural framework of the housing unit

XI. Bamboo sticks (split into four) are used as vertical intermittent studs for the framework, but are also placed horizontally to strengthen the wall.

XII. Bamboo sticks (split into thin blades, approximately 1cm-2cm in width) are used as the wall panel (acting as plywood in a conventional light frame construction).

XIII. In some cases a mud plaster is applied to the inside and outside of the wall as a protective coating (similar to that used in straw bale construction).

Roof:

XIV. The structural frame of the roof (joists, ceiling rafters and collar beams) is made of bamboo sticks (whole taken from upper end of bamboo stick, diameter ranging from 5cm-10cm).

XV. The roof structure is then covered with straw

5.2.2 Local DRR practices

It is very important to note that the flooding that occurred in the month of September 2010 is an extraordinary event. That is, the affected beneficiaries usually employ coping strategies, as I will demonstrate below, to reduce the risk of destruction during annual flooding. Furthermore, early warning signs could not have been anticipated primarily because this type of phenomenon was unexpected and unprecedented. Moreover, according to the beneficiaries, the flooding occurred overnight thus negating any attempt of emergency preparedness planning. Below are images demonstrating some of the disaster risk reduction (DRR) techniques used by the locals to counter annual flooding.

Monolithic rammed earth slab with bamboo formwork.

Bonou commune

This picture represents a monolithic rammed earth slab with a bamboo formwork. This slab raises the floor level of the housing unit by approximately 50cm. Furthermore, this slab acts as a barrier to water (retention wall) during the annual flooding; this way the water never enters the inside of the house.

A grenier (crop and seed storage space) on stilts

Adjohoun commune

The stilts play an important role in all year protection of harvested crops and storing of seeds. During the annual flooding, the water usually does reach this height; therefore whatever is stored inside the grenier will not perish due to water damage. During the rest of the year, the stilts create a secure enough distance keeping the crops and seeds out of reach from livestock (principally pigs and goats).

5.3 Shelter type 3 (Highlands)

The traditional housing unit used in the highlands regions which were destroyed by the flooding were homes built from earth mixtures, creating a monolithic building structure similar to adobe. However, it is important to note that the adobe like mixture was not made into sun dried bricks but rather built in a hand moulded wall similar to the techniques used in cob construction. Below is an image of this type of structure.

A traditional housing unit made of earth mixes similar to adobe.

Zangnanado commune

Unfortunately, this type of material is not resistant to excessive exposure to water, especially flooding.

5.3.1 Specific building materials and techniques

The materials used to build this type of housing unit are:

Foundation:

i. None (the structure is built directly onto the ground; consequently the ground is the floor inside the home. This floor is occasionally covered with a mud plaster.

Frame:

ii. The frame of home is built from an earth mixture similar to adobe but the construction technique resembles that of cob construction. The monolithic structure is generally composed of a rectangular shaped exterior wall with an interior dividing wall.

Roof:

iii. There are two options for the roofs:

- A roof with the structural frame made of wood beams (joists, ceiling rafters and collar beams) which are then covered with corrugated metal sheets.
- Or a roof with the structural frame made of whole bamboo sticks (joists, ceiling rafters and collar beams) which are then covered with straw.

5.3.2 Local DRR practices

In the highlands the situation is a different as the beneficiaries of inhabiting these regions are not as exposed to the risks of annual flooding as they build their homes on high grounds (not directly alongside the river).

A cement brick housing which will use wood beams and corrugated metal sheets for a roof.

Zangnanado commune

Some of the villagers whom are "better-off" can afford cement brick construction. This type of construction uses cement foundations and cement slabs which can resist this type of phenomenon.

6 SPECIFIC INFORMATION REGARDING STRATEGY

6.1 Shelter strategy for phase 1

Impact and Outcomes

As mentioned earlier, phase 1 of CARE Benin's shelter intervention is considered an emergency phase. The differentiation here is that CARE is basing its intervention on quality, that is, the shelter kits which will be distributed recognize the fact that many people have already returned home, and furthermore, the kits are adapted to the different types of housing units found in the six communes of intervention (relevant to real needs).

In a few words, CARE Benin's shelter program will contribute to reduce the vulnerability of the individuals affected in terms of shelter by providing them with context and culturally adapted emergency shelter repair kits, as well as appropriate training on the use of these kits.

6.1.1 LOGFRAME

Compilation of all three donors – shelter specific

Strategy of Intervention	**Verifiable Indicators**	**Means of Verification**	**Risks and Assumptions**
Impact (overall objective)	**Impact Indicators**		
Contribute to reducing the vulnerability of individuals affected by the 2010 flooding in Benin.	Not required	Not required	Not required
Outcome (purpose)	**Outcome indicators**		
To meet the immediate shelter needs of flood affected households and strengthen early recovery and preparedness processes.	10% of the most vulnerable affected families have received emergency shelter repair kits and are using them correctly (GATES/ECHO). 25% of the most vulnerable households have received emergency shelter repair kits and are using them properly (DFID)	- Local NGOs report - Health district reports - Project staff reports - Distribution reports - M&E reports	- Accessibility problems due to poor road conditions - No significant movement of people in affected areas.
Outputs (deliverables)	**Output indicators**		
R.1- 732 (GATES); 860 (ECHO); approximately 2000 (DFID) targeted households were able to repair their homes or have a temporary shelter because they received the CARE emergency shelter repair kits; and are properly using these kits.	-80% of the kits were used properly to repair their homes -80% of the beneficiaries are satisfied with the fact that their homes where improved by the kits	- NGOs report - Project staff reports - Training register - Distribution monitoring forms - M&E report	- Sufficient quality and quantity and quality of NFI materials available locally. - Population remains accessible - Sufficient trained staff are available to carry out the programme
Activities (project components)	**Inputs**	**Costs**	
R.1.1- Most vulnerable		Please refer to section 6.1.8	

affected households have an emergency shelter repair kit - Identify, select and register beneficiaries - Procure and distribute emergency shelter repair kits to beneficiary households - Provide training on the use of kits and conduct supervisory visits to ensure proper use of the kit - Monitoring and evaluation to ensure proper use of these kits	- Equipment /materials - technical staff - partner training, training course for staff, training materials - Partner support - Warehouse - Vehicles and fuel - Office space - Transport		
			Pre-conditions
			• Access to project areas due to current rains and security issues. • The coordination of international aid community is properly carried out and has sufficient means to avoid duplication or issues within same regions of intervention.

