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**SAFE REBUILDING**  
**A MIXED APPROACH TO SHELTER RESPONSE  
FOLLOWING THE 2018 FLOODS IN KENYA**





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# Executive Summary

As part of the 2018 floods response, the Kenya Red Cross Society (KRCS) received funds from the Government of Kenya to implement a large-scale shelter intervention in 25 counties across the country using a mixed modality approach of cash and in-kind assistance. Heavy rains commenced in March 2018, worsening a Kenya already hit hard by the droughts from 2015 to 2017. The rain resulted in further loss of lives, destruction of property, and disruption of access to essential health care and related social services. Damage extended to critical local infrastructure including water, sanitation, and hygiene facilities.

The shelter programme leveraged a light version of the Participatory Approach for Safe Shelter Awareness (PASSA)<sup>1</sup> to encourage active community participation in the reconstruction program and to fulfil the principles of building back safer. The programme also used cash-based assistance to achieve increased participation among beneficiaries, in an attempt to enhance their sense of empowerment and dignity. Cash was provided to purchase materials such as sand and stones, as well as cover labour costs. Furthermore, the programme used

innovative technology as such RedRose<sup>2</sup> data management system to manage beneficiary data and last mile distribution of in-kind assistance using paper vouchers and biometrics for identity verification.

## Key Achievements

- The sense of empowerment, dignity and true participation of the communities through the creation of community groups (PASSA) that worked through the PASSA approach. Communities, through the PASSA groups, were involved in aspects of the programme including targeting, providing information on safe shelter awareness to the communities, developing model house designs, cost analysis, advice on local materials to be used, and construction process monitoring all through to completion.
- New ways of shelter construction were undertaken which resulted in strong and safer shelters in comparison to what the beneficiaries initially built, resulting in a multiplier effect in some cases where

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<sup>1</sup>An approach developed by the International Federation of Red Cross and Red Crescent Societies (IFRC) - <https://www.ifrc.org/PageFiles/95526/publications/305400-PASSA%20manual-EN-LR.pdf>

<sup>2</sup><http://redrosecps.com/>



community members not targeted for this programme emulated their neighbour's homes and constructed their houses citing safety considerations of the PASSA-led constructed houses.

- Fostering of local market dynamics in each county, not only for the vendors of the construction materials, but also the local MPESA branches, motorbike drivers and transporters, land owners, and local masons in the delivery of the programme.
- The programme was implemented in a relatively short-time frame in such diverse communities and far stretched locations, that there was a tremendous success in not only achieving the shelter outcomes, but also in the use of participatory owner-driven model for implementation, enabling communities to gain a sense of dignity and respect though the implementation of the programme.
- The participatory shelter approach allowed innovation and creativity as well as the adaptation of local building culture into each shelter design that was implemented in each county. Some communities built using oil drums for walling, others stone, others mesh and gabion walling and others adopted earth blocks that the communities produced themselves.

- The use of technology enabled scalability and efficiency of assistance while promoting quality, accountable, and transparent programming with appropriate security of data. The RedRose system provided an accessible "single view of the beneficiary" allowing ease in monitoring of the construction status, construction materials allocated and distributed, and demographic information for reporting. Time savings as a direct result of using the RedRose system was cited in the interviews.

### **Challenges Encountered in the Programme**

- Despite attempts to mitigate the negative impacts of inflation within the communities, the large cash injections in some communities caused a hike in prices for the construction materials, land as well as labour.
- There were also delays in completion of houses in some areas and this was attributed to insufficient stock of materials, lack of sufficient labourers and significant cost variation of materials. In many cases, delays also occurred as families in one community needed to wait for all the houses to reach a completion stage before the next tranche of support, in kind or cash, was granted to all.

- Land availability was also cited as a challenge in some areas, since families needed to find safer location, and local authorities did not directly intervene when landlords sometimes increased the price of the land.
- Technical inspection and check-off of the construction quality was lacking in some areas leading to a diversity in the overall construction quality, as quality depended on the skills of the labourers that were employed by the household. In some cases, vulnerable households were sometimes tricked by artisans, that in fact had no constructions skills but had been hired for completing the work due to the unavailability of sufficient skilled labour in the communities.

### **Key Recommendations for Future Programmes**

- A more detailed market risk analysis is key prior to the implementation of the programme to mitigate some of the possible impacts of large cash injections in the community. In the case of this programme, households mentioned the price hikes from land-owners, artisans and vendors that could have been mitigated in advance through agreements. Many households, interviewed during the Learning Review in one community in Kilifi, in hindsight, felt they would have preferred an in-kind support as opposed to cash due to these challenges.
- KRCS's engagement with the artisans at an earlier stage to sign a contract with a fixed price for the construction of each house could have avoided the tensions between households and artisans that arose, as well as the price hikes that were reported. In addition, identifying them in advance, training them on Build Back Safer techniques and sharing the list of qualified masons with the community would have ensured that all households had a qualified mason and access to a safer construction.
- A training on money management could have supported families that were using cash for the first time. Some of the rural communities that were supported were not used to seeing cash and such a large amount of it. Support for careful administration as well as management and protection could have empowered targeted households further.
- Increasing monitoring and construction quality control during the different phases of the construction process with on-the-job training of local artisans, the construction of demonstration houses for the most vulnerable houses, support for households in selecting quality materials as well as awareness campaigns on build back safer messages,

could have supported an increase in the quality control of works. Hiring local engineers and technical staff as part of the implementation and monitoring team would have mitigated some of the technical issues found during the implementation of the programme.

- Increase the use of PASSA in Disaster Risk Reduction (DRR) and recovery programmes by training others and fully use the scope of the tool for joint analysis, local decision making and community action planning. Given the tight timeframe, the PASSA approach was limited in reaching the intended impact, however there still existed the opportunity of rolling this out within the community more widely.
- Make use of existing sectoral IFRC guidance such as owner-driven housing reconstruction (ODHR)<sup>3</sup> or 'All under one roof' disability-inclusive shelter and settlements<sup>4</sup> to increase capacity of KRCS staff on shelter programming and link to other sectors such as health, infrastructure, land, protection etc.
- Use the data management solution for both in-kind and cash for a more comprehensive management of beneficiaries and assistance, and a consistent way of reconciling and auditing transactions.

