



NDRT workshop – Niamey July 2018

Mission Report

NDRT Training in Niamey

July 2018

Table of Contents

1. General information

2. Context

2.1 Context notes and situation

3. Outcomes

4. Outputs

5. Activities

- 5.1 NDRT Sahel Shelter Training
- 5.2 Workshops and prototype construction
- 5.3 Guidance of drafter works
- 5.4 Dedicated operational advice to the Diffa team

6. Conclusions

- 6.1 Customized NDRT Sahel shelter training
- 6.2 Shelter reinforcement and operational needs
- 6.3 Field communication and drafter works
- 6.4 Experiences exchange and operational advice

7. Operational challenges

8. Recommendations

- 8.1 Sahel shelter kit - possibilities + alternatives (SSK inspiration)
- 8.2 Sahel shelter kit to permanent house
- 8.3 Operational Quality control procedures for materials control and new technologies

9. Annexed documents

- 9.1 Service agreement
- 9.2 Mission itinerary
- 9.3 List of contacted people
- 9.4 Agenda NDRT shelter training
- 9.5 List of presence – NDRT shelter training
- 9.6 Evaluation quiz – NDRT shelter training
- 9.7 Guidance list of works for local artist

1. General Information

1.1 Mission title: NDRT Niamey

1.2 Country: Niger

1.3 Report date: 2018.08.07

1.4 Type of operation: Technical Support and capacity building

1.5 Requesting Organization: International Aid of the Luxembourg Red Cross

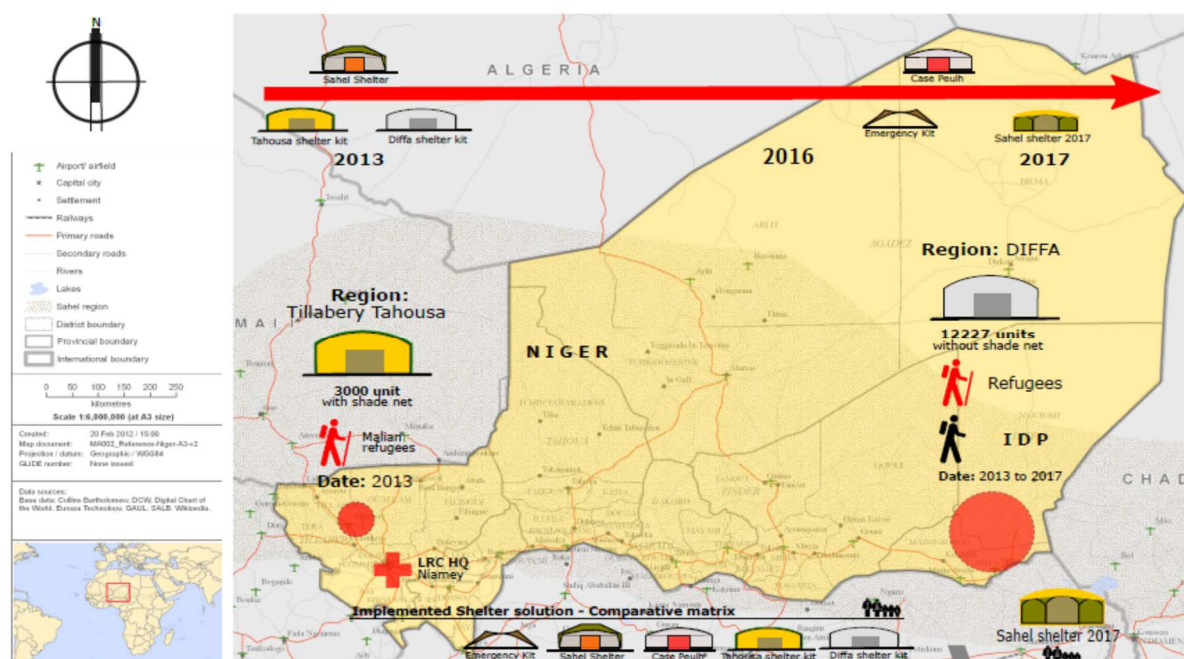


2. Context

West Africa faces many episodes of population movement. The National Societies of the Red Cross of West Africa are often called upon to intervene at the frontline during each crisis.

The International Aid of the Luxembourg Red Cross (IA-LRC) is actively working in the Sahel Region of Western Africa with Shelter projects in Senegal, Mali, Burkina Faso, Niger and recently in Cameroon and Chad.

In particular, the IA-LRC has been working since 2013 in Diffa, Niger. In close collaboration with the Niger Red Cross (NRC) it carries out interventions in the field of shelter for displaced populations, refugees and returnees within the Diffa region.



In September 2017, International Federation of Red Cross and Red Crescent Societies-Shelter Research Unit (IFRC-SRU) provided technical support to design a shelter solution to be implemented in the region. This shelter was implemented by IA-LRC and NRC in the Diffa region as a new transitional shelter model. In early 2018, 240 units of that transitional shelter were built in Mainé Soara and Boudouri.

During a monitoring mission in May 2018, it became evident that the shelters failed during a massive sandstorm. A combination of different factors including improper set up and construction, together with extreme climatic conditions and soft sandy ground caused the shelter failures.

3. Outcomes

The IFRC-SRU consultancy mission aims to provide additional technical support to IA-LRC contributing to their general objective of: “Contributing to the improvement of the technical and operational shelter capacities of the NRC and the IA-LRC team in Niger”.

The IFRC-SRU has proposed a methodology based in the following individual outcomes:

- Coordinate and facilitate the National Disaster Response Team (NDRT) Shelter (17th to 21st July 2018) in Niamey.
- Analyze the relevance of reinforcing the transitional shelter model to resist the climatic conditions in Diffa, with particular consideration on the team's capacities and the complexity of the assembly procedure.
- Guide the work of the local draftsman/filmmaker to develop a dissemination/training tool, adapted to the context for the implementation of the Sahel Shelter.
- Provide advice to the IA-LRC and the NRC team in Diffa in setting up distribution procedures and logistical procedures adapted to the context of the project implementation.

4. Outputs

The following objectives were achieved during the mission:

- The NDRT Shelter training delivered with 23 participants and a total duration of 5 days including workshops. Participants' evaluation finished.
- Particular measures have been identified to strengthen the structure of the shelter adapted to the context of Diffa. Including workshops with local equipment and prototype built.
- The structure and content of the sketch/draft artist's work have been defined.
- The Diffa teams in the field received dedicated advice focused on the improvement of the logistics procedures adapted to the context.

5. Activities

The following activities were performed in coordination with and in response to the mission ToR provided by IA-LRC.

