RETURN ON INVESTMENT IN EMERGENCY PREPAREDNESS

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CARE – November 2017
Return on Investment for Emergency Preparedness

Report contents

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1. Executive Summary

Although CARE has been investing in emergency preparedness for many years, there is little evidence of its impact, positive or negative, on humanitarian responses. Through three case studies (Indonesia, Madagascar and Nepal), specific preparedness investments chosen among four types (supplies, skills, processes and contingency agreement) were analysed in terms of potential cost and time savings as well as contribution to response quality. The methodology is based on scenario comparison: how does an emergency response occur under a risk scenario without having put in place the investment and how does it occur with the investment in place. The study balances quantitative and qualitative approaches.

Key findings

Investments in pre-positioning of locally procured emergency relief items have **no financial impact** (it is more expensive to pre-position than to buy at the onset of a crisis) but **save significant time towards emergency response**. For instance in Madagascar, the study shows that pre-positioning supplies could accelerate the response time by 35 days. Various contextual factors can impact supplies pre-positioning return on investment:

- In-country transport time and reliability
- In-country price inflation for goods and services
- Security and infrastructure issues in pre-positioning areas
- Synergies with regular programmes

Investments in staff skills potentially show high return on investment partly because they are inexpensive and can have a ricochet effect without further investment (impact on other staffs' skills, processes, overall Country Office capacity and culture). **They can potentially save costs and accelerate response time** as Country Office rely less on international deployments. For instance in Nepal, the study shows that investment in humanitarian trainings could potentially accelerate response time by 4 days and save up to 10,800USD over 2 weeks during a small type 2 emergency. However it is still **difficult to measure direct correlation between trainings and CARE's humanitarian impact**. Various contextual factors can impact skills return on investment:

- The turnover of staff, returns decreases as staff depart
- The demand for skills, it is impacted by frequency and duration of emergency work

Investment in processes (covered by the study: new EPP approach, commodity tracking systems, cash based intervention systems) **have significant return on investment** mainly as they reduce decision making time, accelerate deployment of personal and assets and simplify operations management during emergencies for a low cost. Various contextual factors can impact processes return on investment:

- The type of emergency (rapid or slow onset)
- The duration of the emergency (processes may need to evolve)

Cash Based Intervention systems and Commodity Tracking Systems can significantly increase CARE's efficiency in emergency response

National and regional rosters show limited return on investment

Investments in contingency agreements with local civil society partners significantly accelerate response time. For instance in Indonesia, the study shows that signing agreements with local partners at preparedness stage could accelerate response time by 14 days. This type of investment also has a

broader contribution to the humanitarian sector in strengthening civil society expertise and capacity. Various contextual factors can impact contingency agreements return on investment:

- The type of partner (civil society, public sector, private sector)
- The type of agreement (project, strategic, alliances)
- The pre-existing relationship
- The quality of services assumed by the partner
- The prices that can be negotiated in the market context of the country (for long term agreements with suppliers/service providers)

The study establishes **clear correlation between emergency preparedness and donor funding**. Good practices include relief goods pre-positioning for quick action thus demonstrating operational capacity and raising visibility; building responses on development programming for better targeting and resilience mainstreaming; joint preparedness with peers; developing generic proposals and nurturing humanitarian donors relationship at country level.

The study also explores a few "non-traditional" preparedness investments and highlights positive outcomes of CARE Members increased coordination on preparedness when pooling resources to support humanitarian in Indonesia; benefits of partnering with a private sector platform in Madagascar or impact of the Nepal Country Office relocation.

Conclusions and recommendations

All investments scoped through case studies (supplies, skills, processes, agreements) showed time and/or costs savings with investments in contingency agreements (local civil society and service providers) yielding the greatest time savings. **The favourable returns on investment are encouraging CARE and their donors to consistently invest in these preparedness areas**. In a current context where humanitarian needs are growing, are more complex and more expensive, up-front investment in preparedness would increase humanitarian impact and efficiency, ultimately saving more lives. As the four core preparedness areas are inter-connected, investments should be diversified and spread across these areas to maximise impact (i.e. pre-positioning relief items also needs skilled staff and long term agreements in place for an optimal response). The study also shows that preparedness investments are context related: investment with a high return in one country do not necessarily show similar impact in another country. Investment should be tailored to the complexities of each country. As such, introducing a constant **return on investment perspective throughout the emergency preparedness planning process would better inform how to use CARE's limited resources in preparedness**. In order to support this initiative, regular monitoring and tracking of key cost and time data should be integrated at Country Office level.

The study also generates specific recommendations:

- Supplies
  - Reconsider pre-positioning relief items, especially perishable items, in countries where disaster frequency is low
  - Reconsider pre-positioning relief items in countries where national and local supply chain systems are stable and privilege cash based interventions (with adequate systems in place)
  - Pre-position at local level rather than capital/central level, especially for predictable/seasonal disasters, it will allow CARE to react immediately and bridge urgent supply gaps in the early days of an emergency

  - Review UNHRD pre-positioning relevance and consider international pre-positioning directly in country if cost efficient.

- Skills
  - Favour team and in-country capacity development through simulations preferably over individual and international training.
  - Ensure clarity of trainings objective and systematically include and measure new developed skills in performance management systems
  - Increase staff exposure to humanitarian settings through more consistent TDY scheme

- Processes
  - Integrate (at least partly) return on preparedness investment approach in the new emergency preparedness planning process in order to inform better decisions on preparedness.
  - Mainstream Cash Based Interventions preparedness into the new emergency preparedness planning process
  - Set up Commodity Tracking Systems at Country Office level and invest in supply chain management
  - Reassess national and regional rosters' relevance, focus on better defining external Country Office staff support needed and pre-identify candidates in the global roster and rapid response team

- Contingency Agreements
  - Systematically favour partnership with long term development partners. Develop and sign contingency agreements in order to gain time ahead of disasters
  - Establish partnership with peers for preparedness and response in order to pool resources, boost efficiency, and grow humanitarian impact, increase effectiveness
  - Systematically develop and sign long term agreements with key service providers at country level

2. Introduction

2.1. Objectives

CARE has been significantly investing in emergency preparedness over the last decade. Time and resources have been mobilised to support preparedness activities at various levels: country, regional and head offices. While anecdotal evidence suggests that investment in preparedness has enabled faster and better responses, hard evidence and quantification of this is not readily available.

The objective of the study is to assess existing preparedness investments in terms of potential costs saved, response time gained and contribution to response quality. The study will also help CARE building the evidence base for impact of humanitarian preparedness work, guide CARE in preparedness investment choices and could lay the groundwork to developing business cases and advocacy materials for emergency preparedness investments.

2.2. Scope

The study focuses on preparedness activities that CARE have invested in the past 6 years. Four core areas are examined in three pilot countries, Indonesia, Madagascar and Nepal:

- Supplies and equipment (relief items pre-positioning; equipment pre-positioning; etc.)
- Skills (trainings of staff or partners; humanitarian workshops; e-learning, etc.)
- Processes (development of standard emergency operating procedures; development of cash programme systems; etc.)
- Contingency agreements (long term contracts with local suppliers; agreements with local partners; etc.)