**KRCS's engagement with the artisans at an earlier stage to sign a contract with a fixed price for the construction of each house could have avoided the tensions between households and artisans that arose, as well as the price hikes that were reported.**

<sup>3</sup><https://www.ifrc.org/PageFiles/95526/publications/E.02.06.%20ODHR%20Guidelines.pdf>

<sup>4</sup>[https://www.ifrc.org/Global/Documents/Secretariat/Shelter/All-under-one-roof\\_EN.pdf](https://www.ifrc.org/Global/Documents/Secretariat/Shelter/All-under-one-roof_EN.pdf)

# 1.0 Introduction

## 1.1. The Kenya Red Cross Society

The Kenya Red Cross Society (KRCS) is the largest volunteer based humanitarian organisation in Kenya with 120,000 volunteers to date and branches in all the 47 counties in the country. As auxiliary to the National and county governments, KRCS works with communities, volunteers to ensure they are prepared to respond to humanitarian and development needs.

The KRCS 2020 Strategy has a vision of ‘timely, effective and innovative humanitarian service delivered with respect, solidarity and accountability to our stakeholders, our communities and affected populations’. Furthermore, KRCS’ fourth core value is Innovation, where they identify and explore uncharted opportunities for growth and sustainability, mitigate risks and provide the best humanitarian services through creative solutions.

## 1.2. The 2018 Floods in Kenya

Heavy rains commenced in March 2018, worsening a Kenya already marred by the

droughts of 2015-2017. The rain resulted in further loss of lives, destruction of property, and disruption of access to essential health care and related social services. Damage extended to critical local infrastructure including water, sanitation, and hygiene facilities.

According to the UNOCHA Report of June 2018, the death toll from the impacts of floods was 186, with an estimated 800,000 people affected. KRCS assessed 8,832 houses as having been destroyed in different magnitudes following the flooding and rainfall in 2018. Counties most affected by flooding included Isiolo, Garissa, Kisumu, Mandera, Marsabit, Narok, Samburu, Taita Taveta, Tana River, Turkana, Wajir and West Pokot. Mandera and Tana River counties reports the highest levels of displacement.

The flooding further resulted in a burst dam in Solai, Nakuru County, washing away 223 households and resulted in 47 deaths. In central Kenya, the floods triggered a series of mudslides and landslides leading to population displacement, infrastructure damage to health facilities, schools and other social amenities.



The Government, both national and counties, as well as other humanitarian actors supported the affected populations through evacuation, provision of emergency shelter, food, integrated health outreaches, cash interventions and emergency water treatment. KRCS worked closely with the government and other partners in providing this support.

### 1.3. Learning Review Objectives and Methodology

This learning review reflects on the actions taken by KRCS in response to the 2018 floods, specifically the shelter recovery programme, and the results and learnings from the use of a mixed approach including community participation, cash and voucher assistance, and innovative technology.

The objectives of this learning review are to:

- Document the processes, decisions, and experiences of KRCS in the large-scale shelter recovery operation including what worked well and areas for improvement
- Share the experience and learnings with other Red Cross Red Crescent National Societies and wider humanitarian sector interested in implementing similar programmes

- Document evidences of benefits and challenges in linking shelter, cash, Participatory Approach to Safe Shelter Awareness (PASSA), and technology innovations in humanitarian assistance
- Reference the learnings in other publications or events (e.g. bi-annual publication Shelter Projects 2018/19, Cash Hub, KRCS publications and in other relevant platforms).

Additionally, the learnings in this programme will help inform future KRCS policy regarding shelter interventions and the use of cash, PASSA approach, and technology to scale up and ensure quality programming.

Consultations as part of this learning review were conducted in Kilifi, Narok and Makueni, which are 3 out of the 25 counties where this programme was implemented. The counties were selected based on the dynamics and differences of the construction processes in each of the three locations. The review employed both qualitative and quantitative methods in data collection and analysis.

## 2.0 THE SHELTER RECOVERY PROJECT

The Government of Kenya selected KRCS as the partner of choice and provided funding of US\$ 10 million to implement the shelter programme to support over 5,000 households in 25 counties affected by the floods of 2018.

The programme was given a six-month timeframe. KRCS diverted from the traditional model of having contractor-led and pure in-kind assistance for the shelter programme. Instead, KRCS advocated for and implemented a mixed approach using Participatory Approach to Safe Shelter Awareness (PASSA), a combination of in-kind (shelter materials) and cash and voucher assistance (CVA), and the use of the RedRose system to manage beneficiaries and last-mile distribution of assistance.

The objective was to enable an owner-driven approach to building back safer homes with a focus on strengthening local economies and employing innovative technology to support the scale up and accountability.

### 2.1 Overview of Concepts

This section describes the three concepts used in the approach for implementing the shelter program. The subsequent sections will describe the experience in using these concepts.

#### 2.1.1. Participatory Approach to Safe Shelter (PASSA)

PASSA is a method of disaster risk reduction (DRR) that addresses shelter safety<sup>5</sup>. It is a variation of the participatory hygiene and sanitation transformation (PHAST) which has been used in water and sanitation programs by many Red Cross Red Crescent National Societies<sup>6</sup>. This method aims to develop local capacity to reduce shelter related risk by raising awareness and developing skills in joint analysis, learning and decision making at the community level.