5.1 NDRT Sahel Shelter Training

Training Structure and content

NDRT (National Disaster Response Team) is a key response tool of National Societies (NSs) and the training was an opportunity to focus on the Shelter response in the country. With particular attention on the Sahel Shelter kit and the IFRC-Shelter kit that were presented in detail.

The agenda included topics such as introduction to concept of shelter, first needs assessment, gender and diversity inclusion, logistics procedures and summary view on the minimum shelter standards as well as lessons learned from field experiences.

Due to the practical component of this training, the agenda was designed to include different role playing activities, simulations and workshops (See annex 9.4).



NDRT training in Niamey

The training in numbers

The 5-day training took place in Niamey from July 17th to 21st and was completed successfully with the kind participation of NRC, IA-LRC and the IFRC-SRU.

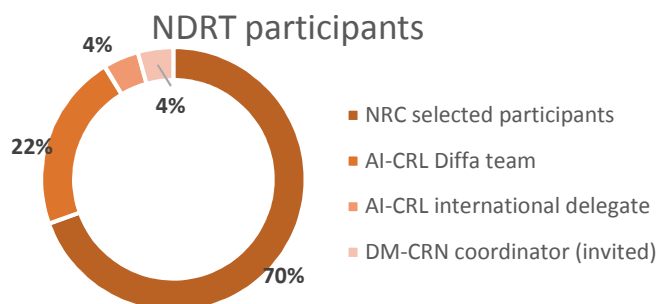
Participants:

The NRC has appointed 16 people to participate in the NDRT training. They represent the different regions of Niger (Agadez, Dosso, Diffa, Maradi, Niamey, Tahoua, Tillabéry and Zinder).



The shelter team from IA-LRC/NRC based in Diffa also joined the group of participants that was completed with the participation of the international delegate of IA-LRC in Niamey and the

Disaster Management Coordinator of NRC. In total, we have had 23 participants to the training with the following distribution.



Facilitators

Four facilitators participated actively in the theoretical and practical sessions of the training.

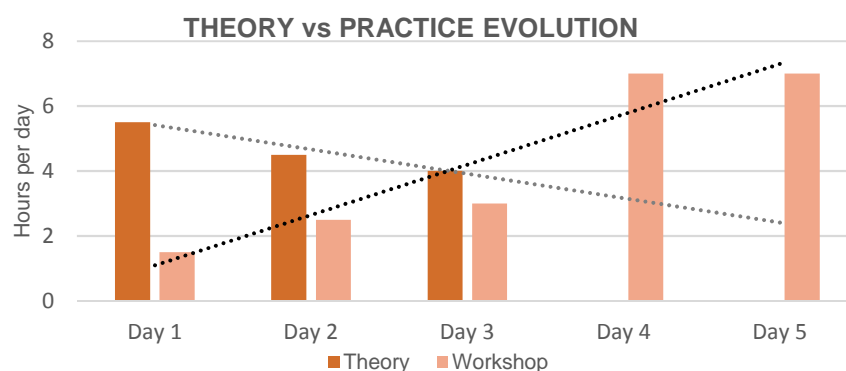
	Name and surname	Organization
1	Issoufou Boubakar	NRC/AI-LRC
2	Abdou Mukara Hassan	NRC
3	Alexander Jacoby	IA-LRC
4	Daniel Ledesma	IFRC-SRU

Average ratio attendees/facilitators of 5.75 attendees per facilitator.

Additional pedagogic activities

The NDRT training in Niamey was designed to transmit basic shelter theory but mostly experiences and practical knowledge to the attendees. Theoretical sessions were facilitated in a conference room with PPT support, bibliography and group dynamics to exchange experiences. The practical sessions including simulations were organized in a workshop format with the active participation of all the facilitators and the attendees.

The following graph shows the evolution of the sessions in hours where the theory is decreasing and the workshops are increasing towards the end of the training.



At the end of the training, we have delivered more than 35h with a balance of 40% of theory and 60% of workshops.

Evaluation

A continuous system of feedback was implemented by the daily distribution of an anonymous matrix that collected the attendees' impressions. The information was processed and discussed openly with all.

At the end of the training, the attendees individually filled a written test that was evaluated by the facilitators (See annex 9.6).

Finally, an evaluation matrix was created to evaluate each of the attendees on the following criteria: Construction, Communication, Logistics, and managing. The facilitators filled in the form with the following agreed scale: 1= not satisfactory; 2=correct but needs to improve, 3=correct, 4=good and 5=over the expectations

The next matrix shows a short list of the attendees with the highest score obtained calcification values:

	Name	Construction	Communication	Logistics	Management	Total
1	Kimba Dan-Malam	5	4	3	3	15
2	Sani Gaciere Biga	4	4	3	4	15
3	Oseydou Yaye	4	5	3	4	16
4	Habibatou manzon mallam	3	5	3	4	15
5	Mamane Ousmane Ismael	4	3	4	4	15
6	Ibrahim Maman Dodo	4	4	4	4	16

The following matrix shows the average qualification of the attendees:

	Reference	Value
1	Average note	13/20
2	Max. value	16/20
3	Min value	8/20

In average, the qualifications were positive, and independently of the final value, it is important to flag the good disposition and high level of participation of all the attendees.



Group dynamic - NDRT training in Niamey

5.2 Workshops and prototype construction

The last two days of the NDRT training were dedicated to workshop activities with two main objectives.

- 1- Provide practical knowledge to the attendees to use the Sahel Shelter kit.
- 2- Responding to the operational demand from the IA-LRC and in particular from the Diffa team by including additional structural elements to “customize” the shelter to the particular conditions of Diffa.

Two shelters were built with the same concept of structure and shape design but with different cladding materials and minor modifications that respond to specific demands. The cladding materials of the first shelter were corresponding to an emergency solution that can be 100% prepositioned in warehouses ready for deployment in a short period.

On the second shelter (Sahel Shelter Diffa), the focus was on the current IA-LRC shelter operation. We used vegetal mats for the inner cladding layer. This material is well known in the Sahel region and currently used on the Sahel Shelter Diffa with good results.

These two examples show the flexibility of the proposed regional solution that can be deployed fast as a prepositioned shelter and can also be used as a shelter solution for a mid to long-term operation with local materials.

The next section of this report will describe the implemented modifications of the Sahel Shelter Diffa version. The warehouse version corresponds with the original model explained in the IFRC-SRU report “Emergency Sahel Shelter – Warehouse version” presented on 2017.11.28.

Sahel Shelter Diffa - Foundation and Layout plan

The proposed dimension for the Shelter is 6,50m x 3,40m with a total surface area of 22,1m² covered surface (4,42m² person for a family of 5 - Sphere Standard 3,5m² per persons).

