



Learning from Shelter Responses towards Resilient Housing in Malawi

National Shelter Learning Event. September 28th, 2021

Event Programme



Hosts of the meeting:

The Government of Malawi and Catholic Relief Services (CRS), in collaboration with The World Bank, CARE Malawi, IFRC and Blantyre CADECOM.



Malawi National Shelter Learning Event

Learning from Shelter Responses towards Resilient Housing in Malawi

September 28th, 2021. Bingu International Conference Center, Lilongwe

Agenda

MORNING

8.30-9.00 **INTRODUCTION**

8.30-8.45 **Opening remarks**

by Mr. Peter Chimangeni (DoDMA Deputy Director of Recovery)

8.45-8.50 **Introduction of representatives and objectives of the event**

by Joab Frank Chakhaza, Master of Ceremony

8.50-9.00 **The National Housing Policy in Malawi**

by Mr. Shadreck Chirwa (Chief Housing Officer. Department of Land, Housing and Urban Development)

9.00-10.00 **SELF-RECOVERY**

9.00-9.15 **The context of shelter responses in Malawi**

by Mandinda Zungu (CADECOM)

9.15-9.30 **Malawi Self-recovery policy**

by Charles Parrack (CENDEP Oxford Brookes University)

9.30-9.45 **Malawi Shelter Cluster TWiG work to promote safer building practices for shelter self-recovery**

by Cecilia Schmölder (Malawi Shelter Cluster TWG)

9.45-10.00 **Understanding local habitat to support self-recovery**

by Enrique Sevillano Gutiérrez (CRAterre/AE&CC/University of Grenoble-Alps)

10.00-10.20 **Q&A**

10.20-10.50 **TEA / COFFEE BREAK**

10.50-12.45 **EXPERIENCES FROM THE FIELD**

10.50-11.05 **CRS shelter response: Build Back Better Malawi**

by Dyna Khonde (CRS)

11.05-11.20 **CARE Malawi shelter responses**

by Jessica Swart (CARE Malawi)

11.20-11.35 **Nsanje Shelter Learning visit report**

by Fackson Chidzalo (Phalombe Housing Officer)

11.35-12.45PM **Panel discussion session**

by presenters from different organisations (CRS / CARE / Government of Malawi / World Bank). Moderation by Joab Frank Chakhaza, Master of Ceremony

AFTERNOON

12.45-1.45 LUNCH BREAK

1.45-2.45 TOWARDS RESILIENT HOUSING

1.45-2.10 Homes and Communities research

by Lorenza Esquinca Vereza (CRS)

2.10-2.25 Shelter self-recovery research (preliminary findings)

by Clement Bisai (CARE Malawi)

2.25-2.40 Safer Housing Construction Guidelines

by Roster Arufandiaka (Malawi Red Cross)

2.40-3.00 Q&A

3.00-4.05 MATERIALS

3.00-3.15 Sustainable building materials

by Ike Phiri (MUBAS)

3.15-3.30 Finding the linkage between Geoscientists and Shelter Practitioners in Malawi

by Hassan Steven Mdala & Patrick Makukuni

3.30-3.45 Green construction solutions offered by 14 Trees

by Mussa Chayenda (14 Trees)

3.45-4.05 Q&A

4.05-4.30 TEA / COFFEE BREAK

4.30-5.00 CLOSING CEREMONY

4.30-4.50 The future of shelter and housing in Malawi: key actions going forward

by Jamie Richardson (CRS)

4.50-5.00 Closing

by Joab Frank Chakhaza, Master of Ceremony



Self-recovery

Bios

CHARLES PARRACK

Charles leads research and teaching on Shelter after Disaster in the Centre for Development and Emergency Practice (CENDEP) at Oxford Brookes University. He runs the postgraduate course in Shelter after Disaster and is active in the shelter community of practice, holding working group positions in the Global Shelter Cluster.

Charles also holds academic leadership positions in the School of Architecture: he co-leads Masters in Architectural Design in Architecture (RIBA part 2), and is subject leader for technology for the whole school.

Charles trained and worked as an environmental engineer, focusing on sustainability and community development. He studied at CENDEP for the Masters degree in Development Practice in 1997.