The process is facilitated by volunteers who guide community groups through

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<sup>5</sup>An approach developed by the International Federation of Red Cross and Red Crescent Societies (IFRC) – Manual: <https://www.ifrc.org/PageFiles/95526/publications/305400-PASSA%20manual-EN-LR.pdf>

<sup>6</sup>PHAST is based on a participatory approach called SARAR which stands for Self-esteem, Associative strengths, Resourcefulness, Action-planning and Responsibility.



participatory activities that enable participants to: (i) develop their own awareness of shelter safety issues in their communities; (ii) identify hazards and vulnerabilities that create risk related to shelter; (iii) recognize and prioritize potential strategies to improve shelter safety; (iv) make a plan to put those shelter safety strategies into place and (v) monitor and evaluate progress. It is important to note that this is a community tool that helps communities to analyse, plan and monitor.

PASSA is not only a shelter risk reduction tool, but also a tool to progress from the shelter relief phase to more long-lasting and sustainable reconstruction solutions,

**PASSA is a method of disaster risk reduction (DRR) that addresses shelter safety. It is a variation of the participatory hygiene and sanitation transformation (PHAST)**



empowering people to communicate their demands and to understand the impacts of each of their choices. The PASSA approach is based on the belief that everybody in a group has knowledge and ideas to contribute and that the solution to shared problems can be found by people working together effectively.

### **2.1.2. Cash and Voucher Assistance (CVA) in the Shelter Sector**

Cash is becoming a widely recognized assistance modality for communities impacted by crisis. Experts note that cash, when effectively deployed, can be a faster and more cost-effective assistance mechanism than in-kind support<sup>7</sup>. Cash provides beneficiaries with choice and dignity while stimulating local economic recovery. Despite the increasingly widespread use of cash in other sectors to provide relief in disaster situations, the humanitarian shelter sector has been relatively slow in adopting it.

Using cash for the shelter project presents a range of risks and liabilities thus requiring a balance with the cost-efficiency and choice it provides. Hesitations from some organisations in incorporating cash in shelter programmes have been mainly: a lack of clarity about how cash could be used to support shelter response and improve access to housing; concerns about organizational

capacity and the lack of sector-specific tools to support their transition into cash-based programmes; general concerns that cash was not appropriate to a shelter response; concerns that beneficiaries would not want to spend money on shelter materials and that the vouchers would be inappropriate as materials are too cumbersome to bring in bulk to a market fair site<sup>8</sup>.

The success of CVA is often predicated on the existence of functioning local markets that are able to respond rapidly to swift changes in demand and supply<sup>9</sup>. As such, shelter experts emphasize that when cash is used for shelter support, it must include adequate complementary programming such as technical assistance, quality control, and community engagement.

### **2.1.3. RedRose System**

RedRose<sup>10</sup> offers data management and delivery solutions for cash and in-kind assistance provided by humanitarian organisations. This allows data to be managed from a centralized online portal, which facilitates beneficiary management, last-mile distribution, reconciliation, monitoring of assistance, and survey and beneficiary feedback management.

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<sup>7</sup><https://phap.org/theme-cva>

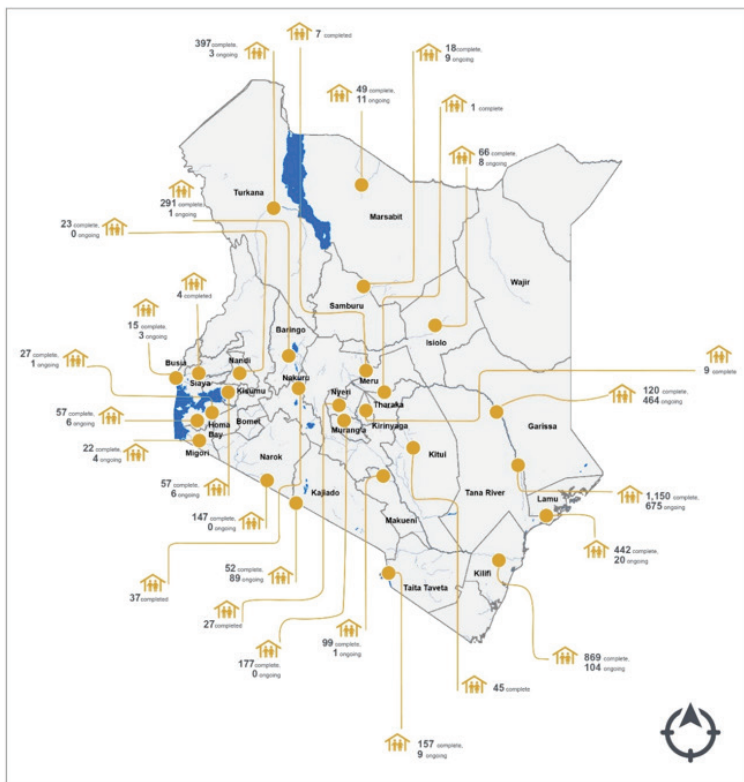
<sup>8</sup>Bauer R. (2013). B.2 Banker and Builders – The Coming of Age for Cash and Shelter

<sup>9</sup>Projects. Shelter Case Studies 2011-2012 – Geneva: IFRC, UN-HABITAT and UNHCR  
[www.cashlearning.org](http://www.cashlearning.org)

<sup>10</sup><http://redrosecps.com/>



## Government of Kenya (GOK) - Floods 2018 Early Recovery Programme - Shelter



### Legend

- Shelter project sites
- Major lakes
- County boundary
- Main rivers



**4,308**

are completed and currently  
occupied by the program  
beneficiaries



**1,408**

houses are incomplete  
but positively on progress

Dated: 14/4/19

The RedRose solution has been used by over 30 organisations worldwide in over 35 countries. It has demonstrated ability to rapidly register beneficiaries, capture a wide range of data for programming decisions such as market prices, enforce controls particularly for financial approvals, ensure accountability through its audit features, and ease the reconciliation process. RedRose allows for integration with financial service providers (FSP) in delivering cash. It also works in offline environments for registration, surveys, and distribution, which is critical for scale-up.

## 2.2 The Approach

KRCS advocated for the participatory approach instead of the traditional contractor driven model for implementing shelter programmes, and after discussions the government agreed on using this approach given the additional benefits for the affected population. PASSA was used to encourage active community participation in order to strengthen local response and enhance long-term sustainability. The PASSA process used for this shelter program is described in the next section.