A prefabricated “model” will be used for the implantation and stake out of each shelter in order to facilitate the control during the operation and standardize the results.

The depth of the excavation will be in function of the type of soil. For the Diffa context with sandy and no-cohesive soils, the recommended minimum depth is 50cm for each pillar. Additional measures can be necessary to ensure the structural stability depending on the soil type and shelter exposition to wind.



Poles

The poles in metal profiles with a minimum section of 30 x 30mm; e>1,5mm recommended.

The main ideas behind using metal poles are: improving the structural resistance, increasing durability, long warehouse shelf life, and (based on the experience) avoiding the possibility of termite infestation.

The height of the central pillars is set to 2,20m (2,60m in total), the height of the corner pillars is 0,90m (1,40m total) and the height of the perimeter pillars is up to 1,70m (2,20m in total). The head of the pole finishes in a U-shape that will receive the PVC pipes for the dome structure. At the foot of the pole, two metallic pieces of 15cm each and with the same section than the main body of the pole, will be welded in different directions in order to increase the resistance of the shelter in sandy grounds.

None of these structural modifications affects the shape of the actual shelter solutions and the general proportions of the original model remain similar. However, the use of a “model” will allow a better follow-up on the stake out, standardisation and simplification of the construction process.



Pole head ready to receive the PVC pipe



Pole foot with additional pieces for better anchorage

The metallic profile used for the pole has to follow the recommendations (min. section 30x30mm + min. thickness 1,5mm recommended 2mm). In addition, to avoid the oxidation process a protection layer of rustproof paint is highly recommended.

Dome Structure

The design includes the dome concept for the roof shape. The geometry of the dome was created through arches attached in a rectangular perimeter over the poles' heads. With this layout, using diagonals and triangulations, the resistance of the entire system is ensured and the rationalisation of used material represents another substantial improvement. The chosen material is semi-rigid PVC (d=32mm; e=2mm L=6m) commonly used in the region for black water conduction.

Special recommendations for the construction process:

- The PVC tube in the dome structure always placed with a "Positive arch shape" (curved to the top never to the bottom or horizontal).
- Male-Female joint is very useful to optimize the number of tubes. This type of connection shall avoid the centre of the arch. It is recommended to place the joint point close to the pole head in the principal arches.
- The free ends of the PVC tubes should be cut with the metallic saw avoiding sharp pieces that can deteriorate the dome cladding layers.



Dome structure with PVC tubes

Bracing

The IA-CRL required additional measures to ensure stability of the structure adapted to the particular conditions in Diffa. In response to this demand, two different and complementary systems were implemented.

First, beneficiaries added additional materials over the roof. To respond to the vertical load that these additional materials produce, an arch system was introduced as a complement to the dome structure.

Second, diagonal bars on the spans between pillars were introduced in the two main directions of the shelter.

The used material is the same PVC (d=32mm) fixed with metal wire on the pillars and perimeter arches.



General view of the bracing elements in the two main directions (8 bracings on the walls)

Structure and Joints

The used structural joints are the same than in the other Sahel shelter kit. A simple attachment using metal wire for the connections provide a strong joint system and is a well-known material by the volunteers.

Special recommendation to the construction process: use double wire and pliers for strongly tighten the knot.



Note: To ensure this fixing system with secure and stable knots, a training for preparation and monitoring of staff and beneficiaries is needed.

Vertical Cladding and Doors

The walls are made with 16 vegetal mats of 120 x 220cm pre-stitched in to two pieces of 8 mats each. Finally, the cover is directly stitched on the shelter structure leaving free space in the centre of the long side for the doors. The mats stitched directly over the lintel beams, bracing arches and metallic poles. Please notice that the stitch can be done with metallic wire and/or 1mm rope.



Pre-stitching of vegetal mats for walls

The design of the shelter includes two doors placed on the long side of the shelter and situated opposite each other. The same vegetal mats are used in the doors than those used in the vertical cladding. Two mats per door (stitched in pairs) are fixed to the structure to the central lintel. This solution allows different combinations including the option to omit one of the doors by stitching the long sides to the vertical cladding and poles.



Vegetal mats for walls and Dome

Dome Cladding - Inner Layer

The inner layer that covers the dome structure is made of vegetal mats. The mats stitched together to a full cover of the dome with 12 units of 120 x 220cm. Finally, the cover is fixed over the dome as a single piece.



Full cover of vegetal mats for Dome cladding inner-layer

Dome Cladding - Outer Layer

This layer is made with two 4x6 standard IFRC tarpaulins. The tarpaulin is fixed with a 4mm nylon rope. The tarpaulin sides are stitched to the lintel beam with a 1mm nylon rope. This rope is used to pull down and tension the plastic layer and fix it directly to the shelter structure at the 4 corners. Furthermore, the plastic sheet is pulled down over the short ends and anchored to the lower part of the structure at four points. This solution provides extra protection against lateral rains and winds during the rainy season.



Two IFRC 4x6 tarpaulin for the Dome cladding exterior layer

Flood Protection

No modification advice for this dispositive. The solution is a barrier with sand bags positioned around the perimeter of the shelter. The plastic bags have to be placed inside the shelter to protect the plastic from the UV radiation and hold down the shade net walls.



Flood protection – Picture from the Prototype built in July 2017 Niamey

Inner partition

Based on the feedback of the volunteers, the shelter solution should allow the beneficiaries to make one or more interior partitions. The distribution of the inner space in the shelter can easily provide the opportunity to divide the shelter in 1, 2 or 3 interior spaces. Proposed solution for this interior partition: using the same vegetal mats attached to the structure.

Updated material list for Sahel Shelter Diffa

	Material	Unit	Quantity
1	IFRC tarpaulin 4x6m	Unit	2
2	Metal Pole (30x30mm ;e>1.5mm ; L>1,40m)	Unit	4
3	Metal Pole (30x30mm ;e>1.5mm ; L>2,20m)	Unit	6
4	Metal Pole (30x30mm ;e>1.5mm ; L>2,60m)	Unit	2
5	PVC rigid tube (D=32mm ; e=2mm ; L=6m)	Unit	26
6	Metallic wire roll (min 3kg)	Unit	2
7	UV resistant Rope (Ø4.0mm)	Roll	1
8	Vegetal mats (1,20x2,20)	Unit	32
9	Thread (d=1mm in roll of 100m)& two sewing needles	Kit	1
10	Plastic sacks (30x40x90cm)	Unit	12

5.3 Guidance of drafter works

Dissemination and pedagogic material

The works to produce a dissemination material that support the sensitization session -How to build the Sahel Shelter Diffa?-, were following the specific demand of the IA-LRC.