CECILIA SCHMÖLZER

Cecilia Schmölzer is an independent consultant, currently working on the GCRF-funded Self-recovery research project chairing the Malawi Shelter Cluster Technical Working Group. Cecilia has been involved in post disaster shelter and reconstruction work since the Indian Ocean Tsunami and was the coordinator of the IFRC Shelter Research Unit from 2012 to 2016. Since 2016 she has been deployed in different coordination roles for the Global Shelter Cluster (GSC) as well as for first post disaster shelter assessments on behalf of IFRC (International Federation of Red Cross and Red Crescent Societies) in Philippines, Madagascar, Haiti, Bangladesh, Nigeria, Indonesia and Mozambique. She has supported GSC working groups and provided shelter and coordination trainings as well as workshops in various countries.

Abstracts

Malawi Self-recovery policy

As part of the Global Challenges Research Fund research project supported by UK Government funding, ODI, a global independent think tank collaborated with the Centre for Development and Emergency Practice, Oxford Brookes University to study how to support housing recovery in Malawi after disasters. Government of Malawi representatives were interviewed as well as UN organisations, and humanitarian and development actors. The study highlights a series of entry points and recommendations targeted at different stakeholders for supporting self-recovery and affordable safer housing reconstruction post-disaster.

Malawi Shelter Cluster TWiG work to promote safer building practices for shelter self recovery in Malawi.

The Promoting Safer Building Working Group of the Global Shelter Cluster developed a “protocol” for developing key messages to promote safer building practices so that affected people can reconstruct safer while using their own capacities. In order to identify the most important messages for safer reconstruction in Malawi, the TWiG followed the steps of the protocol starting with analysis of the context, especially the local building practices, to identify key strengths and weaknesses of local housing and develop messages for safer construction. Further steps were analysis of different stakeholders as well as most appropriate communication channels to target the identified key audiences and the development of a communication/dissemination plan with detailed IEC materials. An additional new tool for the selection of most appropriate “green” materials in a given context was developed for the purpose of identifying and promoting safer, environmentally friendly and sustainable construction materials. All the developed tools were discussed, field-tested and revised through the Malawi Shelter Cluster Technical Working Group (TWiG) under the chair of the MHLUD and Malawi Red Cross/IFRC.

Bios

ENRIQUE SEVILLANO GUTIÉRREZ

Enrique (Madrid, Spain) is an architect and associate researcher at CRAterre Laboratory (AE&CC Research Unit, ENSAG, University of Grenoble Alpes, France).

Within CRAterre, he contributes to numerous projects in several areas: study and development of local building cultures and practices, development of context-based low-cost and emergency housing projects, conservation of heritage, training and development of school infrastructure in countries of Africa, Latin America and Asia.

He has also worked as mason in the conservation and renovation of vernacular constructions and works as independent architect.

Abstracts

Understanding local habitat to support self-recovery

In the framework of the “[Self-recovery](#)” project funded by GCRF and coordinated by CENDEP and CARE, the Protocol “[Informing choice for better shelter](#)”, developed by the [PSB Working Group](#) of the Global Shelter Cluster, has been tested in Malawi. Several steps are included in the Protocol, from the creation of a TWiG to the development of detailed IEC materials and messages for different audiences and stakeholders. In order to be able to propose adapted messages and project strategies for different groups, there is a need to understand the context, second step of the Protocol.

Within this project, CRAterre has had a coordination role in the process for the comprehension of the context in Malawi regarding habitat, housing and settlements, both through the general overview of construction and housing gathered in the [Shelter Response Profile](#) (final draft version can be found [here](#)) and through the more specific [contextual analyses of local habitat](#) undertaken together with CRS, CADECOM and CARD in different localities.

These analyses of the context have permitted us to better understand the strengths and weaknesses of local solutions for sustainable and resilient habitats undertaken by local communities and to compile them. Some findings about these researches will be presented, as they can facilitate decision making when implementing projects which support self-recovery.

As a way forward, CRAterre, together with CARE UK and CARE Malawi have started a project for the development and test of a method to support decision making in shelter and housing projects willing to promote informed choice and sustainability in all its pillars: cultural, social, environmental and economic, taking into account governance (financed by the BHA Grant of the Global Shelter Cluster). The objective is to make the connection between comprehension of the context and decision making. The method will be tested in the country by CARE Malawi.