KRCS has been using CVA since 2011 as part of its emergency response. KRCS' strategic focus when it comes to cash is in line with the

global Red Cross Red Crescent Movement ambitions to scale-up cash assistance using partnerships and innovations. KRCS has used different delivery mechanisms such as banks, mobile money and money vendors.

Although the use of cash for shelter interventions was new to KRCS, their extensive experience with CVA and having well-functioning markets in the targeted areas for the shelter programme suggested cash would be cheaper, faster, and easier to implement in complementary to in-kind assistance, instead of purely in-kind delivery. KRCS already had an agreement with MPESA and pays no charges for the cash transactions made for humanitarian programs. Cash was considered necessary to ensure the delivery of the needed materials to all the targeted families within the aggressive project timeframe. It was reckoned that the pressure on logistics to procure and deliver all the materials would be too high.

In addition, as KRCS used a participatory approach for the reconstruction, each county had a different shelter design and bill of quantities (BOQ) with different materials adapted to the building culture within that county, adding further complexity to the procurement process and thus necessitating a lot more human resources than available. In addition, it was recognised that many of the construction materials, particularly those for



walling such as sand, stone, earth and poles, were available locally, and this decision would also support the local markets in the communities.

Moreover, KRCS wanted to avoid the risk of inflation that may arise with cash distributions in communities and tried as much as possible to avoid small vendors exploiting beneficiary households. This led to the decision that the high value materials

(cement and iron sheets) would be centrally procured to reduce overall costs and avoid too much cash being injected directly into the communities. Central procurement of these two materials would also ensure economies of scale and a reduction in the overall costs for each house.

Also, to avoid risks of inflation, the cash grants and in-kind materials were distributed at different points upon the completion of



a specific construction phase of the shelter reconstruction. For the materials that were not available locally in the quantities required such as iron sheets, ridges and cement, these were distributed as in-kind, and cash was provided for other materials such as sand as well as to cover for the labour costs.

Given the scale and complexity of the shelter programme—with the number of houses and associated mixed assistance to distribute and monitor—it was important to have a robust data management solution. The choice of RedRose data management was based on the success of a pilot project<sup>11</sup> in 2018, where evidence showed that having an integrated data management solution was critical in scaling up assistance, ensuring quality programming, and strengthening accountability, transparency, and protection of beneficiary data.

The RedRose platform was used to manage beneficiaries and in-kind distribution. It was also used to monitor the construction status of the houses, construction materials allocated and received as well demographic information for reporting.

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<sup>11</sup><https://www.cash-hub.org/-/media/cashhub-documents/resources/2018/kenya-blockchain-open-loop-pilot.pdf>

## 2.3. Experience and Learnings

### 2.3.1. PASSA Approach

The PASSA methodology was used in the implementation of the owner-driven shelter programme, in order to achieve safe awareness, responsible resettlement and further shelter safety measures such as flood resilience, improvement of house typology, choice of materials, settlement planning, and environmental considerations. A PASSA training of trainers (ToT) was carried out for all branch coordinators from each county who then went to train their volunteers further to implement PASSA in their communities. In each county, a number of PASSA groups was then formed depending on the targeted households. In some, such as Kilifi, up to 18 PASSA groups were formed.

One of the greatest successes of the shelter programme was the sense of empowerment, dignity and true participation from communities that were involved with the project. This was evident from the interviews held with PASSA groups describing the sense of ownership and power that the programme provided. The process provided new opportunities and experience to the teams involved within the KRCS and the community.





**Narok County – using old drums for walling**

The PASSA methodology provided an opportunity to walk the journey together with the community from targeting, trainings, identification of the model house, analysis of the cost implication, the materials to be used, the construction process at different stages all through to the completion of the houses. For the counties that had concerns regarding the modality and approach, further engagements with the communities were undertaken to establish an understanding on the benefits of this approach as well as building model houses to demonstrate the process and support provided. The houses that were designed and constructed through the project were safer and much more

durable compared to those that previously existed, but using the local vernacular building materials appropriate for each county. (Figure 1).

The establishment of one or more PASSA groups in each county, followed by training enhanced beneficiary participation, with several noting that it increased their sense of ownership and participation. Indeed, beneficiaries noted experiencing a sense of increased ownership at different stages of the programme including selection, registration and validation of targeted households, co-designing shelter prototypes adapted to the local context and building culture,



identification of safer location to build, identification of artisans and monitoring of the shelter construction phases including reporting progress, delays and any other challenges.

In all communities, the final shelter prototype was produced through consultations with the PASSA group, discussions with the local county authorities. Validation and final approval was conducted by the county steering committee (which included 9-line department representatives including water, urban and planning) and the KRCS Management Team. This ensured that the design and BOQ met the technical

requirements and budget. The family was responsible for all other activities in the implementation of the programme including (i) finding an appropriate and desired safe location to rebuild; (ii) selecting the labourers to build their houses and negotiate a price (with a set ceiling); (iii) using the cash grant to purchase the materials that were required from the vendors of their choice or produce them themselves to make savings, and (iv) making any necessary modifications and improvements to the design through personal contributions<sup>12</sup>.

<sup>12</sup>While the structural design was similar in each county, the top up per county varied based on availability and accessibility to material and each beneficiary's capacity to top up.



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PASSA was designed to improve shelter safety and thereby reduce disaster risk. Two of the key activities in the tool included (i) community mapping and visit and (ii) safe shelter and unsafe shelter. These activities required the community to map out the shelter conditions and identify potential hazards and vulnerabilities linked to individual buildings and further identify what can be done to make the shelter safer in the community while utilizing the local resources. These processes ensured engagement of the community at an individual level. The commitment to get local resources contributed to owner driven reconstruction as the support was given based on the level of construction.