The pilot countries were selected for their high exposure to natural disasters and because they have been recipients of specific dedicated preparedness funds (mainly through the Margaret A. Cargill Philanthropies).

2.3. Limitations

The methodology, particularly for the case studies, has been balancing qualitative and quantitative considerations. Unfortunately quantitative measurements have been limited due to delays in collecting data. Basic calculations on potential returns were based on available information including projects and Country Office budgets but also cost estimations for some parameters, therefore quantitative information should be seen as indicative mainly. This approach was completed by a qualitative analysis, mainly informed by desk review of key documentation and interviews with key stakeholders.

The four areas mentioned above represent the core traditional investments made through the Emergency Preparedness Plan process and focus on strengthening CARE's internal readiness to respond to emergency situations. The study covers the impact of preparedness as opposed to disaster risk reduction and resilience initiatives aiming at mitigating impact of disasters on population. Measuring the return on investment of DRR and resilience programming is not covered by this study and would require its own dedicated research as it encompasses a large range of elements that cannot be analysed due to insufficient time and resources.

The study only covers natural disasters as well as a limited number of countries (three pilot countries, Indonesia, Madagascar and Nepal were selected). While some patterns are similar across the three countries it is important to stress that all analysed investments are context related. It is therefore

difficult to generalise results to the rest of the organisation. Various external factors influenced the outcomes. Nonetheless the findings in this report are informative on the level and type of return that can be expected from different type of investments and indicate key trends that can be carefully used to build an evidence-based case for funding towards emergency preparedness. Moreover the methodology relies on risk scenarios and forecasts that are per nature uncertain.

Because of lack of time and available data, the study could not translate financial savings into an estimated number of additional affected persons could receive assistance if savings were to be reinvested in the investment itself.

The study also explores correlation between preparedness investments and fundraising during an emergency response. However it is difficult to generate evidence around enhanced ability to leverage donor funds for a response through greater preparedness, thus the study mainly collects good practices shared by key stakeholders on that matter.

3. Methodology

The return on investment approach is relatively new to the development and humanitarian sector. United Nations agencies were the first one to pilot researches on that front. The current study has been informed by several methodologies but most particularly the one developed by PricewaterhouseCoopers on behalf of OCHA, UNICEF, UNHCR and WFP (*Emergency Preparedness: Return on Investment Model Methodology*, January 2017). The methodology has been simplified and although uses quantitative measurement to some extent, it relies on qualitative approaches.

The key principle is that improved return on investment should be assessed by comparing scenarios: how does an emergency response occur under a risk scenario without having put in place the investment and how does it occur with the investment in place.

The methodology involves the following steps:

- Identify specific preparedness investments (2 – 3 investments per Country Office)
- Develop with and without preparedness investment scenario based on existing country risks
- Measure the impact of preparedness investments

3.1. Scoping investments

The study is scoping specific preparedness investment falling under four distinct categories: supplies, skills, processes, contingency agreements.

The investment cost is defined as the sum of all expenditure needed to set up the investment. In addition, effort from staff is also considered an investment. Costs are all expressed in USD.

Timeframe for the investment is also being looked at when possible as it may influence the return on investment for instance investment in staff skills may be affected by staff turnover or investments in preparing for unpredictable or infrequent disasters.

3.2. Risk scenarios

The investments are analysed against risk scenarios developed in the Country Offices emergency preparedness plans: type of risks, number of affected people, frequency, emergency duration and

ramping time. The study lists the top three risks in each country but because of time constraints, explores returns for one scenario only. The scenario is chosen in consultation with Country Offices.

Once risks scenarios are established, with and without preparedness investment scenario are developed in order to assess how the response would take place if the preparedness investment was not made and how the response would take place if the preparedness investment was made.

3.3. Returns

The study measures impact of preparedness investments on response quality, time gain and financial savings. In the case studies, the study also explores ad hoc preparedness initiatives that do not fall under the traditional categories but were mentioned by CARE staff as good or bad examples of preparedness.

Understanding to what extent an investment improves humanitarian performance is crucial however it proves difficult to generate hard evidence without an in-depth evaluation of a real response. The study measures investments' contribution to response quality against OECD-DAC humanitarian response evaluation criteria, comprehensive framework of performance standards.

Time savings are simply calculated with the difference between the lead time with the preparedness investment in place and without the investment in place.

Financial savings are calculated by carrying out a simple cost analysis occurring in both with and without preparedness investment scenarios. When appropriate, staff time/effort is also factored in.

As the methodology relies on one scenario, time and financial savings figures should be seen as indicative and reflect main trends only. They should be carefully used by users of this report as they can be influenced by many external factors in a real case scenario. Nevertheless most costs were based on real Country Office expenditures or Country Office conservative estimations of costs (to avoid overstating impact).

3.4. Beyond traditional investments

21 CARE staffs from various backgrounds and positions have been interviewed in the course of the study in order to gather various perspectives on emergency preparedness investments and potential returns. Various opinions were expressed on good and bad practices in emergency preparedness. Conversations backed by a non-exhaustive review of key CARE response documents (response strategies, after action reviews, internal reports, donor reports, etc.), the study intends to raise some meaningful examples around preparedness investment. These are not quantified and could be subject to more in-depth analysis.

4. Main results and general trends

4.1. Supplies and equipment pre-positioning

This type of investment is made before an emergency occur (an anticipatory investment), it means placing assets and/or commodities in a location and in manner that should improve speed and/or reduce cost of responding to an emergency.

Investments in pre-positioning of locally procured emergency relief items have no financial impact (it is more expensive to pre-position than to buy at the onset of a crisis) but save significant time towards emergency response.

Various contextual factors can impact supplies pre-positioning return on investment:

- **In-country transport time and reliability**
- **In-country price inflation for goods and services**
- **Security and infrastructure issues in pre-positioning areas**
- **Synergies with regular programmes**

4.1.1. Contribution to response

Improved appropriateness of the response through better quality and reliability of relief items is one of the main benefits from pre-positioning emergency stocks. The investment ensures that adequate quality (and quantity when enough resources available) of goods are immediately available. It also reduces reputational risks (or increases visibility) linked with delayed responses (see time savings) as well as can quickly raise CARE's media profile (through pictures of relief items and first distribution for instance) which can be instrumental in securing funding (see 4.5).

The investment boosts effectiveness (how well an activity has achieved its purpose) in two different ways:

- The reduced lead times to deliver assistance increase the speed at which targeted populations will receive aid (as a consequence of time savings, see below)
- Assuming the pre-positioned items are designed in accordance with international and national standards, the investment will meet the priority humanitarian needs of affected population as identified through needs assessment (shelter kits for an earthquake response, hygiene kits for a floods response, etc.). Redesigning kits after each response based on assessments and evaluations findings improves appropriateness of the response.

Pre-positioning perishable items (mainly soap in hygiene kits in the Country Offices part of the study) in countries where the frequency of disaster/response is low does not yield significant return on investment as items might be thrown after a certain period of time with the need to procure new items.

This type of investment in certain cases also increases efficiency providing the best intervention for the least resources spent, if there is a decrease in procurement and transport costs, which was demonstrated in the case of Madagascar only.

