



## Developing skills for building safer homes

### Summary

Nsanje District in Malawi frequently experiences severe flooding events and cyclones, leading to the loss of homes, infrastructure, and livelihoods. Disaster recovery and reconstruction efforts are often inadequate, focusing on short-term relief rather than long-term resilience.

Concern Worldwide worked with Malawi's Department of Housing (DoH) to increase community awareness on flood-resilient infrastructure and trained local artisanal builders to improve and construct stronger houses using local materials and expertise.

This intervention aimed to enhance disaster resilience by building and spreading community capacity to upgrade and build homes that are resilient to floods.

### Our approach

Using the Climate Resilience Measurement for Communities approach, Concern Worldwide and local communities identified that recurring damage to and destruction of homes during floods is a critical challenge to developing long-term resilience to floods. Concern Worldwide engaged the district council and DoH to work with artisanal builders on resilient construction techniques using locally available and affordable materials. Concern Worldwide also ran campaigns to raise community awareness about flood-resilient construction, including how builders can support communities.

### Facts and figures

**Costs:**

US\$100 (175,480 MWK) per community training for 20 people

**Skills:**

Training on risk identification, disaster preparedness, and flood-resistant construction

**Time to implement:**

One month

**People reached:**

Training to 435 local artisanal builders (213 in Nsanje, 131 in Lilongwe, 91 in Chikwawa). Awareness sessions in 17 communities: 123,417 households

**Easy to replicate?**

Yes. It relies on local government and community participation, local expertise, and straightforward practical skills



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## What was the problem?

Many homes in Nsanje District are built from weak materials, lack proper foundations, and are constructed without consideration of recurring floods. For many families whose homes are destroyed during floods, rebuilding after each flood simply means rebuilding the same fragile structure, knowing it will not withstand the next disaster.

Building standards and guidelines exist at the national level, but in practice, they are rarely promoted or translated into simple, usable guidelines for builders and homeowners at the community level. Communities are not aware of how to build houses that can better withstand the destructive impacts of flooding.

## What was the solution?

Together with Malawi's DoH, Concern Worldwide trained local artisanal builders, who already worked in Nsanje, in cost-effective and flood-resilient construction techniques and features that help reduce vulnerability to water damage and structural collapse. The builders also learned about assessing the flood exposure of houses so they can advise if a property is in a high-risk location and if relocation is recommended. In addition, the DoH's construction guidelines were reviewed to reflect the availability of local materials and costs.

Examples of recommended techniques include houses being raised above ground level using stones or cement plinths; improved brick-making methods, such as stabilized soil bricks, which reduce water absorption and increase durability; using stronger, locally available materials, such as stabilized soil bricks or poles; reinforcing wall corners, which are most prone to collapse during flooding; using better anchoring techniques (e.g. cross bracing) for roofs to resist strong



Resilient house to ring beam level to the left-hand side under construction by Alex Kashoti. Photo: Concern Worldwide

winds and water damage; and installing simple drainage channels around houses to redirect water away from the structure. Builders can adapt these techniques to people's needs and available local materials.

Concern Worldwide also raised overall awareness of the training amongst the general community (e.g. through jingles aired on local radio stations) so that communities know about the builders' new skills and how to access them if deciding to renovate or rebuild their homes. As a commitment following the training, local builders inform communities and raise awareness themselves, explaining the importance of building resilient houses and the skills they have acquired during the training.

## How does it increase resilience?

This intervention in flood-prone communities aimed to enhance resilience by improving infrastructure and house construction, strengthening community capacity and expertise in flood-resilient homesteads, reducing exposure to floods, and promoting asset protection and sustainable livelihoods.

By upgrading the skills of local artisanal builders, and through Concern Worldwide's awareness campaign as



Flooded, non-improved house in Nsanje District. Photo: Concern Worldwide



### Climate Resilience Measurement for Communities (CRMC)

The Climate Resilience Measurement for Communities (CRMC) is a data-driven process, complemented by a web-based tool and mobile app, which helps communities to evaluate and measure how resilient they are to climate hazards. Using the results, they can identify and implement resilience-building interventions and run additional measurements to track improvements.