In close collaboration with the Diffa team, we have guided the work of the local draftsman/filmmaker to develop the dissemination/training tool.

The two priorities were the construction process and the graphics adapted to the context for the implementation of the Sahel Shelter Diffa.

Technical documents content and structure

The structure and content of the illustrations/draft artist's work defined according to the following structure:

Illustration title

Principal message to transmit

Action: description of the main activity that represent the principal message.

Secondary information: complementary set of information related to the previous points (EG good and bad practices)

Graphic references if applicable.

The following matrix summarizes the provided guidelines.

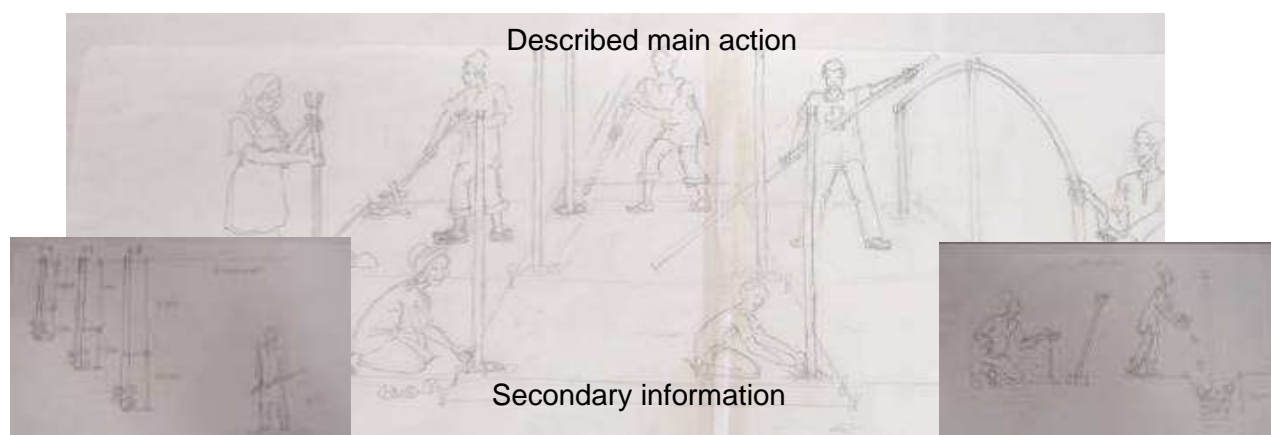
	Illustration title	Action	Secondary info
1	Site identification	Beneficiaries + volunteers during the site identification and validation	Recommendations to identify a safe site
2	Stake out	Stake out using modeling	Use the model Shelter dimensions
3	Excavation	Excavation, pole positioning	Number of elements, pole measures, excavation depth, soil compaction, tools and number of people
4	Dome structure	Dome setup, with individual steps.	Joint with metallic wire, male-female union, number of PVC tubes and characteristics, tools and number of people, verification points
5	Arches	Setup of arches in the structure with PVC tubes	
6	Bracing	Bracing setup in the two main directions.	
7	Walls and doors	Stitching and setting up walls and doors	Previous works, tools and number of people, verification points
8	Dome inner layer	Stitching and setting up dome inner layer	
9	Dome outer layer	Setting up tape lines outer layer	How to attach the tarp, attention points, tools and number of people
10	Maintenance	Living in the shelter and points to check	Elements to maintain, elements that need immediate advice to RC team.

The guidance document was shared with the local artist and the IA-LRC team (See annex 9.7).

As result of this activity, a series of draft designs that follow the previous structure was produced. The first round of feedback and correction was done in the field.

The following images are representative of this work advance with the local artist.

Illustration 3



Currently we are monitoring the local artist in the final layout

5.4 Dedicated operational advice to the Diffa team

Two different activities have been implemented during the mission in Niamey to provide advice to the IA-LRC and the NRC team in Diffa in setting up the Sahel shelter kit distribution and other operational procedures.

The first activity was to lead structured brainstorming sessions in order to better understand the needs and define possible actions to implement.

The second activity was a practical experience with the simulation of a real situation including logistics procedures, sensitization and distribution point.

Logistics and distribution point



Distribution point simulation

The next matrix shows the content and structure of the brain storming sessions:

Distribution point			
	Identified topic	Analyzed	Action suggested or taken
1	Security situation	General risk identification	Individualized risk analysis before any distribution (SWOT)
2		Reduced time for operation	Flux-analysis (graphic format)
3		Reduced space	
4	Sahel shelter kit composition and quality	Sahel Shelter kit material list and minimum specifications	Control list, basic explanation to use a caliber.
5	Need of surface	Graphic design of the distribution point	Individual surface measures per kit and packaging criteria

The result of the activity was the basic design of the distribution point used during the simulation exercise. Additional flexibility and reflections are needed to adapt the future distribution points to the different particularities of each distribution.

6. Conclusions

6.1 Customized NDRT Sahel shelter training

The main objective of this training is to reinforce the capacities of the NSs in term of shelter. The objective was achieved with 23 participants to the training that received basic shelter knowledge. Furthermore, the evaluation of the participants together with their profile will provide the first step for a pool of shelter personnel available for future missions in country. The participants demand additional training that responds to the particular specificities of each country. In particular, in Niger the demand was focussed on shelter solutions and training to respond to flood situations.

6.2 Sahel Shelter reinforcement and operational needs

Two prototypes were built including structural reinforcement and different cladding materials. By the inclusion of additional PVC tubes up to 26 PVC tube in total in one kit and the correct implementation of these pieces, the structure will become more rigid and resistant to external pressures. Setting up the additional bracing (PVC pipes) does not present any complication for the participants in the training. The main conclusion is that no reinforcements will substitute a consistent controlling system of the building process and follow up of the shelter performance.

Regarding the cladding materials, by avoiding the plastic mats we will increase the durability of the shelter and facilitate the construction and control during the operations.

Finally, the Sahel Shelter can support internal partitions with different configurations however, the decision about the implementation remains at the operational level.

6.3 Field communication and drafter works

Regarding the feedback from the field team, the communication and clear indications on how to build the shelter will be a key factor to improve the quality of the construction. The information and indications were transmitted but the adaptation to the culturally accepted images and the translation to the local language will be an added value. Any new team needs a time of adaptation, and in this case, it will be a good opportunity to develop the necessary bridges between the social mobilization and the technical team. The work of the local artist (drafter) will support these activities and will provide an effective tool for communication with the beneficiaries.