4.1.2. Time savings

Time savings for pre-positioning were analysed by comparing the delivery time of relief items with and without pre-positioning. Ordering and shipping time from suppliers to CARE warehouse, as well as delivery time to targeted population were taken into account.

A distinction between nationally and internationally procured goods needs to be made, even though there was no investment in internationally procured goods analysed under this study. Internationally sourced goods are likely to yield a better return on investment due:

- Long custom and clearance processes: procure internationally after the onset of a crisis is likely to delay even further the emergency operations, this can vary depending on the type of goods entering the country (ICT materials for instance have often constraining government regulations for importation)
- Increasing transportation costs during emergency operations: as the demand increases during emergencies, shipping costs are usually more expensive. The development of global agreements with shipping companies can mitigate this risk although transport availability can also be an issue for large responses.

United Nations Humanitarian Response Depot
Although global agreements and preparedness initiatives are not covered under this study, interviews indicated mixed feelings towards CARE's pre-positioned stock in Dubai UNHRD. While most CARE staff agreed storage costs were inexpensive, lead times on the other hand lengthy. Unless in-kind flights can be secured, an average of 2 weeks is needed for items delivery depending on customs regulations. **"Pre-positioning is about saving time, not saving money"** mentioned one of the interviewees. Despite an affordable initial investment, benefits seem limited. For many, it would make more sense to directly pre-position these items in countries with high frequency of disasters although international pre- positioning is costly.

Concerning nationally sourced goods, the time savings are variable but **generally pre-positioning does significantly accelerate the speed of response**. Only one Country Office's investment (Indonesia) in supplies showed minimal gain of time compared to a situation where there is no pre-positioning. This is mostly due to the specificities of the country – an archipelago facing logistical constraints in rapid movement of emergency commodities – and the location of stocks, in the present case located in Jakarta. Indeed the study showed that time to deliver goods to beneficiary would be similar between shipping from the central stock in Jakarta and procuring and shipping locally (on average 1 day gained). Indonesia shows stronger national supply chain and local markets and more consistent goods availability which allows quicker local procurement. Although the time gain is minimal**, it still makes sense to pre-position at local level rather than central level especially if the local supply chain system is impacted by the disaster, it will allow CARE to react immediately and bridge urgent supply gaps in the early days of an emergency**. Therefore pre-positioning a minimal amount of items remains essential. On the other hand Madagascar and Nepal showed high time savings from pre-positioning items (up to 4 weeks) because of weaker markets and supply chain management in country. Understanding markets dynamic is therefore critical in order to evaluate time gains in a response when deciding to pre-position emergency stocks.

4.1.3. Financial savings

In the three pilot countries, there was **no costs savings from pre-positioning local goods**. All investments ended up being more expensive than if same quantity and quality of goods were bought at the onset of the emergency:

- Indeed, stock pre-positioning implies storage costs that do not occur in case of immediate procurement during an emergency. Frequency of disasters/response impacts on these costs as well as decision to use the emergency stock (in some cases responses were

conducted without using the pre-positioned stock). In the three case studies, storage time is more than 1,5 year thus incurring high expenses.
- Even if considering price inflation at the onset of emergency (varying depending on the context) affecting commodities, transport and storage prices, as well as considering extra staff time invested at the start of the response, the cost of pre-positioning remains higher.

Other factors impacting return on investment of supplies pre-positioning are security and infrastructure issues. Relief items can be vulnerable to security risks particularly in conflict affected emergencies, or impacted by natural disasters. Loss of relief items would obviously mean loss of the initial investment without perspective of return. Mitigation measures should be identified in such conditions and appropriate level of security support provided. Quality of infrastructures (such as road) can also impact return on investment and should be carefully analysed to ensure the investment can reach its maximum potential.

4.2. Skills

Skills investments can have both a qualitative and a quantitative return on investment dimension. The qualitative dimension refers to the improvement in staff skills. The quantitative dimension includes changes in humanitarian response logistics that are made possible by having trained staff and partners in the right places (for instance reduce reliance on external deployments).

In qualitative terms, it was assumed that the different types of trainings resulted in enhanced in country staff capacity. Although the objective of the study is not to assess quality and impact of CARE's capacity building initiatives, trainings' outcomes were assessed and discussed with key CARE stakeholders. ELMP, CHEOPS and the Supply Chain management training were looked at for this study.

Investments in staff skills potentially show high return on investment partly because they are inexpensive and can have a ricochet effect without further investment (impact on other staffs' skills, processes, overall Country Office capacity and culture). <u>They can potentially save costs and accelerate response time</u> as Country Office rely less on international deployments. However it is still <u>difficult to measure direct correlation between trainings and CARE's humanitarian impact</u>.

Various contextual factors can impact skills return on investment:
- **The turnover of staff, returns decreases as staff depart**
- **The demand for skills, it is impacted by frequency and duration of emergency work**

4.2.1. Contribution to response

Training investment typically aims at improving quality of staff and partner during humanitarian emergencies however this type of investment also has a role in improving broader types of outcomes.

- Organisational culture: participants' degree of connectedness to the mandate and vision of CARE increases. Boosting confidence and understanding of humanitarian operations develops new sensitivity and mind-set usually shared with other colleagues. However it is important to reach a critical mass to influence an entire Country Office's culture, especially senior managers.
- Internal coordination (within CARE confederation and within Country Offices): participants' feel more confident reaching out for support, first because they know where to find the appropriate resource/support, secondly because they have a better understanding of their own capacity to deliver and challenges they have to confront.

Connecting directly with global advisors during trainings also facilitates this internal coordination

- Decision making: decisions are more appropriate, relevant and contribute to improved humanitarian response.
- Impact on processes: Trained staffs are more likely to be able to develop, implement or strengthen humanitarian processes.

These outcome areas were mentioned several times by key stakeholders however it remains extremely difficult to quantify impact of trainings on staff skills (developed skills should be systematically included and measured in performance management systems) and ultimately on response quality.

ELMP and CHEOPS trainings are praised but a large part of CARE stakeholders questioned its impact.

For instance when looking at the number of staff trained versus number of total CARE staff globally, the impact seems minimal and some would prefer a training of trainers approach (for CHEOPS mainly), although this would entail a very different set up. Some CARE staff also feel team training in country should always be prioritised over individual training in order to develop better inter-department synergies, communications, understanding of challenges and ultimately increase efficiency.

Another frequent comment from interviews: table top simulations give a sense of what managing emergencies involves, especially in terms of decision making in a volatile environment, however there is a general feeling that participants are not challenged enough and that the simulations does not represent what a real emergency context actually is in terms of stress, difficult working conditions, important workload, difficult staff dynamics, etc. A new global emergency training recently developed by CARE USA might address these challenges. Additionally, in country simulations (conducted during preparedness workshops) are usually more contextualised and help raising issues and challenges a Country Office may face in a disaster (see Appendix 1.3. and how Nepal moved their Country Office to an earthquake resistant building after the EPP workshop)

A regional approach for CHEOPS recently put in place was seen as a positive step however some feel it is still not contextualised enough. Key challenges and specificities of each region should be incorporated in the training for instance operational dilemmas: “the training does not equip you to make quick decisions on the spot on how to deal with an armed group asking to review your distribution lists for instance” an interviewee said.