6.1.2 Narrative Summary

Outputs

R.1- 732 (GATES); 860 (ECHO); approximately 2000 (DFID) targeted households were able to repair their homes or have a temporary shelter because they received the CARE emergency shelter repair kits; and are properly using these kits.

Field visits were carried out by the CARE's ERT along with members of the partner NGO. During these field visits, focus group discussions were held with various stakeholders (chief of villages, elders, women groups, focal points and local government authorities, etc.) as well as individual household assessments and observations. This provided CARE with a clear understanding of the needs on the ground, which in turn lead to the creation of context specific and culturally adapted shelter response.

The following activities have been or will be carried out to implement the first phase of CARE Benin's shelter program:

R.1.1- Most vulnerable affected households have an emergency shelter repair kit

- *Identify, select and register beneficiaries*

CARE teams alongside their partner NGO (Autre Vie) are carrying out household assessments in each village within the sphere of CARE intervention. Note, please find the assessment form copied in the annex. Once CARE has identified potential eligible beneficiaries using this assessment form, they will present the list to a village committee (composed of the chief of village, elders and women groups). This committee will revise the names, make the appropriate corrections and will validate the list of beneficiaries.

- *Procure and distribute emergency shelter repair kits to beneficiary households*

Once the shelter kit materials have been procured and stocked locally, beneficiaries will receive vouchers with a list of items which they can pick up at a strategically located warehouse. Beneficiaries will be responsible for the transport of the materials provided by CARE from the warehouse to their homes. The beneficiaries will be given a period of five days to pick up the material from the warehouse.

- *Provide training on the use of kits and conduct supervisory visits to ensure proper use of the kit*

Field staff (CARE & Autre Vie) will undergo a brief workshop conducted by local builders on construction methods and practices. The knowledge acquired during this workshop will be incorporated in the monitoring sessions and the field staff will be also equipped with enough tools to be able to recognize poor building practices and provide tips to the beneficiaries. Please note that CARE Benin has hired a M&E specialist as part of the ERT.

- *Monitoring and evaluation to ensure proper use of these kits*

The final external evaluation will be partially based on the reflection of the relevance and satisfaction with the kits. Please note that CARE Benin has hired a M&E specialist as part of the ERT.

6.1.3 Time frame

The actual implementation of the activities outlined in the logframe has a donor specific timeline. Below is a basic Gantt chart illustrating the time allocated to these activities by donor.

Donor	September	October	November	December	January	February
Gates						
DFID						
ECHO						

In practical terms this means that beneficiaries must have been identified, have received the emergency shelter repair kits and are using these kits properly in within two months in the following four communes: Adjohoun, Bonou, Dangbo and Ouinhi; and within three months in the following two communes: Aguégués and Zangnanado.

6.1.4 Target group

CARE will target the most vulnerable households affected by the 2010 flooding. The most vulnerable individuals are those who have suffered the greatest damage in terms of housing and those who have the least access to food. Particular attention will be given to the following groups:

-Pregnant and lactating women
-The elderly
-Women whom are heads of households
-Children under 5 years old
-People with handicaps

Donor	Number of HHs	Number of Beneficiaries
ECHO	860	4'300
DFID	2'000	10'000
GATES Foundation	732	3'660
Total	3'592	17'960

6.1.5 Budget allocated for shelter materials

Below, please find a table outlining the initial planned budget allocated to the materials for shelter kits. *Note that the value of the kit varies greatly depending on the donor.*

Initial budget in individual donor proposals

Budget allocated to shelter kits				
Donor	**Commune**	**# of kits**	**Unit cost**	**Total budget**
ECHO	Zangnanado	175	100 €	17'500 €
	Aguégués	685	40 €	27'400 €
ECHO				30'000'000 FCFA
DFID	Adjohoun	2000	63 £	125'830 £
DFID				95'000'000 FCFA
Gates foundation	Bonou	732	100 $	73'200 $
	Dangbo			
	Ouinhi			
Gates foundation				35'275'000 FCFA
Total				160'275'000 FCFA

This initial budget was very problematic in that there were large disparities between the funds allocated by each of the donors for a kit intended for the same type of shelter; meaning that some beneficiaries could receive potentially 3 times more materials than their counterparts living in the same type of shelter but in a different commune.

To avoid conflict amongst communities and to standardize (harmonize) the shelter kit approach, CARE identified the most context adapted contents for the three specific types of housing units which are present in the communes of intervention. In turn, each particular type of housing unit has an adapted shelter kits which best suits the local needs. Furthermore, the content of these three kits will not change regarding to the donor, nor will it change on depending on the commune of intervention. The three types of kits are thus standardized.

Below, are the three tables outlining the content and approximate cost of each of the three emergency shelter repair kits.

Shelter Type 1: On stilts (sur pilotis)

Item	**Quantity needed** (1 kit)	**Unit**	**Cost per unit**	**Total cost** (1 kit)
Hay for roof	12 (20%)	Bundle	400 FCFA	4,800 FCFA
Corrugated steel sheet	2 (3.3%)	Piece	2'000 FCFA	4'000 FCFA
Bamboo big size (8m)	15 (10%)	Piece	500 FCFA	7'500 FCFA
Bamboo branches	2 (10%)	Bundle (40 pièces)	1'200 FCFA	2'400 FCFA
Nylon rope (4mm)	10m (20%)	Rouleau 100m	19'000 FCFA	1'900 FCFA
Mats	2	Piece	2'200 FCFA	4'400 FCFA
Blanket	2	Piece	1'275 FCFA	2'550 FCFA
Mosquito net	2	Piece	3'900 FCFA	7'800 FCFA
Prix total en CFA				**31'350 FCFA** **31'250 FCFA**
Prix total en Euro				**Approx. 48 €**

Shelter Type 2 : Rammed earth slab (sur dalle de terre batue)