6.4 Experiences exchange and operational advice

The allocated time to exchange and brainstorm with the local team was very rich and interesting. We have defined a basic model of distribution point including considerations like surface, complaining mechanism and or time allocated per beneficiaries. This is a good expected result but remains on a theoretical level. The implementation in real conditions will demand adaptations and flexibility to ensure the good results. It is important to highlight the need for a pragmatic approach as this project will provisionally end in February 2019 (only 6 months ahead).

7. Operational challenges

Security constraints and interior displacements

Due security reasons, the visit to Diffa was not possible. This represents a challenge in terms of the good understanding of the context and provides limitations in defining the adequate solutions.

Quality control

The quality control of the used materials to build the shelter is a mayor challenge. Just for the two prototypes built, the used materials did not match with the suggested quality and specifications. In a big operation, the control of the materials are a constant challenge to address.

8. Recommendations

8.1 Sahel shelter kit - possibilities + alternatives (SK inspiration)

The Sahel Shelter is presented as a KIT that facilitates warehousing and standardisation of the future operations. Following this logic, it is recommended to study and define safe alternative uses or models that can be developed with the same basic kit. Partition for bigger families, smaller units for polygamous families, modularity and relation of several units, organization for big number of units, are just some of the questions that pop up during the mission and can be valid and useful tools for future operations.

8.2 Sahel shelter kit to permanent house

The Sahel Shelter has been implemented in the different countries of the Western Sahel region with verified good results. In the Niger context, in particular the Sahel shelter is implemented as a “transitional” shelter solution. The transportability is one of the main concepts of this criterion that will allow the beneficiaries to go back to their homeland with a temporary shelter facilitating the transition towards a permanent house. It is recommended to define how to use the Sahel Shelter Kit materials for permanent housing.

8.3 Operational quality control procedures for materials control and new technologies

Working with the Diffa team, we have identified the need for implementation of effective follow-up and quality control procedures. In the recent past, the IFRC-SRU has conducted a distant review project in the same region. Due to the security restrictions, we have implemented a distant monitoring system to collect, transmit and analyze information using new technologies. A good suggestion can be the implementation of a set of procedures supported in a digital format that provide follow up of the operation including among others: beneficiary identification, materials, construction and in general project evolution. With a multiple back-up and clear structure this set of tools/procedures would provide almost real time follow-up and a comparative advantage in terms of traceability.

9. Annexed documents

9.1 Service agreement



Service Agreement

IFRC-SRU field mission to Niger 15th - 21st July 2018

1. Overview

The International Aid of the Luxembourg Red Cross (AI-CRL) has been working since 2013 in Diffa, Niger. In close collaboration with the Niger Red Cross (CRN), it carries out interventions in the field of shelters for displaced populations, refugees and returnees within the Diffa region.

In September 2017 a new transitional shelter model was developed by IFRC-Shelter Research Unit (IFRC-SRU), which was implemented by AI-CRL and CRN in the Diffa region. In early 2018, 240 units of that transitional shelter were built in Mainé Soara and Boudouri.

During a monitoring mission in May 2018, it became evident that the shelters failed during a sandstorm. A combination of improper set up and construction, together with extreme climatic conditions and soft sandy ground caused the structural failures.

IFRC-SRU is asked to provide additional technical support to AI-CRL contributing to their general objective of: "Contributing to the improvement of the technical and operational shelter capacities of the CRN and the AI-CRL team in Niger".

2. Mission objectives

- In coordination with AICRL, facilitate all the technical component parts of the NDRT Shelter training from 17th to 21st July 2018 in Niamey.
- Analyze the relevance of reinforcing the transitional shelter model to resist the climatic conditions in Diffa, with particular consideration on the team's capacities and the complexity of the assembly procedure.
- Guide the work of the local draftsman/filmmaker to develop a training tool, adapted to the context for the implementation of the Sahel Shelter, including an assembly guide adapted to the capacities of local teams and beneficiaries and including a visual representation of good and bad practices.
- Provide advice to the AICRL and the CRN in setting up distribution procedures and logistical procedures adapted to the context of the project implementation.

3. Activities

The following activities are proposed in agreement with and in response to the mission ToR provided by AICRL:

3.1 NDRT Shelter Training, and additional guidance and assistance (Niamey)

- Training facilitation in collaboration with AI-CRL (5 days), carry out the 5 days NDRT Shelter Training including workshops and construction of 3 prototypes in Niamey.
- Together with the head of mission and the AI-CRL desk, conduct the evaluation of the participants in the NDRT Shelter according to the given parameters (construction abilities, dissemination capacities, distribution logistics and supervision)
- Include the local draftsman from the beginning of the training to ensure the correct follow up and documentation for the training tools.
- Continuous follow up and coaching of the design of the training documentation including setup-guide and good practices for future shelter trainings.
- Photographic documentation in place.



- Communication with the local team, advice on how to improve the distribution and the logistics procedures relating to the implementation of the Sahel Shelter in Diffa.
- Support the local draftsman in illustrating and adapting the Sahel Shelter Kit technical training to users in Niger.

Duration: **8 days**

3.2 Mission preparation and reporting (Luxembourg):

- Coordinate in collaboration with the AI-CRL team the necessary logistics to ensure the availability of the materials to deliver the NDRT Shelter training.
- Design and consolidate the pedagogic tools for the NDRT training.
- In collaboration with the AI-CRL, collect the available information and define the evaluation criteria for the participants in the NDRT training including developing the review tools (matrix for data evaluation to be used by Country desk, Head of mission and SRU team).
- Final report after the mission.

Duration: **5 days** (2 days prior to mission and 3 days for report writing after mission)

4. Outputs

Document	Content	Format
Mission report (EN)	Activity report including: NDRT training conducted with at least 15 participants and 3 prototypes built. Brief summary of conclusions and recommendations on logistics, distribution and shelter construction.	A4 vertical Digital format English

5. Duration

This agreement is for the provision of 13 days of services as described in the table below:

Time	Where	Action
Day 1 - 2	IFRC-SRU Lux	- Mission planning and coordination - Training materials development
Day 3	Travel to Niger	- Travel and briefing in Niamey
Day 4 - 9	NDRT shelter training in Niamey	- Logistics and coordination in country - Training facilitation, including a workshop and the construction of prototypes
Day 10	Travel to Luxembourg	- Travel to Luxembourg - Debriefing
Day 11-13	IFRC-SRU Lux	- Reporting

The field mission itself will take place from 15th July to 21st July 2018. IFRC-SRU commits to submit the mission report for comments by 7th August 2018 or earlier, should all key materials be received from the field.



6. Security

IFRC-SRU staff on mission will be included into AI-CRL evacuation plans in case of security incidents. The IFRC-SRU Head of Unit, or the Acting Head of Unit, will be kept abreast of both security and health concerns involving IFRC-SRU staff on mission with AI-CRL.