In Makueni County, the house model agreed upon for construction led other community members not targeted for support to

emulate and construct their own sighting safety considerations of constructed houses. The PASSA groups interviewed had an interest to continue as a group and advocate for safe shelter in their respective communities. This was further encouraged by KRCS management team, citing that the model was a success and the focus is now to fully integrate it into future shelter programming.

The approach brought about new ways of ensuring safety considerations while undertaking shelter construction not only for this intervention but also future constructions. To further strengthen their resilience to floods, the communities were engaged in tree planting exercise to increase vegetation cover and improve environmental safety. Community members felt they were better prepared than before

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in case there is an occurrence of another emergency. There was increased community trust as a result of increased new and positive relationship between KRCS volunteers and the community.

Targeting, feedback and grievance systems were established. Based on KRCS's feedback mechanism procedures, the PASSA group were tasked to receive and address community concerns at the local level and only escalate to the next level if a solution couldn't be found. The process was set out in a way that the first point of contact was the PASSA group then the chief, KRCS volunteers, the team leader, regional and finally the national team at the headquarters. Administrative officials at the county level came in handy to address numerous issues, with instances of people being arrested after reports of misuse of funds.

These were some of the means that were used to resolve issues:

- In Baringo county, after issues of misuse of funds were forwarded to the administrative officials, the beneficiaries were made to sell part of their livestock in order to meet the cost of materials.
- In Kajiado County, an approach of holding back disbursement of funds for the whole group was adopted by KRCS through the PASSA committee. The rest of the community would therefore push the particular beneficiaries to reach the

desired levels of construction in order to enable release of the disbursements for the rest.

- In Narok, there were also grievances shared from families as labourers were inflating the costs of their work. The feedback was raised to the branch level and a decision made to negotiate a fixed rate with all the labourers that would be paid directly by KRCS.

### 2.3.2. Cash Intervention

Since 2011, KRCS has used cash as a response modality pursuant to its mandate, to alleviate human suffering. Cash was used in addition to in-kind support to achieve a common objective of providing safe shelter after the impacts of 2018 floods. Although KRCS has used cash to respond to a variety of disasters, it has not done so for shelter recovery and at this scale.

KRCS engaged community members through the regional, county, and branch offices and used beneficiary communications campaigns to inform communities about the programme. In all the 25 counties, the PASSA groups were consulted on the appropriateness and acceptance of using cash as a modality for the intervention, and all except Baringo, Narok, Turkana—counties, mostly dominated by pastoralists communities—deemed cash as the preferred approach. The delivery mechanism agreed

## Box 1: Summary of PASSA Process Challenges

- The PASSA sessions in the community were not undertaken with the planned duration and objective that was intended by the process, and the PASSA sessions in most counties were limited to 1-3-day sessions. The PASSA activities were explored together at these community meetings and also included the participatory design sessions for developing the shelter prototype, as well as information sharing on the roles and responsibilities in relation to the implementation of the project. The PASSA group then began to play a role of monitors and advisors to targeted households. This was probably due to the limited project timeline as well as limited understanding of the objectives of the PASSA tool. A PASSA ToT was organised in September 2019 with support from IFRC to ensure that PASSA is well implemented in both flood and complex urban areas.
- Hazards and risks and concepts of safe and unsafe shelter were discussed in the sessions, however the scope of the potential impact from PASSA remained limited in the communities at large. Most community members that were interviewed referred to their understanding of the importance of building their homes in a safe location, drainage and the use of stronger and more permanent materials as the only key build back safer messages they retained. The other community members, that were not recipients of KRCS support seemed to not have been informed or received any messages of safe shelter awareness and thus there was little impact overall or connectivity from the wider impacts that PASSA can have in a community at large.
- In Narok, it was reported that leading the PASSA sessions was really challenging in the given context. The pastoralist communities were not used to have women and men discuss together, and some had never held a pen in their life. The learning here is that even though the PASSA tool was already established, it is important to consider the local context when implementing and incorporating communities view on how best to implement the approach
- PASSA should also have led to Community Plans of Action, which would address not only safe housing but settlement planning, integrate other aspects of the environment, and have a long term vision that would engage the entire community well beyond the 6-month construction phase. However, it was important to note that this project was being implemented under a very tight timeline and the full process not implemented in this case.
- The mapping exercise in PASSA was repetitively described as the most useful exercise – with families having truly appreciated the knowledge gained on safe and unsafe locations to build. They also understood the variety of risks that affect their community better, and thus leading to responsible resettlement.
- In terms of shelter safety and improvements with the shelter typology, most families reported on the benefits of living in a semi-permanent house that provided much greater protection and security than before. Families conveyed that the newer homes provided

better ventilation, kept their families safer from fire outbreaks, protected them from rains and leakages with an improved roof, as well as from termites due to having a raised concrete floor. They also mentioned living in a healthier living space where they no longer slept alongside their animals and thus avoided diseases, as well as feeling more protected from theft and insecurity. An additional benefit from the construction of semi-permanent houses in most counties meant that women had more time as they would be relieved of their duty of renovating their traditional thatch houses that was previously necessary to be undertaken every two years.

- In terms of material quality, these were not monitored for quality by KRCS or the PASSA group, which meant that families sometimes did buy materials that were not of adequate quality, either to save some money or due to the unavailability of these in the communities. This was an issue that was also linked to environmental sustainability as timber was not sourced and monitored to understand the environmental consequences from the programme.
- Gaps in communication lead to a lack of beneficiary understanding. Some beneficiaries did not understand why they were being directed to use the funds to build a house, when they had other relevant and pressing needs. In addition, the attempts made by to mitigate the negative effects of inflation was not sufficient enough.

**The mapping exercise in PASSA was repetitively described as the most useful exercise – with families having truly appreciated the knowledge gained on safe and unsafe locations to build. They also understood the variety of risks that affect their community better, and thus leading to responsible resettlement.**

on was mobile money through MPESA given the good network coverage and access to mobile phones in the targeted areas.