Item	**Quantity needed** (1 kit)	**Unit**	**Cost per unit**	**Total cost** (1 kit)
Plastic sheet (4m x 6m)	1	Piece	11'500 FCFA	11'500 FCFA
Hay for roof	10 (17%)	Bundle	400 FCFA	4'000 FCFA
Bamboo big size (8m)	10 (5%)	Piece	500 FCFA	5'000 FCFA
Bamboo branches	5 (60%)	Bundle	1'200 FCFA	6'000 FCFA
Natural rope (vine)	5 (100%)	Roll	200 FCFA	1'000 FCFA
Mats	2	Piece	2'200 FCFA	4'400 FCFA
Blanket	2	Piece	1'275 FCFA	2'550 FCFA
Mosquito net	2	Piece	3'900 FCFA	7'800 FCFA
Total en CFA				**42'250 FCFA**
Total en Euro				**Approx. 65 €**

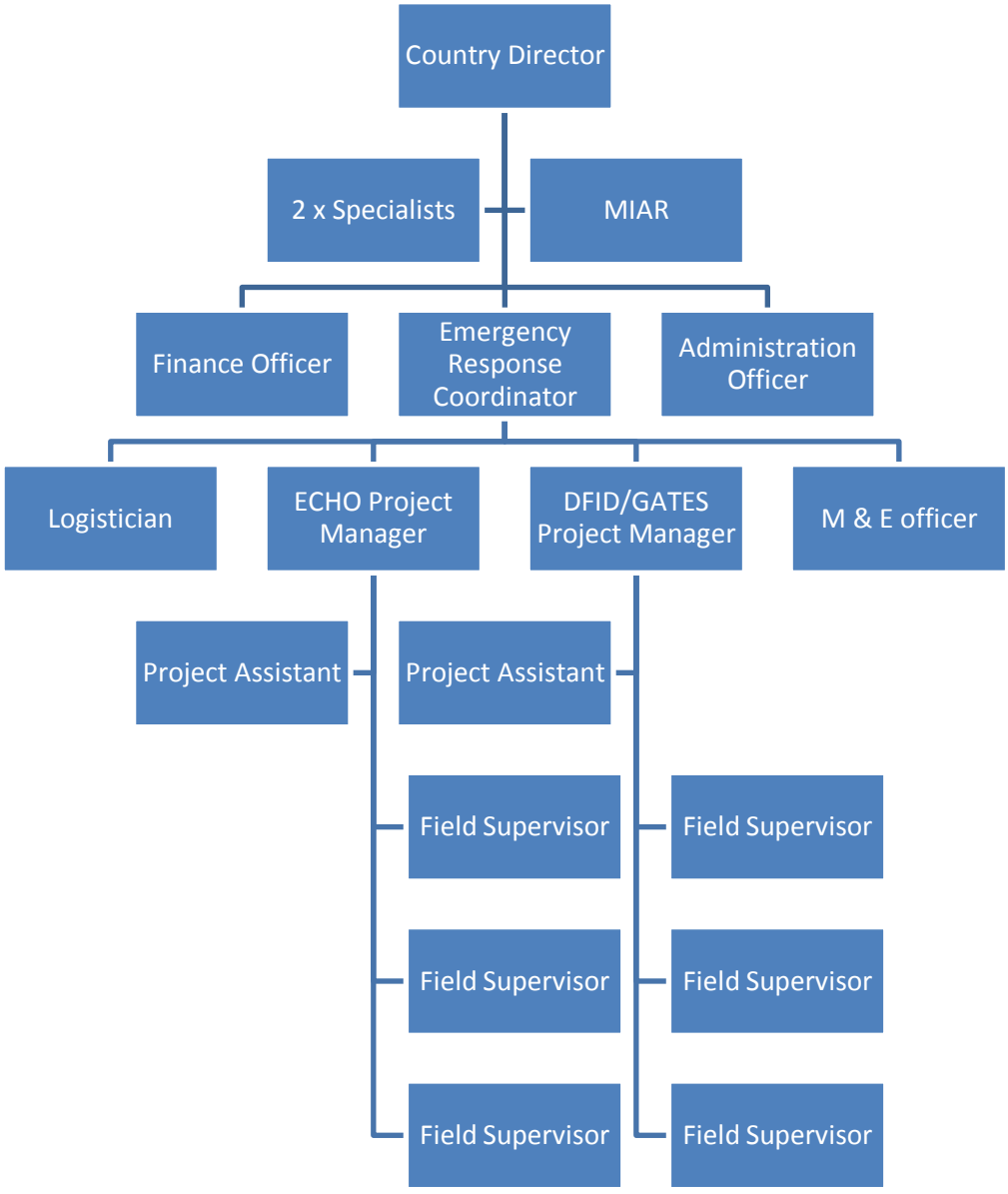
Shelter Type 3 : Monolithic adobe walls (murs en adobe)

Item	**Quantity needed** (1 kit)	**Unit**	**Cost per unit**	**Total cost** (1 kit)
Plastic sheet (4m x 6m)	1	Piece	11'500 FCFA	11'500 FCFA
Corrugated steel sheet	5 (8-15%)	Piece	2'000 FCFA	10'000 FCFA
Steel sheet nails	2 (50%)	Bag	700 FCFA	1'400 FCFA
Wood beam (approx.. 0.10m x 2.50m x 0.05m)	8 (12%)	Piece	1'200 FCFA	9'600 FCFA
Nails (pointure 8)	1 (15%)	Bag	700 FCFA	700 FCFA
Nylon rope (4mm)	2m	Roll 100m	19'000 FCFA	380 FCFA
Mats	2	Piece	2'200 FCFA	4'400 FCFA
Blanket	2	Piece	1'250	2'550 FCFA
Mosquito net	2	Piece	3'900 FCFA	7'800 FCFA
Total en CFA				**48 330 FCFA**
Total en Euro				**Approx. 74€**

Please note that the percentage listed next to the quantity corresponds to the percentage of that particular material needed in the full construction of one of these housing units. Annexed, please find the quantity of materials needed to build each of the housing units; also annexed is a table outlining the potential transitional use of this material according to a standard recovery.

6.1.6 Human resources CARE

Below is an organogram of CARE Benin ERT in connection with the country office. Please note that the specialists (WASH and Shelter) are sent for a one month period respectively. The logistician is supposed to stay for a period of 6 months, and part of the ERT will be dismantled after the emergency.