On the other hand ELMP and CHEOPS had a wide range of positive impacts listed in the recent impact reports. Trainings obviously do not replace exposure and experience of a real emergency response and interviewees mentioned that TDY opportunities should be more systematic to give opportunity to promising staff.

4.2.2. Time savings

Time savings can be estimated by comparing time needed to deploy international staff or recruit additional national staff (with required skills). Based on human resource experience, it covers time to identify personnel, processing deployment (for the rapid response team) or recruitment as well as travel times to the emergency location. Again this is based on the assumption that trainings provide the necessary skills and level of confidence for a trained staff to be able to positively perform during a small scale response in autonomy. As deploying rapid response team members can take several days and recruitment several weeks, the speed of response can be greatly accelerated. Based on that

assumption, **investment in skills generate significant time savings** as in country team rely less on Rapid Response Teams or international recruitment which can be lengthy (up to 3 days for RRT and 3 weeks for recruitment).

However, investments in staff skills may yield marginally decreasing returns over time because of staff turnover. While the return on investment is likely to be positive despite turnover as staff build systems, and pass on their knowledge to others, these benefits decrease as time goes by and staffs departs.

4.2.3. Financial savings

To assess the potential cost savings of trainings, risk scenarios (informed by past experience) were rolled out based on additional external staffing needs (international) to ensure the same quality of service if the skills and competencies provided by the trainings were not available amongst existing staff. Explored under the initial work assumption (trainings increase staff skills), **humanitarian trainings represent a small initial investment with the potential to generate high costs savings**. Indeed it decreases the need to surge or hire staff, often at a high cost, to support the response as the Country Office itself developed its capacity and confidence to respond with less hands-on support.

4.3. Processes

Unfortunately Country Offices identified for this study did not include processes in the preparedness activities they wanted to be explored. These types of investment, which can be seen as transformation and enhancements of delivery mechanisms, are designed to set up more efficient and effective operational processes, systems and standards

Investment in processes have significant return on investment mainly as they reduce decision making time, accelerate deployment of personal and assets and simplify operations management during emergencies for a low cost.

Various contextual factors can impact processes return on investment:

- **The type of emergency (rapid or slow onset)**
- **The duration of the emergency (processes may need to evolve)**

Cash Based Intervention systems and Commodity Tracking Systems can significantly increase CARE's efficiency in emergency response

National and regional rosters show limited return on investment

4.3.1. Emergency Preparedness Planning

CARE's approach to emergency preparedness planning has been questioned over the past few years. An increasing part of the organisation has seen the EPP process as inadequate in supporting good planning. A majority of the stakeholders consulted felt it is still the case: not fit for purpose, disconnected from local operational and context realities, time consuming, often not used or referred to, Country Offices feel they go through the process in order to "tick the box" rather than integrating a useful preparedness planning into their internal systems. The investment in time and money (for the workshop – on average 5,000USD) is not seen as relevant.

On the other hand, the workshop provides a dedicated time within the Country Office to focus on preparedness planning. In many cases, if this time is not allocated then it is less likely that preparedness plans will be fully considered. The workshop also provides a dedicated opportunity for Lead Members and other technical CARE International staff to access the Country Office planning process around preparedness; build relationship and establish more constant communication as well as provides capacity building opportunities for new staff. Work on roles and responsibilities, capacity assessment or response strategies (among other preparedness topics) may sound redundant for some staff but is extremely useful for others as it builds automatisms and confidence, this was specifically the case during the Nepal 2015 Earthquake response that occurred just a few weeks after the EPP workshop. Staff reported greater understanding and awareness of how their positions could support relief efforts and actually thought of the workshop's simulation for guidance in the early days of the response (also see Appendix 1.3). The EPP can also be the starting point to develop contingency agreements, in some instances it was the foundation to start exploring local civil society partnership opportunities in response and initiated mapping of partners, capacity assessment, etc.

CARE has just developed a new approach and new guidelines for their emergency preparedness planning. The proposed approach is both more directive (it will includes adaptable tools/check lists/SOPs that will make preparedness less cumbersome for CO, and responses more predictable globally) and more adaptable (moving away from one standard emergency preparedness planning process to offering multiple avenues for humanitarian planning adapted to various contexts where CARE operates). The new process and guidelines are built around the management of the processes as oppose to emphasizing the centrality of an EPP workshop as well as more clearly define organisational preparedness and related accountabilities (based on past good practices such as CARE members' collaboration as showcased in the Philippines or Indonesia – see Appendix 2.3) It is currently being piloted in a few Country Offices.

4.3.2. Cash Based Intervention systems

Although CARE has not explored return on investment of its cash programming, various studies and documentation recognise its high efficiency. The return on investment is considered high because:

- Minimal investment is required to set up cash systems. If expertise is available in the Country Office, only staff would be required to implement the cash preparedness stages. If external support is required, preparedness costs will be slightly higher as it would imply deployment of a cash expert for a certain period of time to launch the process and train teams.
- Several factors can affect the overall efficiency of cash programmes, mainly prices of commodities that beneficiaries purchase in local markets which can vary significantly but also the type of delivery mechanism, the scale of the intervention or degree of competition in markets, however, the cost of getting cash to people is generally less than the cost of delivering commodity based assistance.
- The contribution to response quality is high. Goods and services that households access through cash transfers are diverse. Different sectors are impacted positively through a single activity: beneficiaries can use assistance according to their own capacities, risks and opportunities, thus supports resilience.

Cash preparedness could be institutionalised through CARE's new preparedness approach.

4.3.3. Commodity Tracking Systems

As described in the Nepal case study, the absence of robust commodity tracking system during the earthquake response in 2015 led to major inefficiencies. It affected CARE's ability to scale up programming rapidly, it diverted energy and resources to tracking back what was purchased with what and distributed where, it impacted CARE's ability to produce timely and accurate reports, thus damaging relationship with donors and leading to potential ineligibilities (see Appendix 1.3.). A recent Kuehne Logistics University study on humanitarian supply chain expenditures found out that supply chain expenditures accounts for 69% on average of relief operations (including cash based interventions). Interestingly, CARE Nepal estimates that logistics staff dedicated 40% of their time on average (up to 70% for the procurement officer) to support relief efforts during the recent flood response. **In order to boost efficiency and grow humanitarian impact, investment in supply chain should be considered a priority.**

4.3.4. National & Regional Rosters

One of the common human resources preparedness task for Country Offices is to set up and maintain a national emergency roster in place, usually comprised of former Country Office staff, consultants or former peers' staff. It is interesting to see how a majority of response reviews (mainly After Action Reviews) mention the need to update and review the national roster as it proved not very efficient during the time of the response. Indeed once the initial investment has been made (mainly staff time) meaning set up a data base, the difficult part is maintaining the roster up to date: what is the most effective vetting system? How often to contact people to update their situation and availabilities? How and when to integrate new members? A non-exhaustive review of After Action Reviews show that the return on investment appears extremely limited and that national rosters are often not used during emergencies.