Local leaders including chiefs helped ensure that there was no misuse and misappropriation of the cash grants. When it was found that families had used the cash for other priorities, chiefs followed up to encourage the beneficiary to use the cash as per the non-committal form that had been signed. In some cases, the authority and power from the chief led the household member to sell their goats or work to replace the cash in order to finish their shelter construction.

Despite some attempts to mitigate the risk of inflation<sup>13</sup>, the cash injection in several communities caused a hike in prices in construction materials, land, and services. The cash value was so significant in some communities, and the proportion of cash versus in-kind was approximately 67% cash and 33% in-kind.

However, it is important to note this varied from one county to another. For transparency and accountability the cash transfer value and dates was communicated to all in public community meetings, leaving recipient households exposed to and incapable of addressing the exploitative costs of some essential services, such as those of the

motorbike drivers, transporters, materials vendor, land owners and sometimes labourers within the community.

In Kilifi, specifically Garashi, some families were reported to have been left in debt after the project conclusion due to this issue, as there was a need to provide their own contributions in order to complete the project and funds not always sufficient to pay for inflated costs. In some cases, KRCS volunteers stepped in to try and address some of these issues through community meetings and dialogue, and could find common ground and a negotiated price. In Narok, specifically, the KRCS team stepped in to negotiate a fixed price with labourers, the payment was then negotiated at a lower rate and was disbursed directly by the KRCS team instead of being managed by the recipient household.

In some cases, cash was being distributed to families that were not used to handling cash and MPESA. In as much as the programme supported households to open MPESA accounts and even hand over phones if families didn't own these, sometimes family members themselves took advantage of the cash inflow into their family. In Kilifi, it was reported that family members sometimes

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<sup>13</sup>See Approach section above on attempted risk mitigation for inflation

took the money from the elders in their family from their phone, as most used their date of birth as their PIN number, and thus there was no opportunity to retrieve the cash that was diverted in this manner, or protect the family adequately.

A detailed and comprehensive market assessment was not completed in all locations due to an insufficient stock of materials in all locations and sometimes, a significant cost variation of a specific material within the county, as well as a lack of sufficient labourers to build the houses that caused delays. This was reported in Narok, where materials and cash was disbursed but construction stalled due to insufficient manual labour in the community. In Narok, the local market also didn't have sufficient supply of materials so one supplier from a further location was identified by KRCS and brought to the community so purchases could be made. In Kilifi, there was a scarcity of sand, which caused families to resort to have to travel long distances and going to extremes by carving out areas of land that were not appropriately planned for this.

In-kind distribution of cement and Corrugated Galvanised Iron (CGI) were dropped off at central points in the community due to the great distances between recipient households, and families had the responsibility to transport these

materials to their houses for the last mile. Despite this being a community in kind contribution, some interviewed households reported that the money received overall was insufficient and felt the need for budgeting of such extra costs in the future.

### **2.3.3. The RedRose data management system and procedures**

The use of the RedRose Platform for data management and distribution was new to KRCS. It was only the second time they have used it in emergencies, the first time was from a pilot in May 2018 for a one-time cash distribution. KRCS has used a similar solution for distribution with biometrics integration for beneficiary verification, but they faced challenges with the setup and administration of the previous solution.

The RedRose features used in the shelter programme were:

- **Beneficiary Registration:** During the beneficiary registration, household details were collected using mobile devices. Fingerprint biometrics of the head of household were also captured using biometrics scanner tethered on a mobile phone and all data were collected offline. Beneficiary data was



then uploaded and made available centrally from an online portal.

- **Distribution:** RedRose was used to distribute in-kind (shelter construction materials) using generated paper vouchers that were redeemed with specific vendors. One voucher per material (e.g. cement, iron sheets). Beneficiaries were asked to come to a distribution point close to their communities. The vendors asked for the beneficiary's National ID<sup>14</sup> and their paper vouchers provided by the KRCS. Biometrics were used during the redemption of the paper vouchers to check that the right beneficiaries were collecting their own assistance. For a few instances where biometrics were not registered properly, PIN numbers were used. RedRose was not used to distribute cash for this programme due to concerns with costs. Since MPESA service fees were waived for humanitarian cash distribution, the incremental cost of RedRose service fees for cash transactions were seen as expensive.
- **Monitoring, Reporting, and Evaluation:** RedRose was also used to monitor the weekly progress of the shelter construction. The field team downloaded a list of QR codes representing each household; this QR code allowed the team to link the surveys with the household profile in the RedRose system. Every week the team would visit

## The use of the RedRose Platform for data management and distribution was new to KRCS.



the programme participants, scan their corresponding household QR codes, check the level of completion, and take a photograph of the house to record the status. They were also asked some community engagement questions to identify any issues or incidents during the construction process. GPS coordinates were also collected as some of the families were located in very remote areas. All information was then stored in the RedRose system, and history and progress of the construction were all documented. Furthermore, Redose was also used for reconciliation of the data from suppliers and those that received assistance.

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<sup>14</sup>For those with no National ID, they were asked to nominate a proxy to collect on their behalf. The biometrics of the proxy were then captured.

LEVEL 6: PLASTERING : PLASTERING IN PROGRESS BUT INCOMPLETE UPTO PLASTERING COMPLETE FOR ALL SURFACES (INSIDE, OUTSIDE, FLOOR)



LEVEL 6: PLASTERING : PLASTERING IN PROGRESS BUT INCOMPLETE UPTO PLASTERING COMPLETE FOR ALL SURFACES (INSIDE, OUTSIDE, FLOOR)



LEVEL 6: PLASTERING : PLASTERING IN PROGRESS BUT INCOMPLETE UPTO PLASTERING COMPLETE FOR ALL SURFACES (INSIDE, OUTSIDE, FLOOR)



LEVEL 4: ROOFING : STRUCTURE WITH TRUSS UPTO STRUCTURE WITH COMPLETE IRON SHEET ROOFING



LEVEL 0: NO PROGRESS



LEVEL 0: NO PROGRESS



The monitoring sessions

Below were some observations on the opportunities of RedRose evident from the shelter programme:

1. Scalability

The programme team was able to manage large sets of data from 25 affected counties (out of a total of 47 counties in Kenya) with some areas being very remote, hard to access locations including Turkana and Marsabit. Over 6,000 households were registered in the system and weekly monitoring of construction from the start of the project in September 2018 until around May 2019. Scaling up was made possible

because RedRose incorporated tools that were already familiar to the organization, for instance mobile data collection using Kobo/ODK, which reduced the need for new, extensive trainings.