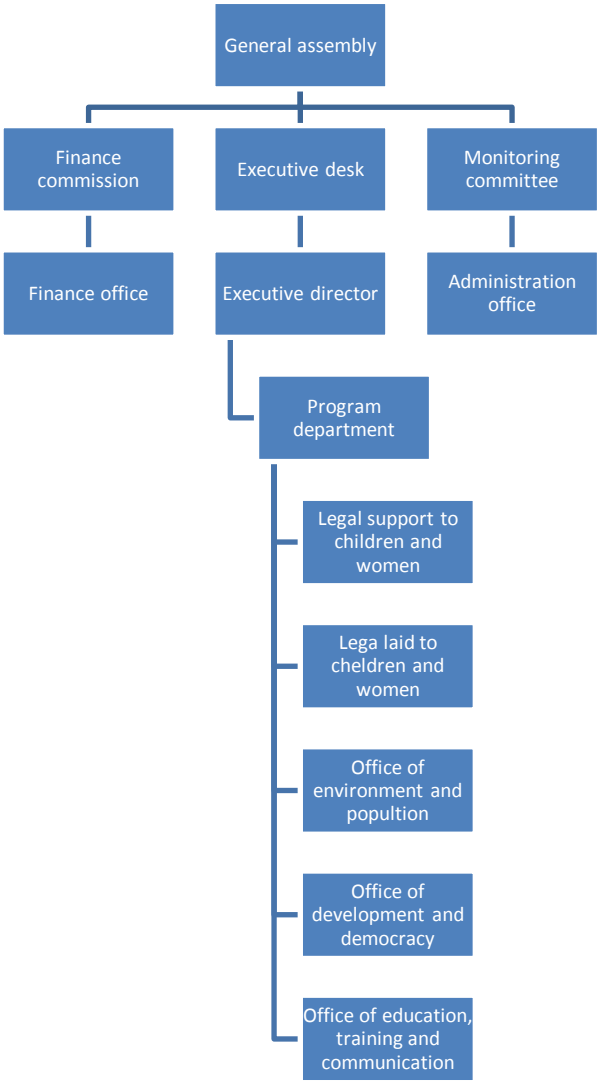


It is equally important to note that there was a proposal writer, as well as a food security specialist for a period of one month respectively.

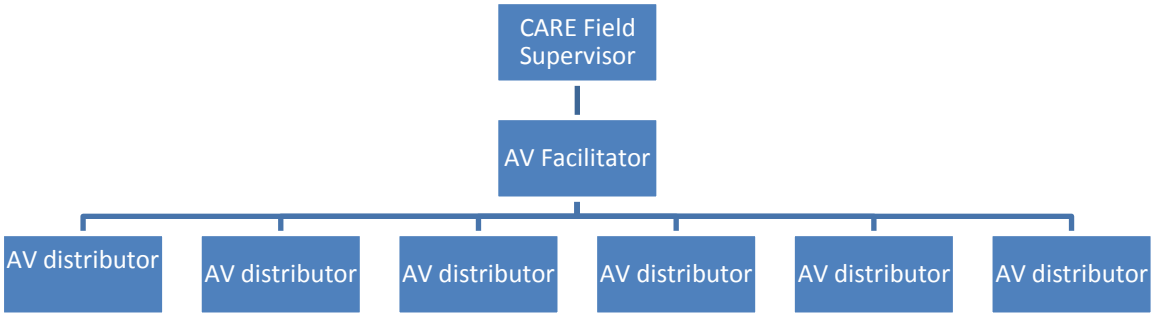
6.1.7 Institutional capacity and partners

CARE Benin's office is relatively new but is demonstrating great maturity in dealing with this emergency situation. To fill the HR gaps, CARE Benin has seeked expertise in the matters which were out of its grasp. Furthermore, in regards to support staff and manpower, CARE Benin has partnered up with a local NGO called Autre Vie to ensure a proper implementation of its programs. *Please refer to the Autre Vie team composition (annex) for specific information regarding the team members*.

Directly below is an organogram of Autre Vie NGO



The link between CARE and Autre Vie is displayed in the organogram below. Each CARE field supervisor is assisted by a team from Autre Vie consisting of one facilitator and six distributors. The Autre Vie staff has been implementing CARE Benin's programs, i.e. in practical terms, carrying out tasks such as assessments, community liaison, food & NFIs distribution, etc. *Please note that as the programs continue to define themselves, there may be a need to increase the resources of this teams in terms of manpower; this will largely depend on the evaluations of the outcomes of early distributions and awareness campaigns.*



Capacity assessment chart

Locality	HQ: Cotonou and Porto Novo Projects: Ouémé and Zou
Humanitarian indicators	- Health: affected persons are living with poor sanitary conditions - Security: stable - Dignity: has been affected through the destruction of homes, loss of livestock and livelihoods - Access to services: the humanitarian response to the emergency has been slow; some areas are still difficult to physically access
Significant external factors	- Political: elections are coming soon and leaders may try to capture and use aid relief to promote their political agendas - Seasonal: access to villages is difficult during the rainy season. Natural building materials are available seasonally. - Legal: land tenancy issues may arise if there is a need for relocation - Financial: Most of the affected communities have lost almost all of their savings. The support for early recovery and rehabilitation is taking a long time to be accessible
Affected community capacity	- Financial management: the majority of affected HHs have loss all savings - Community cohesion: high levels of solidarity and hosting community - Materials access: costs of some materials remains out of reach for those HHs without savings
CARE capacity	- funding from DFID, Gates Foundation, ECHO, CARE International, CARE France and CIDA - Staff: CARE Benin office regular staff; ERT staff (short term contracts for experts, and 6 month contracts for other ERT staff) - experience and skills - local relationships
Partner capacity	- funding for joint implementation comes directly from CARE - Staff: facilitators are primarily teachers and anthropologists - 5 years of experience in disaster relief operations in Benin - Skills: project management, M&E, community mobilization, disaster relief, communication, hygiene promotion and shelter - local relationships: close relationship with the communes in question
Support options	- Potential need for additional staff for assessments and distributions