Regional rosters also showed similar challenges and limited return on investment (but minimal initial investment tempers the impact). The Asia Pacific roster for instance has faced many challenges for instance. Despite being a good initiative with some positive experiences, the 2015 Nepal earthquake response is a good example of the limitations of the regional roster: around 15% of deployments were from the Asia region and only a few were really fit for purpose (raising issues around vetting system but also lack clear identified needs from the requesting Country Office): the first phase of a response requires more than just good will and roster members must add value that cannot be found locally through solid experience, technical knowledge, leadership and decision making ability. It raised some key questions: how can CARE best assess candidates offered by the region against what is available locally or through the global roster? How can CARE use the best regional staff appropriately in light of any cultural tensions? How can CARE craft feedback to the Country Office that does not discourage regional candidates, the regional roster initiative, or collaboration among Country Offices? Although the regional roster also included a capacity development component (through TDY and increased exposure to small disasters for junior staff), **relying on trained and experienced responders (CARE rapid response team) seems like a better option for the relief phase**.

4.4. Contingency agreements

This type of investment is made before an emergency occur (anticipatory investment), it means reaching agreements with emergency response partners (local partners/operational partners and/or service providers) before they are needed.

Investments in contingency agreements with local civil society partners significantly accelerate response time as well as have a broader contribution to the humanitarian sector in strengthening civil society expertise and capacity.

Various contextual factors can impact contingency agreements return on investment:

- **The type of partner (civil society, public sector, private sector)**
- **The type of agreement (project, strategic, alliances)**
- **The pre-existing relationship**
- **The quality of services assumed by the partner**
- **The prices that can be negotiated in the market context of the country (for long term agreements with suppliers/service providers)**

4.4.1. Contribution to response

Contingency agreements improve the reliability of CARE responses as they can significantly extend geographic coverage, increase speed and implement adequate responses through existing networks of partners with strong local knowledge of the context. However these **benefits are usually better when working with partners in contexts where CARE has been active before the emergency hits**: teams are familiar with the context and the groups are well positioned to respond. This may include existing partners where there is already a level of trust and knowledge of each other, systems that makes it possible to quickly shift roles. Too often, though, existing partnerships are put on hold as CARE organize new, separate relief efforts and shift to coordination with other international actors. It can put partners in a precarious position, not knowing the future of their relationship with CARE at a very uncertain time in their country also compromising the partnership principles of equality and transparency. Going beyond project delivery requires a greater initial investment in time but also financially to keep nurturing this relationship: the potential **returns go far beyond responding to a disaster only and can impact civil society capacity, structure as well as broader public policies**. For instance the alliance created in Madagascar with other INGOs generate returns on advocacy and influence towards authorities and other humanitarian stakeholders (see Appendix 3.3). On the other hand, Indonesia is setting up more traditional partnerships with civil society based on capacity building and assistance delivery (see Appendix 2.2.).

4.4.2. Time savings

The **investment yields considerable time savings**, if no agreement in place, new agreement would need to be negotiated, designed and signed after the disaster's onset and thus before commencing any emergency operations for Country Office responding only through local partners. Assuming partners' mapping and due diligence process has not been done at preparedness stage, the time needed would be even greater and could go up to several weeks. However the relationship and level of trust with a local organisation, even if no agreement in place, can also positively or negatively impact the time factor. Having an existing relationship would greatly accelerate speed of response.

4.4.3. Financial savings

Strategic partnerships take time and resources to set up. If looking at signing preparedness agreements only, the initial investment is the staff time spent in negotiating the agreements. However a partnership with local civil society takes time and resources not only to set up but to manage and grow. Additional costs include organisational strengthening, training, technical support, accountability, monitoring and evaluation. While there is insufficient data available to quantify the

average efficiency of working with a partner, it is often described **as less efficient** because of these additional costs not always balancing the lower operational and human resources costs of partners.

4.4.4. Long term agreements

Contingency agreements with suppliers/service providers or long term agreements can cover various types of commodities or services, the primary objective for signing this type of agreement is to save time and ensure rapid availability of specific relief items or services (particularly transport services). Unfortunately, no investment in this category was identified by pilot Country Offices to be explored. However, all three Country Offices mentioned that had long term agreement in place with various service providers. The return on investment can significantly vary from country to country. In the case of Madagascar, prices negotiated in the agreement are much lower than market prices, sometimes reaching half the market value, yielding significant cost savings. For the other two countries there was **no cost saving observed but time saving due to shorter procurement procedures and delivery time by suppliers**. Although not specifically observed with the pilot countries, long term agreements could lead to a better reliability of responses as items specifications are agreed ahead of a disaster and suppliers contractually obliged to deliver goods and services at a pre-agreed cost and time frame. To some extent this could also boost local economy through increase of local procurement.

4.5. Preparedness as donor funds leverage

While it is difficult to generate evidence on links between preparedness and fundraising in emergencies, experience and past responses give some indication on that correlation.

- Good preparedness accelerates speed of response and as such greatly raises CARE's visibility among humanitarian stakeholders including donors and the public. Being first to hit the ground gives CARE an advantage showing donors the organisation has or is setting operational presence in the affected area. It builds donors confidence in CARE's capacity to respond. This can also be increased through CARE Emergency Response Fund allocation. It also allows CARE to quickly communicate around the emergency, raise the media profile and eventually attract additional funding.
- Time is not the only factor increasing chances to fundraise: deep understanding of the context and local dynamics even before starting needs assessment shows donors that CARE is able to quickly identify vulnerabilities and have a coherent targeting of the population most in need. The emphasis on quality programming is usually possible because of CARE's long term presence. Building response on existing development programming is also part of the emergency preparedness planning process, as well as understanding of gender dynamics and how they were impacted (through the Gender in Brief document, developed at preparedness stage and quickly shared with donors during an emergency) If able to demonstrate it to donors, it will significantly increase chances of fundraising.
- Coordinated preparedness: as donors are looking more and more for global and coordinated response, the ability to develop joint preparedness plans, map capacities, expertise and areas of presence increases chances to attract quickly attract funding in a consortium or bi-laterally (see Appendix 3.2)
- Emergency preparedness plans include generic response strategies that can be used to quickly draft proposals. Especially in rapid onset disasters where call for proposals have a very short turnaround, this can give CARE an important advantage.

- Donor preparedness: although not clearly articulated in the original preparedness planning guidelines, it is essential to map humanitarian donors, build and maintain good relationship, regularly share key information so that CARE is best positioned to fundraise during the emergency. CARE Members should play a crucial role on that matter. If CARE is able to attract significant funding during the relief phase, it is usually easier to secure recovery funds as well.

5. Challenges carrying out the study

One of the main challenges faced carrying out this study was data collection. Mainly because of time constraints and because Country Offices had a short turnaround to provide data, many information could not be collected on time. However, the fact that Country Offices could not find data quickly also highlights institutional knowledge challenges CARE has been facing.

Below is a non-exhaustive list of data that could be consistently monitored and recorded in order to track preparedness investment. In addition to tools presented in appendix, it should provide CARE a basis to be able to evaluate return on preparedness investment.