Experiences from the field

Bios

DYNA PWELE KHONDE

Emergency Program Manager,
Humanitarian Unit, Catholic Relief
Services (CRS)

Dyna leads the Humanitarian Response Unit under CRS in Malawi. She is responsible for programming the humanitarian response and recovery projects which focuses on Shelter, WASH, Livelihoods, and disaster risk reduction. She holds bachelor's degree in Health Sciences Education and Master's degree in public health (MPH).

Abstracts

CRS shelter response: Build Back Better Malawi

Background of CRS Shelter Response:

In 2015 floods displaced more than 230,000 households in Phalombe, Karonga, Zomba, Machinga, Nsanje and Chikwawa (Malawi floods 2015; post disaster needs assessment; 31 March 2015). CRS responded in the districts with 898 model shelters representing 0.4%

In 2019 Cyclone Idai floods led to 23,914 households in Zomba and 10,882 in Chikwawa and 1107 in Nsanje to need shelter assistance (Malawi's National Disaster Management Response report, 15 April 2019). CRS supported in the districts with 1075 model shelters representing 3%

Shelter approach

CRS promotes self-recovery through construction of model houses for replication. It supports promotion of affordable local materials which are accessible and affordable to the local community to achieve social, cultural and economic sustainability. CRS and its partners enhance capacity building of local actors and structures such as Local artisans and village civil protection committees (VCPC). The knowledge and skills disseminated consider traditional building techniques and materials. The key disaster risk reduction features promoted are deep and raised foundation, hipped over hanged roof and Plinth wall. The Construction Manual for Shelter self-Recovery is based on the Government of Malawi Safer house construction guidelines manual adapted to reflect the specific context.

Key lessons Learnt

Training of local artisans and community leaders (VCPC) as well as shelter IEC materials play a key role to construction of resilient shelter in rural areas. The IEC materials should be translated into local language for easy understanding and communication. Graduation and certification of local masons motivates local artisans to construct quality structures. Involvement of local leaders facilitate sustainability of construction techniques in the community. CRS built back better shelter approach has informed the future programming of Homes and Communities.



Bios

JESSICA SWART

Jessica Swart is CARE's Assistant Country Director responsible for overseeing program design and implementation for both the humanitarian and development portfolios. As part of this role she supervises CARE's project managers and technical specialists in such sectors as shelter, WASH, livelihoods, nutrition, education, gender, and governance. Prior to this position, Jessica also worked as CARE's Regional Emergency Coordinator for Southern Africa, and CARE Malawi's Emergency Team Leader. Before joining CARE in 2016, Jessica worked for various organizations in Malawi, Afghanistan, Uganda, Australia, and the US. She holds a Master's degree in International Development.

FACKSON CHIDZALO

Fackson Chidzalo is development facilitator with a background of Bsc. Sociology and Gender development and Msc. in Development Studies. However, he has vast knowledge in construction and brickwork. Inspired by his father, who was a civil engineer, Fackson embarked his journey into shelter through a brickwork training. He is a trained craftsman in brickwork from Soche Technical College.

He has worked as a civil servant for 17 years, of which 6 of those years he has worked and is still working as a housing officer for Phalombe district council since January 2016. He has been a housing sector head for Phalombe district and a shelter cluster lead. He has been in the construction industry since 1991 including training attachment. His major roles were to provide technical advice on housing issues.

He also has vast experience in shelter as he is a trainer of trainers in safe shelter construction and Disaster Risk Management.

Abstracts

CARE Malawi shelter responses

CARE Malawi began working in the shelter sector in 2015 after the devastating floods in the Southern Region. Over the years CARE Malawi has developed and honed its shelter model with funding from UNHCR, ECHO, USAID's Bureau of Humanitarian Assistance (BHA), Aktion Deutschland Hilft, and the Canadian Humanitarian Assistance Fund. CARE's aim is to enhance the timeliness, local ownership, resilience, and overall appropriateness of the response with consideration of the needs of women and girls. The presentation will focus primarily on the market-based approaches utilized in the USAID/BHA-funded projects and highlight successes, challenges, and lessons learned. Over two phases of implementation, CARE supported 3,100 households in these two districts to access improved shelter materials through voucher fairs, trained local artisans and Village Civil Protection Committee members in Building Back Safer principles, and provided a cash transfer to cover the cost of local construction labor. Issues of environmental protection, sanitation and hygiene, and GBV prevention were integrated in the response.