6.1.8 Shelter program phase 1: Overall budget

Overall budget phase 1	
Item	**Cost**
Materials	**200 000 €**
Shelter Kit 1: (48 € x TBD after assessment) Shelter Kit 2: (65 € x TBD after assessment) Shelter Kit 3: (72 € x TBD after assessment)	
Staff	**189 560 €**
Technical staff	96000 €
-Emergency coordinator x 1 (6000 €/per month, for 4 months)	24000 €
-Program manager x 2 (2000 €/per month, for 4 months)	16000 €
-Program assistant x 2 (1200€/per month, for 4 months)	9600 €
-Supervisors/evaluators x 6 (750€/per month, for 4 months)	18000 €
-Autre Vie team x 1 (3500€/per month, for 4 months)	14000 €
-Logistician x 1 (1200€/per month, for 4 months)	4800 €
-Shelter specialist x 1	6000 €
-per diem (shelter specialist, 60€/per day, for 1 month)	3600 €
Support staff (full salary)	93560 €
-Country director x 1 (11000€/per month, for 4 months)	44000 €
-Finance officer x 1 (3300€/per month, for 4 months)	13200 €
-Accountant x 2 (1370€/per month, for 4 months)	10960 €
-Administration officer x 1 (3300€/per month, for 4 months)	13200 €
-Administration assistant x 1 (1100€/per month, for 4 months)	4400 €
-Secretary x 1 (650€/per month, for 4 months)	2600 €
-Driver x 2 (650€/per month, for 4 months)	5200 €
Logistic	**14675 €**
Transport	
-Zangnanado + Aguégués (6 trips in 5 ton truck)	900 €
-Bonou + Dangbo + Ouinhi	815 €
-Adjohoun	1000 €
-Vehicle rental x 2 (1000€/per month, for 4 months)	8000 €
-Boat rental x 1 (23€/per day, for 80 days)	1840 €
-Fuel for vehicles (450 litres)	1620 €
-Plane tickets for shelter specialist	500 €
Capital equipment	**1750 €**
-Laptop computer x 1	1000 €
-Desktop computer x 1	600 €
-Portable hard drive x 1 (500 GIGA)	150 €
Operational cost	**15508 €**
-Office space (1667€/per month, for 4 months)	6668 €
-Office equipment (300€/per month, for 4 months)	1200 €
-Overhead costs (water, electricity, internet, phone) (1910€/per month, for 4 months)	7640 €
Total cost	**421 493 €**

6.2 Shelter strategy phase 2

Impact and Outcome

As mentioned in section 4.3 of this report, the main objective of the second phase (recovery and rehabilitation) of CARE Benin's response to the 2010 flooding in Benin is primarily to support appropriate durable solutions for the housing (shelter) sector. Special emphasis will be placed on the themes of early preparedness plans (EPP) and disaster risk reduction mechanisms (DRR). These cross cutting themes will be present throughout all planned activities within the proposed housing (shelter) program.

Concisely, the program has the intention of providing economic support to individuals through income generating activities in a "***cash for work***" initiative; of supporting the alleviation of risks by proposing improved building practices: "***building back safer***", as well as supporting and building capacity of local and central authorities by providing training on EPP and DRR; of supporting sustainable, long term national plans regarding risk reduction through "***advocacy***".

6.2.1 LOGFRAME

Strategy of Intervention	**Verifiable Indicators**	**Means of Verification**	**Risks and Assumptions**
Impact (overall objective)	**Impact Indicators**		
Contribute to reducing the vulnerability of individuals affected by the 2010 flooding in Benin.	Not required	Not required	Not required
Outcome (purpose)	**Outcome indicators**		
To support the intermediate and long term shelter needs of flood affected households by strengthening recovery and preparedness processes	50% of the villages in the six communes of CARE Benin's intervention have access to improved recovery and preparedness processes.	- NGO reports - District reports - M&E reports - Final evaluation	-There is no political resistance to such an initiative
Outputs (deliverables)	**Output indicators**		
R.1- Provide a "***cash for work***" initiative in villages where reconstruction and rehabilitation is not possible due to physical inaccessibility of site.	-100% of the selected sites are appropriately prepared (deris removed, site levelled, materials salvaged, etc.) -100% of selected candidates are receiving adequate salary for their work	-On site monitoring -Payroll -Final evaluation -NGO reports	-There is no political resistance to such an initiative
R.2- Implement a "***building back safer***" initiative in the 6 communes of CARE Benin's intervention	-3 standard model homes using improved building practices are built in each commune (6) -2 community members from each village has received training on improved building techniques and understands -Selected staff, support staff &	-On site monitoring -Training register -Evaluation of comprehension after training -Final evaluation -NGO reports	-That the weather is favourable for construction and that the materials and human resources are available -That there is sufficient technical staff to carry out the program

	selected authorities have received training on EPP and DRR -80% of mature inhabitants of all villages of intervention have participated to information sessions regarding EPP and DRR		
R.3.1- Support selected villages within the 6 communes through an "***advocacy for relocation***" initiative. R.3.2- Support and lobby with civil society and national institutions through an "***advocacy for greater change***" initiative	-100% of the selected communes are supported adequately in regards to advocacy for relocation -Relevant government officials and civil society have become aware of the strategies needed for greater change.	-NGO reports -records of meetings -Final evaluation	-That there is no political resistance to this type of initiative
Activities (project components)	**Inputs**	**Costs**	
R.1.1- Selection of eligible candidates for cash for work R.1.2- Establish work plan R.1.3- Monitor site preparation R.1.4- Payment system	R.1: - Support staff - Equipment - Vehicles and fuel - Cash for community workers - Office space	Please refer to section 6.2.8	
R.2.1- Creation of plans for standard homes R2.2- Construction of a standard model home in each affected village R.2.3- Training on improved building practices R.2.4- Training and on DRR and EPP R.2.5- Information campaigns of DRR and EPP	R.2.1 + R.2.2: - Technical staff - Support staff - Equipment - Materials - Vehicles and fuel - Office space - Warehouse / storage space R.2.3 + R.2.4 + R.2.5: - Technical staff - Support staff - Training courses - Training materials - Office space - Vehicles and fuel	Please refer to section 6.2.8	
R.3.1.1- Creation of a mobile support cell which provides technical support in land tenure issues R.3.1.2- Liaise and lobby with local authorities for the relocation of certain villages R.3.2.1- Appoint a staff responsible for liaison with national government	- Technical staff - Support staff - Training courses - Training materials - Office space - Vehicles and fuel - Equipment/materials	Please refer to section 6.2.8	

R.3.2.2- Liaise and lobby with national government authorities on issues of water retention in the North			
			Pre-conditions
			-That there is the political will and support from the international community and national institutions to take on these types of initiatives and programs

6.2.2 Narrative explanation

Outputs

R.1- Provide a "cash for work" initiative in villages where reconstruction and rehabilitation is not possible due to physical inaccessibility of site.