	Financial investment	**Time investment**
Supplies	Cost of items prepositioned Cost of transport to point of prepositioning Cost of staff for prepositioning Cost of warehousing at prepositioning site Cost of operations at prepositioning site Cost of staff at prepositioning site Inflation rate during emergencies	Time from origin to prepositioning site by land Time from origin to prepositioning site by sea Time from origin to prepositioning site by air Time from prepositioning site to distribution site
Skills	Cost of trainer/facilitator Cost of venue Cost of accommodation Cost of training material Cost of staff travel Cost of per diem	Time to design training Time to implement training Time of staff travel
Processes	Cost of staff to design process Cost of staff to implement process Cost of staff to maintain process	Time of staff to design process Time of staff to implement process Time of staff to maintain process
Agreement	Cost of staff negotiating agreement Cost of staff finalising agreement Cost of staff maintaining agreement	Time of staff negotiating agreement Time of staff finalising agreement Time of staff maintaining agreement

6. Conclusions and recommendations

All investments scoped through case studies (supplies, skills, processes, agreements) showed time and/or costs savings with investments in contingency agreements (local civil society and service providers) yielding the greatest time savings. The favourable returns on investment are encouraging CARE and their donors to consistently invest in these preparedness areas. In a current context where humanitarian needs are growing, are more complex and more expensive, up-front investment in

preparedness would increase humanitarian impact and efficiency, ultimately saving more lives. As the four core preparedness areas are inter-connected, investments should be diversified and spread across these areas to maximise impact (i.e. pre-positioning relief items also needs skilled staff and long term agreements in place for an optimal response). The study also shows that preparedness investments are context related: investment with a high return in one country do not necessarily show similar impact in another country. Investment should be tailored to the complexities of each country. As such, introducing a constant return on investment perspective throughout the emergency preparedness planning process would better inform how to use CARE's limited resources in preparedness. In order to support this initiative, regular monitoring and tracking of key cost and time data should be integrated at Country Office level. The study also generates specific recommendations:

- Supplies

- Do not pre-position relief items, especially perishable items, in countries where disaster frequency is low
- Where national and local supply chain systems are stable and where countries face multiple small scale emergencies that don't necessarily warrant a CARE response, prioritize cash-based interventions over pre-positioning relief items.
- Pre-position at local level rather than capital/central level, especially for predictable/seasonal disasters, it will allow CARE to react immediately and bridge urgent supply gaps in the early days of an emergency
- Review UNHRD pre-positioning relevance and consider international pre-positioning directly in country if cost efficient.

- Skills

- Favour team and in-country capacity development through simulations preferably over individual and international training.
- Integrate metrics for measuring the application of skills developed in trainings and other capacity building efforts within performance management (i.e., in annual appraisals)
- Increase staff exposure to humanitarian settings through more consistent TDY scheme

- Processes

- Seek ways to integrate return on preparedness investment approach in the new emergency preparedness planning process in order to inform sound decisions.
- Track selected indicators (ref. page 18) to build a better business case for investment in preparedness
- Mainstream Cash Based Interventions preparedness into the new EPP process
- Ensure Commodity Tracking Systems at Country Office level are scalable in the event of emergencies; invest in supply chain management
- Reassess national and regional rosters' relevance, focus on better defining external Country Office staff support needed and pre-identify candidates in the global roster and RRT for high-risk countries

- Contingency Agreements

- Systematically favour long-term partnerships with local organizations. Develop and sign contingency agreements in order to gain time ahead of disasters
- Establish partnership with peers for preparedness and response in order to pool resources, boost efficiency, and grow humanitarian impact, increase effectiveness
- Systematically develop and sign long term agreements with key service providers at country level

APPENDIX

1. CARE Nepal case study

1.1. Country Profile

Nepal is a low income country in South Asia and is a highly prone disaster country. The mountain area in the north is characterized by steep mountains with significant risks from landslides, avalanches, and increasing climate risks associated with melting glaciers. The hill area in the middle of the country roughly aligns with the Main Himalayan Thrust fault which runs across Nepal and includes the area in which Kathmandu, Nepal's capital city is located. The Terai to the south is an area of fertile plains, grasslands, and forests that is the agricultural hub of Nepal, but exposed to significant flood and drought risks.

Map 1 – Overview of hazard risks in Nepal[1]

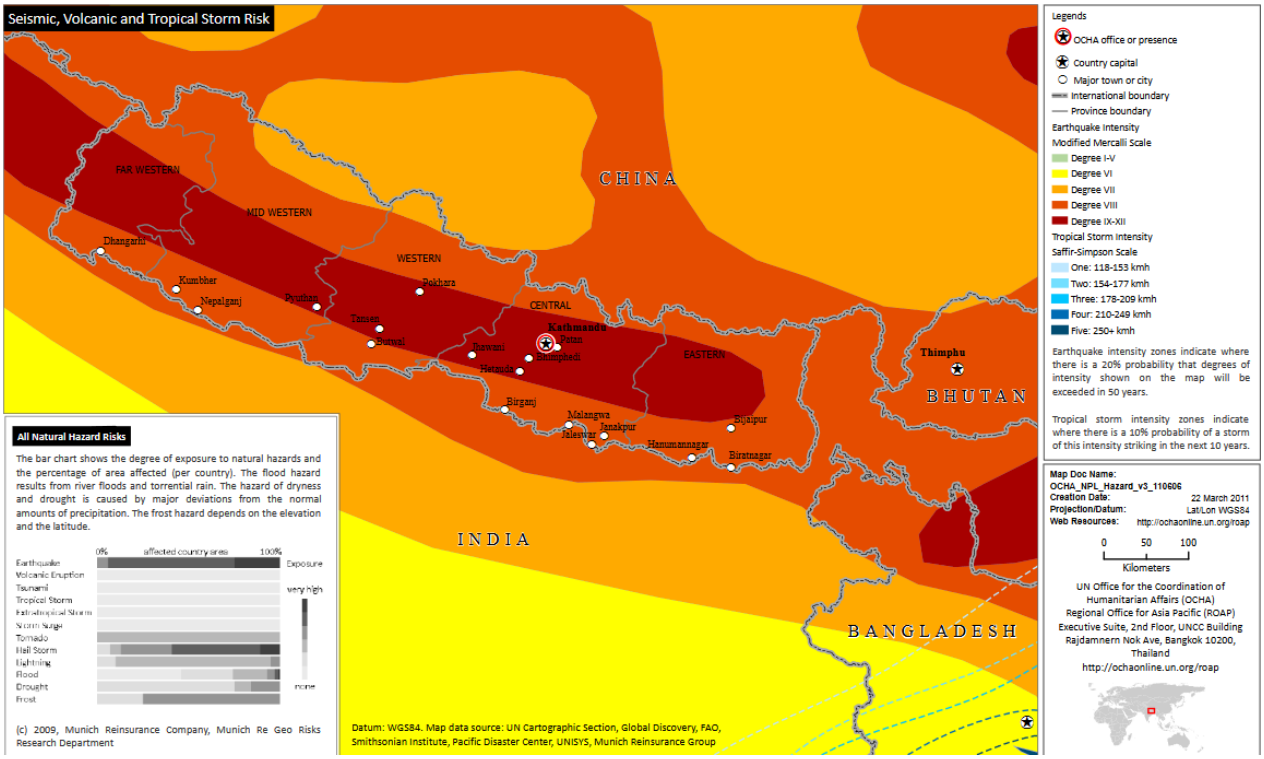

Table 1 – Risk indicators[2]