7. Costs and Fees

The following budget is partially based on costs estimation. It does not include any field costs including internal travel costs, prototyping, logistics for construction, workshops, training, local team daily allowances and any other operational activities, as they will be covered by AI-CRL.

Any changes to the mission plan intervened after departure won't modify the value of the Service Agreement, which will be paid in full.

Any additional services, or modifications of the services described by this Service Agreement, such as the request for additional staff time, will be communicated to the Head of IFRC-SRU and will be undertaken following the amendment of this Service Agreement.

Description of cost	Unit	Duration	Total
SRU consultancy fee			
NDRT Shelter Training (Niamey)	1.000,00 €	8 days	8.000,00 €
Mission preparation and reporting (Luxembourg)	1.000,00 €	5 days	5.000,00 €
Operational costs			
Airport drop off and pick up in Luxembourg	200 €	-	200 €
Travel Luxembourg - Niamey - Luxembourg	3.250,00 €	-	3.250,00 €
Mission life and health insurance	200 €	8 days	200 €
Per diem	60 €	8 days	480 €
Accommodation in Niamey	80 €	7 days	560€
Unforeseen operational costs	10%	-	477 €
Total			18.159,00 €

For IFRC-SRU
Antonella Vitale
Head of Unit

Date: 12.07.2018

Signature:

For AI-CRL
Dr Christian Huvelle
Director

Date 12/07/2018

Signature

9.2 Mission itinerary

			15.07	16.07	17.07	18.07	19.07	20.07	21.07	22.07			
Activity	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13
Mission coordination Including pedagogic material.													
Travel to Niamey (evening arrival)													
Briefing logistics and coordination for training				Local draftsman briefing									
NDRT training Day 1													
NDRT training Day 2													
NDRT training Day 3													
NDRT training Day 4													
NDRT training Day 5													
Travel to Luxembourg*													
Reporting													
Place	Luxembourg		Niamey								Luxembourg		

9.3 List of contacted people

	Name and surname	Title	Organization	Phone number	Email address
1	Gabriel Harkay	Head of mission	Luxembourg Red Cross	+227 8040 4808	gabriel.harkay@croix-rouge.lu
2	Pierre Levigneron	International delegate	Luxembourg Red Cross	N/A	N/A
3	Mohamar Ousamene Ismael	Technical field officer	Niger Red Cross/ Luxembourg Red Cross	N/A	N/A
4	Manzo Mallau Habibatou	Communication field officer	Niger Red Cross/ Luxembourg Red Cross	N/A	N/A
5	Foukouma Gangi	Dpt. General secretary Diffa branch/ technical field officer	Niger Red Cross/ Luxembourg Red Cross	N/A	N/A
6	N'guessan Amonlin	Field delegate	Luxembourg Red Cross	+227 8882 5393	N/A
7	M. Ali Bundiare	President of Niger Red Cross	Niger Red Cross	+227 2073 3037	NRCiger@intnet.ne
8	Elke Leidel	Technical Assistant	Office DG ECHO Niger	+227 2073 9921	Elke.leidel@echofield.eu
9	Felipe Juarez Cañaveras	Head of delegation	Spanish Red Cross	+227 2073 2097	del.fjc@cruzroja.es
10	Issoufou Boubakar	Logistic coordinator	Niger Red Cross/ Luxembourg Red Cross	+227 9043 0940	CRLlogistique@outlook.com
11	Abdou Mukara Hassan	Shelter Focal Point NRC	Niger Red Cross	+227 9628 9740	mounkarabdou@yahoo.fr

9.4 Agenda NDRT shelter training



- Agenda Formation NDRT Sahel Shelter Niamey -

Heure	Séance	FACILITATEUR
08:00 - 08:30	Questionnaire individuel	
08:30 - 09:30	Ouverture de la formation NDRT	Responsable OD CRN ou équivalent
09:30 - 10:30	Histoire CR/CR et CR Nigérienne et rappel Principes fondamentaux du Mouvement Le code de Conduite de la CRN, les principes « accès plus sûre »	Responsable OD CRN ou équivalent Alexander AICRL desk
10:30 - 11:00	Pause-café	
11:00 - 12:00	La Gestion des catastrophes au Niger: introduction, mécanismes généraux Le département de préparation et réponse aux catastrophes de la CRN	Coordonnateur DM CRN
12:00 - 13:00	Le système logistique de la CRN	Issoufou
13:00 - 14:00	Pause - repas de midi	
14:00 - 15:00	Évaluation on situation d'urgence en abris	Dani / Alexander
15:00 - 16:30	Simulation jeu de rôle évaluation d'urgence en abris	Dani / Mounkara
16:30 - 17:00	Évaluation et fin de la journée	

Heure	Séance	FACILITATEUR
08:00 - 09:00	Introduction à la réduction des risques	Mounkara
09:00 - 10:30	Introduction sur la notion des abris	Dani
10:30 - 11:00	Pause-café	
11:00 - 12:00	Guides et standards	Mounkara
11:00 - 12:00	Séance théorique - Vidéos - kit « abris »	Dani
12:00 - 13:00	Pause - repas de midi	
13:00 - 15:00	Pratique - fondations	Mounkara / Dani
15:00 - 16:00	Pratique - toiture (Iarp IFRC)	Mounkara / Dani
16:00 - 16:30	Évaluation et fin de la journée	Mounkara

Heure	Séance	FACILITATEUR
08:00 - 08:30	Test 1	Mounkara / Issoufou
08:30 - 10:30	Le Sahel shelter kit	Dani / Gabriel
10:30 - 11:00	Pause-café	
11:00 - 12:00	Séance théorique - logistique, adapte au Sahel Shelter Diffa	Issoufou
12:00 - 13:00	Pause - repas de midi	
13:00 - 16:00	Exercices pratiques : 1 - distribution de kits Sahel shelter. Liste de vérification logistique 2 - implantation (si temps suffisant selon la durée prévue de l'exercice 1)	Issoufou/Mounkara / Dani
16:00 - 16:30	Évaluation et fin de la journée	Mounkara

Heure	Séance	FACILITATEUR
08:00 - 08:30	Test 2	Mounkara / Issoufou
08:30 - 10:30	Exercice pratique	
10:30 - 11:00	Pause-café	
11:00 - 13:00	Exercice pratique	
13:00 - 14:00	Pause - repas de midi	
14:00 - 15:30	Exercice pratique	
15:30 - 16:00	Analyse des constructions	
16:00 - 16:30	Évaluation et fin de la journée	