Below is a picture of a section of Kpoto village, situated in the commune of Zangnanado. This picture clearly illustrates ne need for site preparation to allow physical access for the reconstruction of this village.

Destroyed homes in Kpoto village

Zangnanado commune

The inhabitants of villages like Kpoto need to replace damaged and non-existing housing materials but unfortunately are unable to rely on personal savings as their commercial activities were disrupted by the flooding. The general idea behind the "***cash for work***" initiative would be to pay adequate salaries to some physically able workers within the communities to perform work linked to the rehabilitation and reconstruction of their villages. This would entail that the selected individuals temporarily give up their usual livelihood and income generating activities (fishing, agriculture, small commerce, etc.) and engage in alternative activities such as site preparation. To sum up, site

preparation would basically consist of clearing debris, salvaging reusable building materials, level the ground and preparing the foundations.

The following activities would be carried out to ensure the proper implementation of this program:

R.1.1- Selection of eligible candidates for cash for work
The list of selected candidates will be approved by the village committee (consisting of the chief of village, women groups, elders, etc.).

R.1.2- Establish work plan
This work plan will outline the activities to carry out and clarify all expectations between stakeholders.

R.1.3- Monitor site preparation
Weekly visits will be carried out by support staff to ensure that the work is properly completed according to set schedule.

R.1.4- Payment system
A system will be put into place where the selected workers from the community will be paid an adequate salary for their work done.

Critical assumptions
That individual inhabitants are tolerable to the fact that someone will be clearing and cleaning up their property. It is important to note that salvaged materials will be tagged so that the original owner of this material is able to reclaim what is his.

R.2- Implement a "building back safer" initiative in the 6 communes of CARE Benin's intervention

This results primary objective will be to ensure that the locals (inhabitants and authorities) are aware of improved building techniques when they reconstruct and rehabilitate their homes, by providing them with practical and theoretical training which build upon their local practices and techniques but incorporate DRR mechanisms.

The following activities will be carried out to implement this program:

R.2.1- Creation of plans for standard homes
CARE could hire a short term consultant (structural engineer/construction specialist) to conceive plans for a standard prototype housing unit for each of the three types of houses found in the various regions of intervention. These standard building models would be based on improved building technics and practices, the promoting DRR measures, and would emphasize value of local building practices and the use of local building materials. It is important to note that the plans will be translated in French and as well as in the local language to ensure accessibility.

R2.2- Construction of a standard model home in each affected village
The construction of three "better built" homes in each commune (18 in total) to be used as a live models; these homes will incorporate improved building techniques for practical DRR; these can also be used by the local government authorities for infrastructure.

R.2.3- Training on improved building practices
Capacity building – CARE will provide technical training for local NGO staff, community members (2 per community) and local government authorities on building techniques and practices.

R.2.4- Training and on DRR and EPP
Capacity building – CARE will organize a training of trainers on the topic of DRR and EPP with the goal of greater information diffusion.

R.2.5- Information campaigns of DRR and EPP
Capacity building – The individuals who have undergone the training on DRR and EPP will be hired and paid to carry out information and awareness campaigns on simple DRR and EPP measures within the villages.

R.3.1- Support selected villages within the 6 communes through an "advocacy for relocation" initiative.

CARE will potentially provide support to individuals affected by the flooding living in very precarious areas with a high risk of flooding, by carrying out advocacy work in favour of their relocation to safer grounds.

Please note that the following three conditions must apply:
-Must live in a very precarious zones
-Must be culturally acceptable to relocate
-Local government must be willing to engage in negotiation with these parties

R.3.1.1- Creation of a mobile support cell which provides technical support in land tenure issues
CARE will create a mobile support cell composed of CARE employees and support staff, with an even number of women and men.

R.3.1.2- Liaise and lobby with local authorities for the relocation of certain villages
The mobile support cell will provide adequate support to villages in regards to lobbying and advocacy, as well as regularly liaise with local authorities in regards to relocation initiatives.

Critical assumptions
The term "supported adequately" must be defined with all stakeholders to ensure a clear understanding of expectations.

R.3.2- Support and lobby with civil society and national institutions through an "advocacy for greater change" initiative

Understanding the importance and the necessary resources required to carry out the above task CARE considers:

R.3.2.1- Appoint a staff responsible for liaison with national government
CARE would hire a staff which would be entirely dedicated to liaising and lobbying with national institutions

R.3.2.2- Liaise and lobby with national government authorities on issues of water retention in the North

This CARE staff member would regularly liaise and lobby with the relevant national government officials in regards to national initiatives to alleviate risks regarding flooding; principally on issues relative to water retention in the North.