Nsanje Shelter Learning visit report

Background

To appreciate self-recovery programming, CRS and CARD organized a shelter field learning event to showcase the 3 stages of the resilient shelter construction:

- Foundation stage
- Wall level (superstructure)
- Roofed and complete stage

The event was organized to share with stakeholders on key resilient features in construction which promotes self-recovery through the usage of affordable local materials.

Objectives of the field visit

- Showcase the key resilient features in shelter construction using affordable local materials.
- Share CRS shelter approach in localized self-recovery
- Get feedback from participants on the shelter approach and produce recommendations for improvement.

Towards resilient housing

Bios

LORENZA ESQUINCA

Lorenza Esquinca Verea. Mexican architect with over 10 years of experience working in architecture, participatory design, community engagement and post-disaster rehabilitation. Currently working as Shelter and Settlements Technical Consultant with the Humanitarian Response Department at Catholic Relief Services, providing remote and on-site support to the HRD Shelter team and emergency programs.

Abstracts

Homes and Communities research

Since 2015, CRS Malawi has developed and implemented a shelter recovery approach that seeks to extend technical support beyond program beneficiaries through local artisans' trainings and the construction of model homes in the communities, using locally available and affordable materials. The aim has been to enable self-recovering households to replicate safe and affordable homes.

As CRS Malawi looked to strengthen its emergency-development nexus approach through the Homes & Communities Strategic Platform, a large shelter research project was conducted to analyze past shelter programming in three areas: Impact, Replication and Markets. This presentation will cover the results of the research and recommendations for future programming.

Bios

CLEMENT BISAI

Clement Bisai leads the CARE Malawi Monitoring, Evaluation, Accountability and Learning team as a Country Office MERL (Monitoring, Evaluation, Research & Learning) Specialist a position he has held for the 8 years. Clement is a member of the Core CARE International MEAL Team responsible for development and management of CARE Worldwide Program and Project Impact and Information System (PIIRS). Effective June 2021 to November 2021 Clement is spending 60% of his level of effort with CARE USA as Senior Technical Advisor for CARE USA VSLA Global Team. Clement is a member of CARE Malawi Emergency Response Core Team.

Clement has 22 years' experience of program design, Monitoring and Evaluation of Humanitarian Response, Financial Inclusion, Food and Nutrition Security, Climate Change and Resilience. Clement has attained professional qualifications from Leeds Metropolitan University, University of Malawi, Zimbabwe Open University, and the UK Institute of Commercial Management. He is a Phd student in Transformative Community Development with Mzuzu University.

Abstracts

Shelter self-recovery research (preliminary findings)

CARE Malawi with technical support from CARE UK Shelter Team and Oxford Brookes University carried out a Research on Shelter Self-Recovery with an aim of learning from recent shelter responses, investigating the understanding of Shelter Self-Recovery communities, districts official and implementing organizations and investigating the existing limitations and barriers in achieving shelter self-recovery.

The preliminary findings of this indicate that Self-Recovery must be understood as practically possible among affected households/communities. With or without external support affected households are trying to recover from disasters that affect their houses. Most current Shelter Self-Recovery projects are short-term with a maximum of 18 months although there is consensus among affected communities, implementers and experts that Self-Recovery is long process. Nearly all implementers of Shelter Interventions construct houses of the same size in their impact areas. Land, livelihoods capacities, inadequate assessments and mindset are some of key barriers or limitations of Shelter-Self Recovery.



Bios

HASSAN STEVEN MDALA

Hassan is a Chief Geologist working with Malawi Geological Survey Department (Ministry of Mining) with 12 years experience. He Holds a Master of Science Degree in Geo-Information Science & Earth Observation for Applied Earth Sciences from University of Twente – Geo-Information Science and Earth Observation (ITC), The Netherlands; and a Bachelor of Science Degree in Earth Sciences (Geology) from Chancellor College – University of Malawi. Currently he is studying a PhD in Environmental Sciences at University of South Africa.

Hassan Mdala is a Global Fund for Disaster Risk Reduction (GFDRR) – Housner Fellow, since 2012.