2. Speed

Distribution was fast due to the auto generation of the paper vouchers and barcode scanning during redemption. The scanning process made it easy to check the beneficiary and their entitlement to be claimed. Speed of reconciliation was also noted as a positive result of having the system. Because there were multiple

vendors/suppliers and different remote teams across many counties, the system helped ensure that the materials distributed were reconciled quickly.

Since cash was used outside the RedRose system, reconciliation for cash was observed to have taken a long time due to manual efforts versus the automated reconciliation in the RedRose system. For instance, the MPESA reports needed to be downloaded separately and since the beneficiaries were not linked to the MPESA system, the team had to double check if the transactions belonged to the right beneficiaries. It is therefore recommended to use RedRose (taking into consideration value for money) for both cash and in-kind interventions in the future to reap the full benefits of data management for the entire programme. Costs associated to the data management may have covered for the time-consuming, error prone, less secured and less auditable manual processes for cash.

Furthermore, the speed to address beneficiary issues was also good because all data were in one system. Having the remote technical support from RedRose via Skype worked very well. The technicians responded quickly to inquiries and resolved issues in a timely manner.

Time saving (estimated at approx. 660

hours) from using RedRose was noted. This was based on information provided from interviews with staff and volunteers and then extrapolated over the number of households who received assistance within Kilifi county where the distribution was noted as fast. Time savings attributed to identifying beneficiaries with the use of QR codes and biometrics for distribution.

### 3. Ease of Use

The field team found the RedRose system to be user friendly. KRCS has been trained already in Kobo and using RedRose's Kobo/ODK integrated data collection app meant that no new training on data collection (except on the navigation of the forms) was required. All trainings were done by the programme team onsite instead of RedRose technicians. RedRose provided materials and guidance for the training, but since the system was intuitive and there was enough staff that have good knowledge of RedRose already, the programme team managed to organize all onsite trainings on their own. Also, since some of the areas were remote, having a system that also worked offline was very helpful.

### 4. Quality of programming

Good quality of programming was evident in efforts to reduce fraud, ensuring accountability and transparency through

audits, increasing protection of beneficiary data, and good customer service towards beneficiaries using the RedRose system.

For fraud reduction, biometrics was used. Communities were informed of the redemption process using registered biometrics so beneficiaries knew that no one else can claim on their behalf (except their assigned proxies, if there were any). There were some issues capturing biometrics for some people where PIN numbers were used instead. Recommendation in the future to have other biometrics captured and not just fingerprints (e.g. iris) and to continue having other options in case biometrics still does not work or not appropriate.

Data stored in RedRose system was compliant with GDPR, has good backup processes and strong disaster recovery in the event of data loss, and have built-in audit trails. Only those with RedRose access and the right permission levels had access to beneficiary data. This was an improvement from the access to Excel files managed manually before, which had no access control or audits.

From a customer service standpoint, having full visibility to the profile of beneficiaries, their transactions, and survey responses allowed for a well-prepared Community Engagement and Accountability (CEA) teams to address issues.

Accountability and transparency is critical in all humanitarian assistance. The system helped show the donor (government) that the Red Cross was doing the right thing. The Secretary General of KRCS and the leadership team were equipped with auditable artifacts in case they were questioned on how the KRCS used the government funding for this operation. Having all this data in an accessible way in the system boosted the confidence of KRCS senior management and they were able to account to the donor. Also, the internal audit team had access to the system and was able to compare the data with their own observations and physical checks in the field independently.

With RedRose, key stakeholders were involved in the system including IT, Finance, Audit, and Programmes, where before, access was only for programmes.

## 5. Cost efficiency

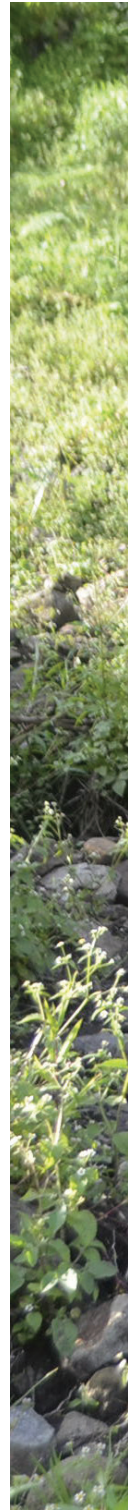
As mentioned, KRCS used a similar tool in the past for biometrics capture and distribution of in-kind in difficult remote areas. The cost with the other tool were comparable to the cost of RedRose. However, RedRose was noted to have much more useful features, was easier to set up, and provided excellent technical support to the field teams. The KRCS IT team had administration rights that allowed them to do some basic



configuration on their own without relying too much on the product technicians of RedRose. Also with the past tool they've had data integrity issues while RedRose ensures full data transparency. It was cited that with the previous tool there was an instance on inconsistent data and after checking with their technician, the data would be changed.

The time saving benefit translated to indirect cost savings to the programme by optimising the amount of resources (e.g. number of staff or volunteers) and processing needed (verification, reconciliation) to meet the programme objectives. Other indirect cost savings were associated to preventing fraud due to the use of biometrics for verification and addressing reputational risks by having a fully transparent and auditable actions by KRCS recorded in the system. Given the scale and complexity of the shelter programme, and even though RedRose was only used for in-kind distribution, with all the useful features RedRose provided, the costs incurred were well invested given the benefits gained for having the system support and enable a large-scale and very fast implementation.