	Value	Rank	Trend
INFORM Risk	5.1	43	-
Hazard & Exposure	5.4	42	-
Vulnerability	4.2	70	-
Lack of coping capacities	5.9	52	-

[1] UNOCHA, Regional Office for Asia Pacific
[2] Inform Index for Risk Management 2018, IASC and European Commission

The combination of high exposure to natural hazards (mainly earthquakes and floods), the population vulnerability (socio-economic, high number of vulnerable groups and general inequality) and a high lack of coping capacities (governance, institutions, physical infrastructures and access to healthcare being the main issues) makes Nepal a high risk country (classified as such by CARE International). The high frequency of disasters in Nepal (CARE responded to at least 1 emergency per year over the past three years) makes the investments in scope more likely to be used. It increases the return on investment (i.e. if the investment is never used, it loses its relevance. Higher frequency of disaster and therefore higher use of the investment increases the return on investment).

Table 2 – EPP scenarios CARE Nepal

	Risk 1	**Risk 2**	Risk 3
Emergency type	Earthquake (large scale)	**Seasonal floods**	Landslides
Time profile	Rapid onset	**Rapid onset**	Rapid onset
Affected people	3 million	**30,000**	50,000
Frequency	Every 20 years	**Annually**	Annually
Cyclical/non-cyclical	Non-cyclical	**Cyclical**	Cyclical
Emergency duration	3 months	**1 month**	1 month
Ramping up time	1 day	**1 - 7 days**	1 day

The three main scenarios identified by CARE Nepal in their emergency preparedness plan are earthquake, floods and landslides. The investment analysis was made on the basis of scenario 2 (Seasonal floods) as it represents the most common disaster in Nepal.

Table 3 – Past responses since 2015 CARE Nepal[3]

Year	Emergency	Type	Pop Affected	Pop Reach	Total funding
2017	Floods	2	1,700,000	17,961 (ongoing)	161,000
2015	Earthquake	2	2,800,000	130,401	21,164,936
2015	Floods	2	169,453	9,088	No data

[3] CARE International (CEG), *Global Emergency Response Tracker*, September 2017

1.2. Preparedness investments in scope

1.2.1. Supplies and equipment

Following the earthquake in 2015, CARE Nepal prepositioned 300 hygiene kits and 200 NFI kits in July 2016 in three districts. The total cost for this investment including storage, operations and staff cost is around 45,820USD over 1,5 years.

Table 4 – Summary of cost for supplies pre-positioning

COST	**Relief Items Cost**	**Warehousing Cost**	**Operations Cost[4]**	**Staff effort[5]**	**TOTAL Investment**
With preparedness investment (current situation)					
200 NFI kits & 300 Hygiene kits	26,000	17,100	2,720	No data	**45,820**
Without preparedness investment					
200 NFI kits & 300 Hygiene kits	27,300[6]	1,140[7]	2,856	No data	**31,296**

Table 5 – Summary of lead times for supplies pre-positioning

TIME	**Time to procure items**	**Supplier to warehouse**	**Warehouse to distribution**	**TOTAL Lead time**
With preparedness investment (current situation)				
200 NFI kits & 300 Hygiene kits	-	-	2 days	2 days
Without preparedness investment				
200 NFI kits & 300 Hygiene kits	10 days	2 days	2 days	14 days

Contribution to emergency response

CARE Nepal's investment in supplies increase efficiency and effectiveness during emergency response

Hygiene kits and household NFI kits are commonly used during emergencies. Pre-positioning ahead of disasters allows CARE Nepal to procure good quality items, at least up to minimum standards in Nepal as defined by the national sectoral technical working groups[8], (often at a better price – see financial savings) which can be hard to find in Nepal in the midst of an emergency. The urgency to purchase quickly during an emergency and the lack of goods' availability sometimes leaves no choice but to

[4] Operations costs include transport from supplier to distribution site as well as potential handling costs (scenario based)
[5] Staff effort include all staff related cost regarding procurement, warehousing, security.
[6] Average inflation of 5% during emergencies
[7] Although just a few days of storage would be needed, this amount equals 1 month of storage.
[8] Shelter Cluster Nepal, *Strategic and technical guidance*, October 2015 & WASH Cluster Nepal, Approved hygiene kit

compromise on items quality. According to past experience, items availability remains constant though varies from region to region. Quality on the other hand is an issue. Therefore, pre-positioning positively impacts on the appropriateness of the response with good quality, culturally and diversity sensitive items. In the hypothesis of the floods scenario, the investment also meets the effectiveness criteria as identified items meet priority humanitarian needs identified through needs assessment: hygiene kits improves health and access to safe water and NFI/shelter kits increase access to basic commodities.

Time and financial savings

CARE Nepal's investment in pre-positioned supplies accelerate response time by 12 days on average

CARE Nepal's investment in pre-positioned supplies costs 15,000USD more than if procured at the onset of the emergency

It is important to distinct national and international sourced goods. The current pre-positioned stock was procured locally: due to the local supply infrastructure, the prices of commodities can experience slight peaks during emergencies. From the Country Office experience, at least 5% price inflation is observed during emergencies. This also impacts warehousing costs (if no prior agreement in place) of about 3 to 5% as well as transport costs (similar increase)[9]. However, this inflation remains low and the cost savings limited. Indeed, procuring at the onset of the emergency could save up to 15,000USD, this is mainly due to storage costs over a long period without using it but the pre-positioning allows a faster response. Having the stock in place can save up to 12 days depending on the availability of goods; the lead time saved due to pre-positioning is significant (it includes procurement and transportation times).

International sourced items on the other hand can have strong return on investment because of air transport costs significantly more expensive than a sea transport costs in the eventuality of pre-positioning international goods. The time gain is also extremely significant and can range between 15 – 30 days depending on the type of item to import in country. This also varies according to specific customs regulations on humanitarian assistance put in place by the government.

1.2.2. Skills

Three CARE Nepal staff attended the CHEOPS training for a total of 4,500USD (1,500/person) and 2 attended ELMP for 3,600USD (1,800/person) over the past 5 years.

Contribution to emergency response

CARE Nepal's investment in skills improves humanitarian culture at Country Office level

[9] Centre for Integrated Emergency Management, University of Agder, Norway, *Mitigating transportation risks at humanitarian supply chains: insights from the 2015 Nepal earthquake.*

The direct benefits of emergency trainings are enhanced staff capacities thus reducing dependence on the rapid response team and external staff support during emergencies. However, quality of trainings can vary considerably and benefits would need to be further analysed. It is likely that investing in skills development would support a more appropriate response (relevance criteria) as well as increasing the speed of the response with more skilled, experienced and confident staff (effectiveness criteria).