Heure	Séance	FACILITATEUR
08:00 - 08:30	Test 3	Mounkara / Issoufou
08:30 - 10:30	Exercice pratique	
10:30 - 11:00	Pause-café	
11:00 - 13:00	Exercice pratique	
13:00 - 14:00	Pause - repas de midi	
14:00 - 15:00	Analyse des constructions	
15:00 - 16:30	Évaluation et fin de la formation Clôture et remise de certificats	

9.5 List of presence - NDRT shelter training

- Formation NDRT Sahel Shelter Niamey -

LISTE DE PRESENCES

	Nom	Comite/position	Jour 1	Jour 2	Jour 3	Jour 4	Jour 5
1	ABDOU SALATI MARI	Zinder	OK	OK	OK	OK	OK
15	SANI GACKERE BIGA	TAHOUA	OK	OK	OK	OK	OK
13	Abdoulaye Mahamane	Tahoua	OK	OK	OK	OK	OK
14	Maouloud ISSA	AGADEZ	OK	OK	OK	OK	OK
10	Ousmane Doustouga	Zinder	OK	OK	OK	OK	OK
6	Mahamane Ousmane Ismael	Diffa	OK	OK	OK	OK	OK
7	Foukouloua Gadjiri	Diffa	OK	OK	OK	OK	OK
8	MATIMAN DODO BIRAH	Diffa	OK	OK	OK	OK	OK
9	Levignier Pierre	Niamey	OK	OK	OK	OK	OK
10	Harzo Mallam Habiboukari	Diffa	OK	OK	OK	OK	OK
16	OSYDOU YAYE	DMNY	OK	OK	OK	OK	OK
2	Abdoullahi Moussa	Niamey	OK	OK	OK	OK	OK
13	Soumane Housseine	Niamey	OK	OK	OK	OK	OK
12	Kimble DAN-DIALAN	Dosso	OK	OK	OK	OK	OK
8	Harouna Adam Hamay	Diffa	OK	OK	OK	OK	OK
17	Hamkila Soumana	Ellebéri	OK	OK	OK	OK	OK
16	Amoussouha Atchah	Agadez	OK	OK	OK	OK	OK
18	Moustapha Halidou	Diffa	OK	OK	OK	OK	OK
19	Ousmane Kanguye	Tillabéri	OK	OK	OK	OK	OK
20	ZIBO KIBBA	Dosso	OK	OK	OK	OK	OK
21	Aminatou Soumaila	Maradi	OK	OK	OK	OK	OK
22	Thiamou Soumaila	Maradi	OK	OK	OK	OK	OK
23	N'Guessan Amadou R.A	Diffa	OK	OK	OK	OK	OK
24	Abdoul Kader Kalloum Addi	Diffa	OK	OK	OK	OK	OK
25	Boulouar Imouf	Niamey	OK	OK	OK	OK	OK
26	Mounkara Issoufou	ALAN RENKISSA	OK	OK	OK	OK	OK

9.6 Evaluation quiz - NDRT shelter training



FORMATION NDRT Sahel Shelter – Niamey, July 2108

Nom:	Durée: 15 min
------	---------------

Citer 6 caractéristiques définissant un abri temporaire

A partir des standards Sphère, calculer la surface minimale à couvrir pour une famille de 5 personnes

Décrire 3 usages pour la corde



Expliquer les 2 meilleures méthodes pour fixer une bâche sur un morceau de bois

Expliquer les 2 meilleures méthodes pour fixer une bâche à l'aide d'une corde

Quel doit être l'espacement moyen entre 2 pointes pour fixer une bâche correctement?

9.7 Guidance list of works for local artist

Affiches techniques du Sahel Shelter kit

- Contenu minimum recommandé pour le design du Affiche techniques

IDENTIFICATION DU SITE ET IMPLANTATION (2 illustration)

- Choix et préparation du site
- Point de attention lie au site pour la correct identification du site sécurise
- *ACTION* : volontiers + gabarit + Validation et identification (GPS) du site
- *INFORMATION* : Dimension d'im plantation
Excavation/ fondation avec mesure et avis (50cm)
AVIS sure sole sablonneux
Poteaux avec dimension, position, et point à vérifier

Références : Guide de montage + Guide sécurité de Habitat.

CONSTRUCTION STRUCTURE (1 illustration)

- Guide de montage amélioré
- Inclusion de Gendre !!!
- Point de attention sure les étapes de construction at les fixations.
- Correct / Incorrect MESSAGES avec attention points
- *ACTION* : Bénéficiaires et volontaires pendant la construction
- *INFORMATION* : arches avec courbature positif
Contrevent sur toutes les directions
Action vérification
Fixation avec fil
List de matériaux
Person nécessaires

Références : Guide de montage

Mur + Porte (1 illustration)

- Guide de montage amélioré
- Inclusion de Gendre !!!
- Point de attention sure les étapes de construction at les fixations.
- Correct / Incorrect MESSAGES avec attention points
- *ACTION* : Bénéficiaires et volontaires pendant la construction
- *INFORMATION* : Comme fixer la nat sur poteaux
Comme fixer le nat sur Tube PVC
Coudre
Porte confection et options (1 port, 2 port)
Matériel + utils + Persons

Toiture intérieur (1 illustration)

- Guide de montage amélioré
- Inclusion de Gendre !!!
- Point de attention sure les étapes de construction at les fixations.
- *ACTION* : Bénéficiaires et volontaires pendant la construction
- *INFORMATION* : Les nattes doit être pre-coudre avant de montage
Comme fixer le nat sur Tube PVC
Coudre
Matériel + utils + Personés
Nous avons la option du nat plastique et nat végétale