**The time saving benefit translated to indirect cost savings to the programme by optimising the amount of resources (e.g. number of staff or volunteers) and processing needed (verification, reconciliation) to meet the programme objectives.**









## 3.0 GENERAL CHALLENGES, ACHIEVEMENTS AND RECOMMENDATIONS

### 3.1. General Challenges

1. Land availability in some areas was a challenge. Families needed to find a safer location to build their homes and in most cases this was facilitated and granted by the authorities. In some cases, families used their own savings or sell their assets or incur debt to secure a safe place to build. It was a project requirement that families supported sort an alternative safer land for the construction of the houses, thus all supported in this project had to resettle.
2. In some areas there were delays in the distribution of in-kind materials, since the plan was to deliver the materials at different stages of construction and was pegged on all beneficiaries the same level of completion at the same time which was not possible since each family building according to their own time.
3. In Kilifi, materials such as cement were delivered too early for some families who did not have anywhere to store and the cement was spoilt due to poor storage.
4. Technical inspection and check-off of

the construction quality was a challenge in some locations and also within communities. This was attributed to lack of technical expertise and the quality of housing depended on the skills of the labourers, leading to a diversity in the overall construction quality. In Kilifi in particular, some houses had to be rebuilt after collapsing due to poor construction practices.

### 3.2. Key Achievements

1. Appropriation of funds: Despite KRCS exposing such a large amount of cash to such a needy community (that in some locations was also not accustomed to seeing so much cash or had so many other priorities for the cash), the project succeeded in achieving the shelter outcomes with only a small number of houses having completely misused the money for other priorities. 'Money is like a ghost, you get money and you run mad.... this was really a test for the community....!' This success was achieved through the strong sense of

- ownership and leadership amongst the PASSA group and community leaders that supported KRCS to implement and monitor the project.
2. Promotion of dignity and respect: The project was implemented in an extremely short-timeframe in such diverse communities and far stretched locations, that there was a tremendous success in not only achieving the shelter outcomes, but also in the use of participatory owner-driven model for implementation, enabling communities to gain a sense of dignity and respect though the implementation of the project.
  3. Innovation and creativity: The participatory shelter approach allowed innovation and creativity as well as the adaptation of local building culture into each shelter design that was implemented in each county. Some communities built using oil drums for walling (Narok County), stones, mesh and gabion walling and earth blocks that the communities produced themselves.
  4. There was already a high level of trust and confidence between beneficiaries and KRCS<sup>15</sup>. The community engagements and inclusion of their ideas and choices bestowed a lot of trust on KRCS as a brand. The joint efforts by KRCS personnel and the community in implementing the shelter project resulted in communities increasing their trust in KRCS.
  5. Beneficiaries accepted the use of biometrics (fingerprint verification) as an accurate tool to verify individuals. Most understood why personal data and fingerprints were being collected and were comfortable with providing that information. They appreciated the use of MPESA as a secure and fast way to receive money. Overall, beneficiaries felt that the use of technology added credibility, confidence and effectiveness to the process<sup>16</sup>.
  6. A reported approximately 660 hours (extrapolated for 971 households in Kilifi) were saved by volunteers using RedRose during monitoring and materials distribution processes. This was attributed to:
    - Volunteers having a history of beneficiary and construction status information available within RedRose when visiting households to monitor construction status, thus reducing the number of questions asked (avoiding repeat questions). Approx. time saving of 10 min per household.

<sup>15</sup>Evidence of beneficiary trust was primarily qualitative. Several beneficiaries interviewed reported a high level of trust, however, quantitative proof of trust levels is as yet unavailable.

<sup>16</sup>This learning was drawn from interviews conducted with beneficiaries and has not, as yet, been confirmed by comprehensive investigation.



- Using QR codes generated from RedRose to quickly and accurately access beneficiary records, saving time by avoiding paper processes for identification and potential confusion of distinguishing people with the same or similar names.
- Using biometrics (two thumbprints verification) integrated with RedRose to quickly and accurately verify that the person identified is the actual person in front of you, thus saving time at material distribution sites compared to using traditional methods of verification.

### 3.3. Recommendations

1. A more detailed market risk analysis is key prior to the implementation of the project to mitigate some of the possible impacts of a large cash injection in the community. In the case of this project, households mentioned the price hikes from land-owners, artisans and vendors that could have been mitigated in advance through agreements. Many households, interviewed during the Learning Review in one community in Kilifi, in hindsight, felt they would have preferred an in-kind support as opposed of cash due to these challenges and difficulties.
2. KRCSs engagement with the artisans at

an earlier stage to sign a contract with a fixed price for the construction of each house could have avoided the tensions between households and artisans that arose, as well as the price hikes that were reported. In addition, identifying them in advance, training them on Build Back Safer techniques and sharing the list of qualified masons with the community would have ensured that all households had a qualified mason and access to a safer construction.

3. A training on money management could have supported families that were using cash for the first time. Some of the rural communities that were supported were not used to seeing cash and such a large amount of it, support for careful administration as well as management and protection could have empowered targeted households further.
4. Increase monitoring and quality control during construction process with on job training, demos, Build Back Safer (BBS) features that increase the likelihood of homogenous quality control of works.
5. Increase the use of PASSA in DRR and recovery programmes by training others and fully use the scope of the tool for joint analysis, local decision making and community action planning.
6. Make use of existing sectoral IFRC guidance such as owner-driven housing reconstruction (ODHR) or "All under

one roof” disability-inclusive shelter and settlements to increase capacity of KRCS staff on shelter programming and link to other sectors such as health, infrastructure, land, protection etc.

7. Use the data management solution for both in-kind and cash for a more comprehensive management of beneficiaries and assistance, and a consistent way of reconciling and auditing transactions.
8. Finally, KRCS needs to ensure that sufficient Monitoring and Evaluation capacities are built into the program at

the outset. Monitoring and Evaluation is critical to assessing the successes and failures of a given program and without it i will be difficult to chart a thoughtful future course on cash for shelter programs.

#### **Samburu County - gabion type-stone house**





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