PATRICK MAKULUNI

Patrick Makuluni is a lecturer in the Mining Engineering Department at the Malawi University of Business and Applied Science and currently undertaking a Ph.D. in the Minerals and Energy Resources Engineering Department at the University of New South Wales, Australia. He has a BSc in Civil Engineering from the University of Malawi in 2012 and an MSc in Mineral Exploration and Mining Geology from Curtin University, Australia, in 2017. He is also the current president of the UNSW African Students Union.

He specializes in Structural Geology, Geochemistry, Mineralogy, 3D Geodynamic modelling, Intraplate Tectonic Reconstructions, Programming (Python & R), GIS, Dynamic Topography, Sedimentology, and stratigraphy, and Resource Exploration.

IKE PHIRI

Ike Phiri is a Lecturer in the Department of Architecture at Malawi University of Business and Applied Sciences (MUBAS), formerly called The Polytechnic. He is specialized in Sustainable Architecture with a Masters in Sustainable Building Design & Performance obtained at University College Dublin in Ireland. Ike is currently the Architect of MUBAS and sits on the University's masterplan committee. He is also the former Head of Department of Architecture.

Abstracts

Finding the linkage between Geoscientists and Shelter Practitioners in Malawi

The presentation also gives the participants a practical idea of some of the geohazards the country is facing and their impact on the Malawian community. Then it gives a recap of the shelter meetings / workshops that were held on 27 July 2021 and 25 August 2021. It highlights important points that were discussed during these meetings / workshops.

Sustainable Material Indicators in Malawi

Objectives: To propose material sustainability guidelines for Malawi, to develop opportunities for the use of local materials efficiently while preserving the environment and improving human health and well-being in the buildings at affordable economic costs range. With the intention of formulating a framework, to guide builders, architects and various stakeholder in Malawi on material sustainability.

Methodology: We developed appropriate indicators in developing countries in four stages. Firstly, existing problems on materials and resources in the developing countries were extrapolated and compiled from the back ground and the literature review of the study. Secondly, a sample of existing sustainable assessment tools where chosen, in order to study how they address and assess

issues on sustainable materials. Thirdly, the analysis to understand if existing assessment tools can address the issues in developing countries or if there is another way of providing solutions. Finally, the development of appropriate indicators from the result of the analysis.

Discussion: Recommending appropriate ideas that the key indicators which are: Local Materials, Local Labour, Technology Transfer, Innovative methods, Endangered Materials, Durability, Reuse and Waste management, could be adopted in developing countries (case of Malawi).

Conclusion: It is suggested that developing countries have practiced sustainable resource management in their practical experience and the dependence on local materials. These practices utilised traditional technologies that were already economically accessible to much of the population and relied not only on local resources but also on renewable resources. However, the introduction of imported materials and methods are substituting the indigenous practices, in so doing the imported materials are unsustainable (costly, skilled labour to sustain maintenance and have high embodied energy) and accelerating the general problems in developing countries.

MUSSA CHAYENDA

Mussa Chayenda is the Head of 14Trees Malawi Operations; a wholly owned subsidiary of 14Trees limited - a Joint-Venture company between Holcim, the world leader in building materials and CDC Group, the UK development finance institution.

Mussa is a 37-year-old Malawian man with more than 13 years of diverse experience in finance, general management, corporate reporting, sales and administration. He joined 14Trees Malawi in 2017 as Finance Manager, just when the company was only six months old. Due to his hard work and excellent performance, he was promoted to Country Head in 2018. Mussa's current role involves general Management and Corporate reporting.

Mussa has successfully developed a construction business department within 14Trees Malawi's integrated offer by aiming to become a one stop shop solution for every home owner. Mussa also once worked for Lafarge Holcim Malawi, where he managed to reduce DSO for receivables ledger of USD2million, from 30 days to 10 days. In addition, he introduced an effective cost management tracker for Maziko Affordable Housing Project of 29 houses in Dwangwa for Illovo Malawi, worth USD 1.1million

Mussa holds an MBA from the University of Nicosia Africa, a Bachelor of Accountancy degree from the University of Malawi (UNIMA), ACCA, and Diploma in IT - BCE London.