6.2.3 Estimated time frame

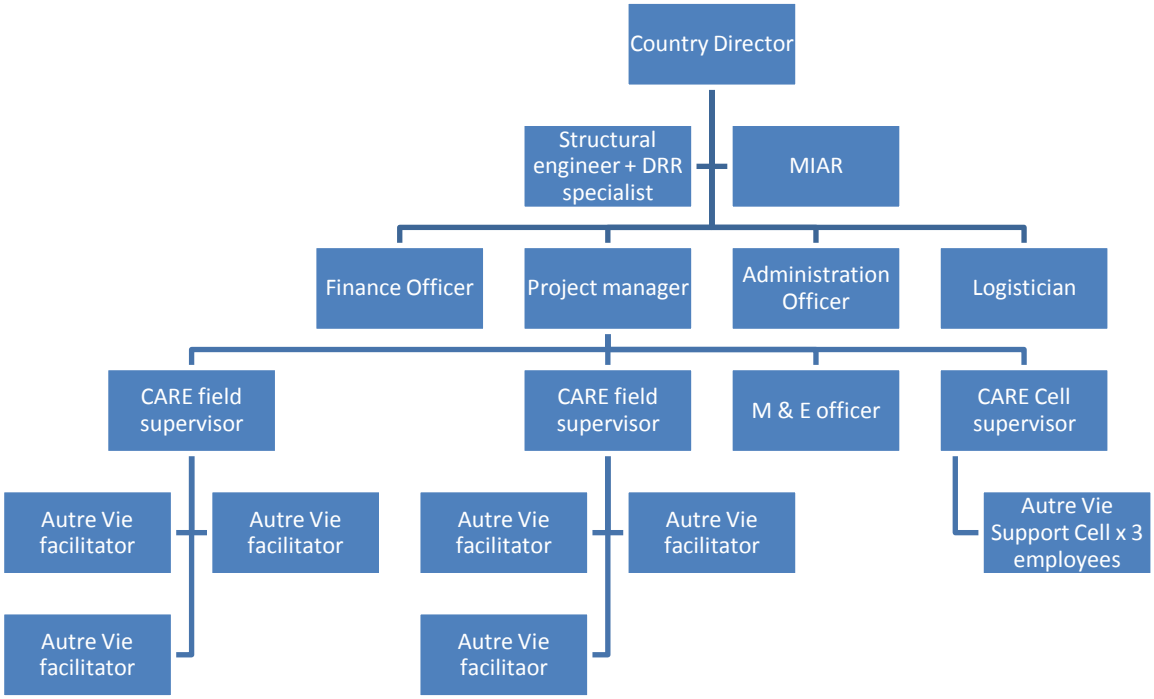
Activity	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
R.1.1														
R.1.2														
R.1.3														
R.1.4														
R.2.1														
R.2.2														
R.2.3														
R.2.4														
R.2.5														
R.3.1.1														
R.3.1.2														
R.3.2.1														
R.3.2.2														

6.2.4 Target group

There is a broader scale of beneficiaries in the second phase of CARE Benin's shelter program. In regards to output 3: "advocacy" the number of beneficiaries is estimated at 330 307 individuals (201 villages) in the six commune of intervention; i.e. Aguégué, Adjohoun, Bonou, Dangbo, Ouinhi and Zangnanado. In regards to output 2: "building back safer" the target beneficiaries will be the same for the model homes, but will differ in respect to the capacity building. More specifically, CARE will be targeting in the villages (123 out of 210) affected by the 2010 flooding. Concerning output 1: "cash for work" CARE will identify those villages requiring site preparation; theoretically, this should be a fraction of the total villages affected.

6.2.5 Human resources CARE

Below is an organogram illustrating the possible composition of the CARE Benin/Autre Vie teams for the second phase of the shelter program. A structural engineer with a strong background in construction will be hired for a period of two months to finalize housing unit prototype plans and monitor the construction of the first three. A DRR specialist will be hired for a month to establish DRR procedures and provide training for trainers on this topic. The CARE field supervisor will coordinate actions on the field and provide support to the Autre Vie facilitators which will be responsible for awareness campaigns and training. A CARE support cell supervisor will be in charge of coordinating the assistance provided to villages in terms of advocacy. The CARE support cell supervisor will be responsible of three Autre Vie staff which will form the support cell.



6.2.6 Partners and institutional capacity

Capacity assessment chart

Locality	HQ: Cotonou and Porto Novo Projects: Ouémé and Zou
Humanitarian indicators	- Health: affected persons live in poor sanitary conditions - Security: stable - Dignity: has been affected through the loss of livelihoods, livestock and destruction of homes - Access to services: the humanitarian response to the emergency has been slow; some areas are still difficult to physically access
Significant external factors	- Political: elections are coming soon and leaders may try to capture and use aid relief to promote their political agendas - Seasonal: access to villages is difficult during the rainy season. Natural building materials are available seasonally. - Legal: land tenancy issues may arise if there is a need for relocation - Financial: Most of the affected communities have lost almost all of their savings. The support for early recovery and rehabilitation is taking a long time to be accessible
Affected community capacity	- Financial management: the majority of affected HHs have loss all savings - Community cohesion: high levels of solidarity and hosting community - Materials access: costs of some materials remains out of reach for those HHs without savings
CARE capacity	- Funding: potentially from donors working within a development or sustainable solutions mind frame. - Staff: CARE Benin office regular staff; need for structural engineer and DRR specialist and a liaison officer. - experience and skills - local relationships
Partner capacity	- funding for joint implementation comes directly from CARE - Staff: Facilitators are primarily teachers and anthropologists. They will require training on construction methods - 5 years of experience in disaster relief operations in Benin - Skills: project management, M&E, community mobilization, disaster relief, communication, hygiene promotion and shelter - Local relationships: work closely with the communes in question.
Support options	- Need for specialized personnel to insure a efficient response

Potential donors:

EHAP
PNUD – African Development Bank

6.2.7 Global estimate for budget needed for phase 2

Overall budget phase 1	
Item	**Cost**
Materials	**8250 €**
Housing unit 1: (535 x 6)	3210 €
Housing unit 2: (305 x 6)	1830 €
Housing unit 3: (535 x 6)	3210 €
*Please note that if we were to intervene at a village level the total cost of building 123 model housing units would be **65805 €***	
Staff	**481840 €**
Technical staff	163200 €
-Program manager x 1 (2000 €/per month, for 12 months)	24000 €
-Supervisors/evaluators x 6 (750€/per month, for 12 months)	54000 €
-Autre Vie team x 1 (3500€/per month, for 12 months)	42000 €
-Logistician x 1 (1200€/per month, for 12 months)	14400 €
-Structural engineer x 1 (6000€/per month, for 2 months)	12000 €
-per diem (shelter specialist, 60€/per day, for 2 months)	7200 €
-DRR specialist x 1 (6000€/per month, for 1 month)	6000 €
-per diem (DRR specialist, 60€/per day, for 1 month)	3600 €
Support staff (full salary)	318640 €
-Country director x 1 (11000€/per month, for 12 months)	132000 €
-Finance officer x 1 (3300€/per month, for 12 months)	52800 €
-Accountant x 2 (1370€/per month, for 12 months)	43840 €
-Administration officer x 1 (3300€/per month, for 12 months)	52800 €
-Administration assistant x 1 (1100€/per month, for 12 months)	13200 €
-Secretary x 1 (650€/per month, for 12 months)	7800 €
-Driver x 2 (650€/per month, for 12 months)	16200 €
Logistic	**39430 €**
Transport	
-Zangnanado + Aguégués (6 trips in 5 ton truck)	500 €
-Bonou + Dangbo + Ouinhi	500 €
-Adjohoun	500 €
-Vehicle rental x 1 (1000€/per month, for 12 months)	12000 €
-Fuel for vehicles (675 litres)	2430 €
-Plane tickets for structural engineer	500 €
-Plane tickets for DRR specialist	500 €
Capital equipment	**1750 €**
-Laptop computer x 1	1000 €
-Desktop computer x 1	600 €
-Portable hard drive x 1 (500 GIGA)	150 €
Operational cost	**46524 €**
-Office space (1667€/per month, for 12 months)	20004 €
-Office equipment (300€/per month, for 12 months)	3600 €
-Overhead costs (water, electricity, internet, phone) (1910€/per month, for 4 months)	22920 €
Total cost (if intervention is done at commune level)	**577794 €**

Total cost (if intervention is done at village level)	**635349 €**

7 CONCLUSIONS AND OTHER RECOMMENDATIONS

7.1 General concerns

7.2 General recommendations

7.3 Concerns phase 1

- *Household assessment in each village of intervention*

CARE and Autre Vie are currently carrying out a HH assessment within each village of intervention to determine the needs for the different programs. However, in terms of shelter, this assessment was flawed in that the degree of damages to the homes was qualified using three inexplicit values which cannot provide a clear indication for prioritizing. Furthermore, it is not possible to begin to implement emergency shelter repair kit distributions until the assessment (census) is complete, and this process is taking longer than expected. In addition, according to those villages where the assessment has been completed the number of "totally destroyed" homes exceeds the 10% apparent in the figures provided to the donors, the real needs thus far are closer to 20% of HHs per affected village.

- *Logistics*

There are many preoccupations in regards to the logistical aspects of the shelter program's first phase, these have to do with the availability of the materials required on the local markets, the ability to stock these materials and the ability of the logistics staff to take on such a venture. The initial idea during this phase is to provide natural building materials so that disaster affected persons can rehabilitate a portion of their homes. This entails purchasing great numbers of bamboo, wood poles, bundles of straw, etc. which may not be in stock on the market. Furthermore, the logistics officers cannot make quotes until the needs assessment is complete to have a global estimate of the quantities needed. We are currently faced with four possible options which are under review from the team; they are the following:

1- Distribution of 2 x mats, 2 x blankets and 2 x mosquito nets per HH and provide a voucher with a specific list of items with a particular quantity of each item. These items would be stocked in a warehouse run by CARE. The HHs would then have a few days in which to show up and pick up the items on their voucher and bring them to their villages on their own.
This supposes that the items must be available in the market, that CARE can rent spaces large enough to store the huge quantities and that the HHs can afford the transport of the material from the location to their villages.

2- Distribution of vouchers with a specific list of items with the exact quantity of each item written on this voucher. The HHs have a few days to present their vouchers and pick up their kits directly from the CARE run warehouse.
This supposes that the items must be available in the market, that CARE can rent spaces large enough to store the huge quantities and that the HHs can afford the transport of the material from the location to their villages.

3- Distribution of 2 x mats, 2 x blankets et 2 x mosquito nets per HH and provide a voucher with a specific list of items with an exact quantity of each item written on the voucher. That voucher can then be presented to retailers that are contracted by CARE.
This supposes that HHs can afford to transport the material from the retailer (local market) to their villages. This also supposes that the material is available on the market.

4- Distribution of 2 x mats, 2 x blankets et 2 x mosquito nets per HH and provide CASH value for a shelter kit to the HH so that they can buy their own shelter materials according to their needs.
This supposes that the HHs will use the CASH for purchasing shelter related materials. It also entails a big effort in regards to monitoring and evaluation.

These different options will soon be discussed and a decision will be provided shortly.

- *Information management*

In general, the information sharing and data entries are very slow. This presents a certain handicap for an organizational specifically in relation to its reaction time.

- *Programming*

The distributions seem to be loosely coordinated and happening sporadically. Coordination with other actors working within the sector must also be clarified to avoid duplications, overlaps and gaps.

7.4 Recommendations phase 1

- *Assessment*

A second assessment will need to be carried out to further target beneficiaries to identify which HHs will be eligible to receive shelter provisions from CARE, or we will need to ask for more funds as there is a clear need which exceeds our means; if the second is the solution, we would have to ensure that it is logistically possible to support this initiative.

If a second assessment will take place, there will be a need to hire additional staff to carry out this assessment; these staff can later be differed towards distribution once the assessment is complete; and after distribution, the same staff can be responsible for the M&E and perhaps the awareness campaigns for the second phase of the shelter program.

- *Logistics*

There may be a need for temporary support as the emergency programs require a great deal of logistical support specifically in regards procurement, stocking and distributing materials.

- *Information management*

It would probably be a good idea to hire a temporary data clerk that could work closely with the logistician, that would supply the information to the coordinators and those staff who attend cluster meetings to ensure a greater overall coordination.

- *Programming*

Effective coordination and programming of activities must be drafted so that the implementation of CARE's programs run smoothly. The distribution of shelter kits should be done very systematically using an appropriate strategic logic; for example targeting specific geographical areas during set dates to ease the logistical load, as well as to make reporting more organized and comprehensible.

7.5 Concerns phase 2

In regards to the advocacy component of the second phase of CARE's shelter program, it is important that the CARE support cell take into consideration cultural aspects (people who refuse to move) as well as be well aware of land tenure issues.

7.6 Recommendations phase 2

To ensure that the staff has proper socio-anthropological sensitivity and background to deal with these issues, as well as are aware of property rights and land ownership to properly support and council villagers.