Références : Guide de montage

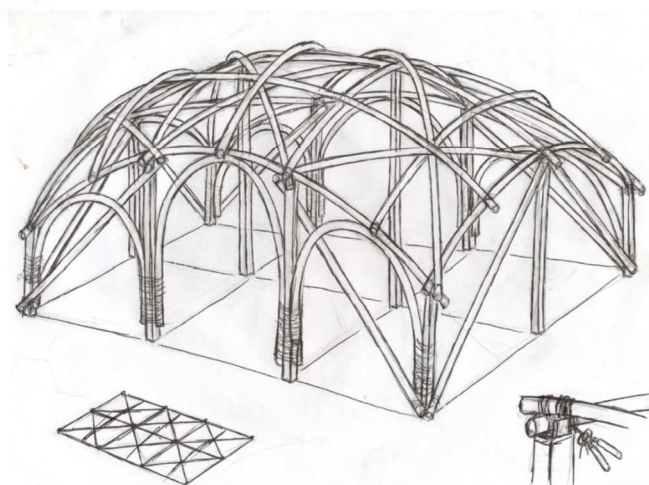
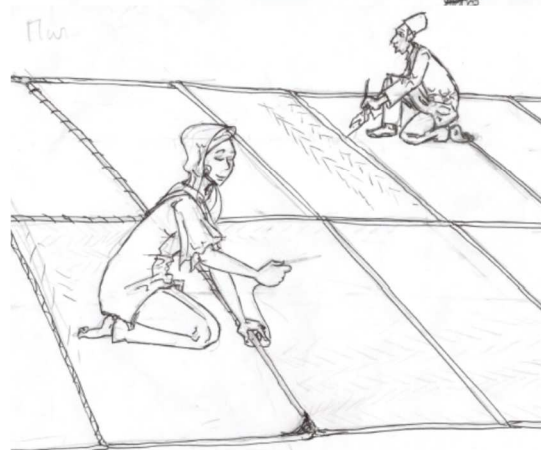
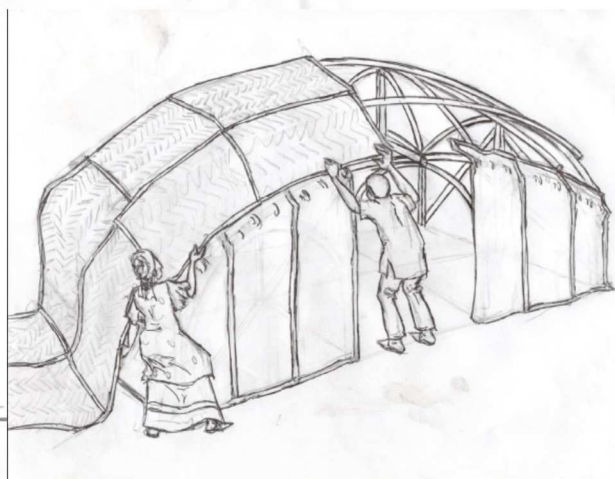
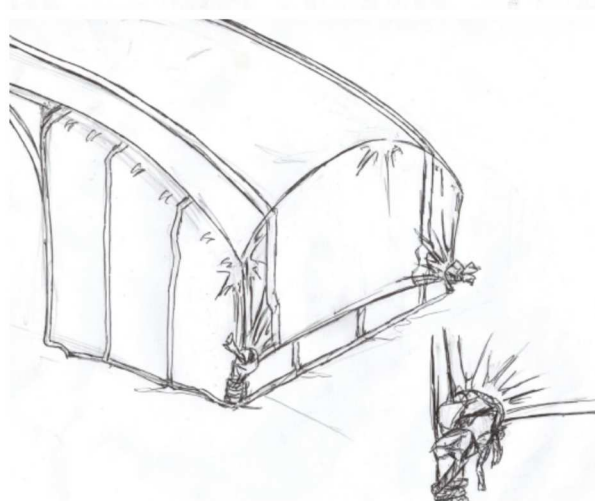
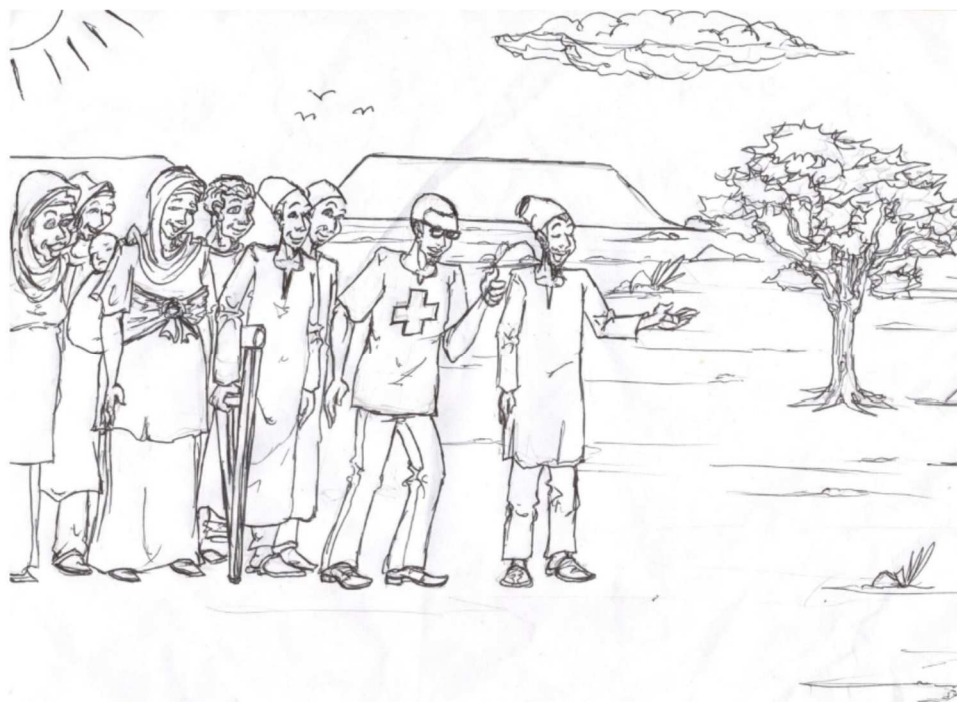
Toiture extérieur (1 illustration)

- Guide de montage amélioré
- Inclusion de Gendre !!!
- Point de attention sur les étapes de construction at les fixations.
- Correct / Incorrect MESSAGES avec attention points
- *ACTION* : Bénéficiaires et volontaires pendant la construction
- *INFORMATION* : On doit de vérifier que les bâches sont IFRC
Comme fixer bâche et corde
Comme fixer le bâche sur les poteaux
Diffèrent attache avec corde
Matériel + utils + Personés

Références : Guide de montage

Maintenance (1 illustration)

- Actions recommandes de maintenance et système de avis (alerte)
- Inclusion de Gendre !!!
- Point de attention sur la im portance de une correct maintenance
- Maintenance nécessaire ici avec attention points
- *ACTION* : Bénéficiaires pendant la maintenance
- *INFORMATION* : Corde bien attache et tenue
Corde détériore pour soleil = avis !
Bâche avec perforation = avis !
PVC tube frise o fissure = avis
Abri desplace o deforme = AVIS IMMEDIATE





International Federation
of Red Cross and Red Crescent Societies

Shelter Research Unit
innovating shelter

Address

44, boulevard Joseph II
L-1840 Luxembourg
Luxembourg

Tel.: (+352) 27 55-8902
Fax.: (+352) 27 55-6601
Email: ifrc-sru@croix-rouge.lu

Postal address

10, Cite Henri Dunant
L-8095 Bertrange
Luxembourg