Green construction solutions offered by 14 Trees

14 Trees is a joint-venture company established by Holcim (Switzerland) formerly known as LafargeHolcim, and CDC Group PLC, UK impact investor. Its objective is to scale up the impact of Affordable Housing across developing countries through environmentally (Green) friendly construction solutions. Presently, 14Trees is active in Malawi, Kenya and Ivory Coast, and is expanding in Western Africa. 14Trees (Malawi) Limited, is a subsidiary of 14Trees Switzerland (Holdco), and a sister company to Lafarge Cement Malawi. We manufacture; DURABRIC Soil Stabilized Bricks (SSBs), Durabric Concrete Hollow blocks, and integrated offers called Durabric Homes, low cost Eco Homes ideal for NGOs Shelter programs, and the newly introduced state of the art Construction 3D printing (first of its kind in Africa). We have two fixed production plants in Lilongwe and Blantyre, and we also offer rural Mobile Production plant services.

DURABRIC is an environmentally friendly, affordable alternative to traditional clay burnt bricks. Every time we build a standard three-bedroom house with Durabric, we save 14 trees on average, hence the company name 14 Trees. DURABRIC is made of a mix of soil, sand, and cement that does not need to be burnt in a kiln, meaning that it does not require cutting down trees to be used as firewood to cure these bricks. So, by avoiding this firing phase, Durabric reduces greenhouse gas emissions tenfold compared to traditional fired bricks. Hence curbing deforestation. For the past few years, we have supplied millions of SSBs to several NGO funded projects like VSO, Habitat for Humanity, Water Aid, GIZ, Plan International, Save The Children and many more.

Our new product in development, Construction - 3D Printing is simply molding of a structure by placing volumes of material in sequential layers on top of each other from the ground up. The material is pushed through a nozzle which regulates flow and is guided by a computer controlled positioning process. Benefits of 3D printing: Fast and Reliable, Cost effective and Enhanced Sustainability Unique Design. We have successfully 3D printed (built) a house in 12 hours, and a school block in 18 hours. The 3D Printed house is in Lilongwe while the 3D Printed school block is in Salima.



Special guests

**MR. PETER
CHIMANGENI**

Opening remarks

DoDMA Deputy Director of Recovery.

**MR. SHADRECK
CHIRWA**

The National Housing Policy in Malawi

Chief Housing Officer. Department of Land, Housing and Urban Development.

JOABFRANKCHAKHAZA
Master of ceremony

Joab Chakhaza is a communications expert and manager with skills that he has built over the past 15 years as a professional teacher and radio and television broadcaster as well as academic training. He has practical skills as a communicator, a mature and professional approach to work as well as a vast network of individuals who make his work easier. He has experience in developing communications strategies having been part of the team that developed the Malawi Floods Emergency Recovery Project Communication Strategy in 2017 and having led in the implementation of the Zodiak Broadcasting Station communication strategy as Director of Programs. He holds three degrees: an MA in Media Management with Distinction (UK) obtained in 2015/16, an MSc in Strategic Management (UK) - 2009 and a BA in Education Humanities (Malawi) - 2003.

MANDINDA ZUNGU
**The context of shelter
responses in Malawi**

Mandinda Zungu is the Executive Director CADECOM (Catholic Development Commission in Malawi).

Responsible for the operations and implementation of all programs under CADECOM Blantyre. She has a wide range of experiences having worked in Emergencies, Inclusive Education, Water Sanitation and Hygiene, Nutrition, Livelihood, humanitarian sector, in areas of CommunityManaged Disaster Risk Reduction, Expert in Emergency Shelter (technical Advisor and Trainer), Emergency WASH, Emergency Food Security and Livelihood and Climate Change, Microfinance, rural development.

**ROSTER
ARUFANDIAKA**
**Safer Housing
Construction
Guidelines**

Malawi Red Cross National Coordinator.

JAMIE RICHARDSON
**The future of shelter
and housing in
Malawi: key actions
going forward**

Jamie Richardson is Shelter and Settlements technical advisor for CRS and has previously worked with other NGO and the Red Cross. Over the past twenty years he has assisted with a number of shelter recovery programs including the Karonga earthquake in 2009 helping with the first draft of the Guidelines for Safer House Construction. His work is focused on sustainable and resilient shelter approaches that support and encourage self-recovery.



Malawi National Shelter Learning Event **Learning from Shelter Responses towards** **Resilient Housing in Malawi**

September 28th, 2021. Bingu International Conference Center, Lilongwe