Find out more: [ZCRAlliance.org/crmc](https://ZCRAlliance.org/crmc)



well as awareness raising by builders themselves, community members have a better understanding of flood risk, and they have started applying resilient construction practices when rebuilding or renovating their homes. As a result, some homes that were rebuilt withstood the impacts of a flood. The focus on locally available and affordable materials means that the techniques are also within reach of households with limited incomes.

Increased understanding about flood exposure also led to voluntary relocation of houses to areas with reduced flood risk, which has considerably improved flood planning, flood preparedness, and overall resilience to flood risk.

## Other benefits:

- Flood risk mapping together with local builders helped communities know the areas they should not construct in.
- Builders encouraged homeowners to plant trees around their houses, which can both mitigate the impacts of floods or storms and provide other benefits to livelihoods (e.g. fruits), though it is necessary to maintain a minimum safety distance between trees and houses, as the trees may fall down.
- The solution is scalable: artisanal builders attested that demand for their skills has broadened, and they get requests for work from outside Zurich Climate Resilience Alliance communities. They also actively transfer skills to other builders, thus spreading knowledge on flood-resilient construction techniques.



A resilient house in Nsanje built with raised foundations to withstand the impact of floods. Photo: Concern Worldwide

## Common conditions for success:

**Q:** *Is this intervention appropriate for other communities?*

**A:** Yes, if existing guidelines/manuals can be adapted to the local context and if the affordability of materials is considered for people with lower incomes.

**Q:** *What conditions are needed for the interventions?*

**A:** Community engagement and mobilization; expertise in disaster risk reduction and flood-resilient construction (to train local builders); and readiness and ability of relevant government departments to align existing construction guidelines to meet local requirements (affordability and availability of materials).

**Q:** *Was there anything special about the communities where interventions were effective?*

**A:** Community volunteers, local artisanal builders, government officials, and local leaders played key roles in implementation by raising awareness about flood-resilient construction. The inclusion of the DoH to review the construction manual and deliver the training was essential to ensure buy-in and alignment with national standards.

## Success story

Mbenje community in Nsanje District is prone to devastating riverine floods. Francis Mandala, a local artisanal builder and chairperson of the community development committee, has been leading efforts to build resilience against these floods. He participated in Concern Worldwide's training to learn about flood-resilient construction techniques that use locally available materials.

**“The training was a game-changer. We've learned how to construct houses that withstand floods. Even with the heavy rainfall we experienced this year, we have not received a report of a single house collapsing”**

*Francis Mandala, Chairperson, Mbenje Development Committee*

## Expert view

*This intervention demonstrated the power of locally led recovery. By empowering community leaders to guide relocation and rebuilding efforts, and by training local artisans in resilient construction methods, we not only restored homes – we strengthened the entire community's capacity to withstand future disasters. The active involvement of local leaders ensured that decisions were trusted and inclusive, while the technical training created a pool of local expertise that communities can rely on well beyond the life of this project."*

**Moses Mumba,**  
District Housing Officer, Nsanje District Council

## Get in touch

If you have any questions, contact:  
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## Lessons learnt

- Community ownership and leadership were crucial for ensuring the sustainability of the intervention beyond the project's lifespan. The success of the training programme depended on active participation from community members who took the initiative to apply flood-resilient construction techniques in their homes.
- By working with Nsanje District Council and the DoH, the intervention ensured that training materials and construction guidelines aligned with government standards. This connection also allowed communities to access additional guidance when needed.



Artisanal women, Meble Vula (red dress) and Malifa Hendreson.  
Photo: Concern Worldwide

## Further reading

Concern Worldwide (2023) 'Knowledge matters – climate resilience'.  
<https://www.concern.net/knowledge-hub/knowledge-matters-climate-resilience>

Concern Worldwide (2025) 'Leveraging WhatsApp to increase disaster preparedness in Malawi'.  
<https://www.concern.net/knowledge-hub/leveraging-whatsapp-increase-disaster-preparedness-malawi>



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