Investing in skills in Nepal also proved to improve the organisational culture[10] (at Country Office level): staff that attended CHEOPS, ELMP and Supply Chain all reported behaviour change towards emergency work: more confidence in conducting emergency tasks, more consistence in implementing preparedness actions as well as improved engagement with global advisors and other resources available in CARE.

Time and financial savings

CARE Nepal's investment in skills potentially saves up to 10,800USD in deployment costs

CARE Nepal's investment in skills potentially accelerate response time by 4 days

To assess the potential cost savings of trainings, the floods scenario (informed by past experience) was rolled out based on additional external staffing needs (international) to ensure the same quality of service if the skills and competencies provided by the trainings were not available amongst existing staff. This is based on the assumption that CHEOPS and ELMP provides the necessary skills and level of confidence for a trained staff to be able to carry out their tasks in a small scale response in total autonomy. Discussions with senior staff at CARE Nepal echo this hypothesis: ELMP and CHEOPS reduce dependence to international deployments although again, it is difficult to directly quantify. As such, the scenario provides an idea of potential savings.

In the floods scenario one team leader and one technical advisor are likely to be deployed for a short period of time (2 weeks, based on the 2015 floods response[11]). Additional national staff would be needed to implement activities as soon as funding is secured. These additional staff would be needed regardless of the level of staff skills (it is assumed the extra operational volume needs extra human resources in all cases) and thus not accounted in the calculation.

Table 6 – summary of cost for international support (Nepal 2015 floods response)

	# int. staff	**daily rate**	**# days**	**TOTAL**
Cost	2	450USD	12	10,800

[10] CARE International (CEG), *CHEOPS impact report*, June 2017
[11] CARE Nepal, *After Action Review Floods response*, January 2016

The time savings follow the same logic and are estimated by comparing time needed to deploy international staff or recruit additional national staff (with required skills). Based on human resource experience, it covers time to identify personnel, processing deployment (for the rapid response team) or recruitment as well as travel times to the emergency location. See below the potential number of days saved equals to 4. Again this is based on the assumption that CHEOPS provides the necessary skills and level of confidence for a trained staff to be able to lead a small scale response in total autonomy. It is also important to mention that in the case of international recruitment (as opposed to rapid response team deployment) to take up to 4 weeks. The return on investment would thus be even greater.

Table 7 – summary of time for international support (Nepal 2015 floods response)

	Identifying candidate	**Deployment process**	**Travel to emergency site**	**TOTAL**
Time	2 days	1 day	1 day	4 days

It is important to mention the impact on staff turnover on the return on investment. Although it was not possible to quantify this impact, investments in staff skills may yield marginally decreasing returns over time because of staff turnover. CARE Nepal estimated their staff turnover at about 5% of the total staff per year. However the return on investment in skills is still likely to be positive despite turnover as staff build systems, and pass on their knowledge to others, even if these benefits decrease as time goes by and staffs depart.

1.2.3. Processes

CARE Nepal is looking at implementing all steps of Cash Based Intervention preparedness (based on CARE's CBI guidelines[12]). However the cash project is in its early stages of implementation thus the investment could not be analysed. Only basic sensitisation was conducted during the Emergency Preparedness Workshop in December 2016[13]. At this occasion CARE Nepal staff familiarised themselves with the feasibility study tool which allowed a better understanding of potential benefits and challenges. It also developed basic knowledge on market structure and dynamics. Further preparedness investments are required to conduct a full feasibility study, develop and integrate methodology on rapid assessments of post crisis markets and the resulting impact on cash and voucher modalities, develop identification and registration systems, sign financial arrangement with banks and mobile phone companies, training of local partners, etc…. Once these systems are in place, strong evidence from other countries and agencies suggests that a future cash based intervention would not only improve CARE Nepal's cost efficiency[14] but would also have strong positive impact on affected communities.

1.3. Beyond traditional investments

[12] CARE International, *Guidelines for Cash Based Intervention*, February 2016
[13] CARE Nepal, *Emergency Preparedness Planning - workshop notes*, December 2016
[14] C. Cabot, S. Bailey, S. Pongracz, *Value for money of cash transfers in emergencies*, February 2015

Relocating CARE Nepal's Kathmandu office

Following the emergency preparedness planning workshop in 2013, CARE Nepal took the decision to move the Country Office in Kathmandu to an earthquake resistant building. The growing awareness of Country Office staff on potential risks, at a personal level but also at an organisational level, led to this critical decision. Although the duty of care and staff safety was paramount in the decision, the understanding that the destruction of the CARE office would totally paralyse operational response capacity for a significant period of time also motivated the motive. The decision implied a significant investment in time and cost but proved to be extremely relevant. Indeed, during the 2015 earthquakes (April and May) the Kathmandu office stood still and emergency operations were able to be organised on the first day following the shock. It is difficult to quantify the time and costs savings but it is likely that the return on investment was high. Response would have been significantly delayed and at a higher cost: losing key equipment and data, establishing operations centre in a temporary place (probably at a high cost), locating a new office, refurnishing office and procuring basic equipment, etc. The negative impact of staff morale (already heavily affected by the earthquake) would have been greater and could have affected performance as well.

Leveraging donor funds through preparedness

In August 2015, excessively heavy rains caused landslides and flooding in 5 districts of mid-western Nepal affecting 143,000 persons. CARE Nepal responded to the emergency in 3 districts, the initial assistance was provided with prepositioned shelter and NFI kits. The Country Office was able to respond within days to the emergency and showcased its operational capacity and readiness to the humanitarian stakeholders. As a result, ECHO directly approached CARE Nepal and expressed interest in funding the response. ECHO representative in Nepal joined CARE in a field visit in the early days of the response and was convinced of CARE's capacity. CARE Nepal has been the only ECHO recipient for this response. Other factors played in CARE Nepal's favour such as operational presence in the affected districts (although limited), existing good relationship with ECHO, international deployment of emergency personnel, however the ability to deliver services quickly is seen as central for ECHO's decision to fund CARE Nepal.

Weak commodity tracking system

During the 2015 earthquake response in Nepal, the lack of systems to deal with commodities led to inefficiencies in the response[15]. It was difficult to track which item bought under what grant was distributed where. A huge amount of time was spent backtracking the information, it also shifted the focus away from the newly approved grants impeding actual implementation of those projects in the initial stage and created additional workload. Again it is difficult to quantify potential time gained if the commodity tracking system had been in place but it is likely that the response speed would have been faster. Similarly, CARE Nepal requested support of two head office staff to set up a "light" version of the commodity tracking system in Nepal. They deployed for two weeks in the Country Office at a significant cost which could have been avoided if dealt with at preparedness stage. Not only would improving systems result in cost and time savings, they could also enable CARE Nepal to better reach growing beneficiary populations.

[15] CARE Nepal, *After Action Review 2015 Earthquake Response*, September 2015 & CARE USA, *Commodity Tracking System Project, Phase I*, November 2016

2. CARE Indonesia case study

2.1. Country Profile

Indonesia is a middle income country in South East Asia and one of the most disaster-prone countries in the world mainly due to its geology and geography (location in the Pacific Ring of Fire), its demography (it is the 4th most populated country in the world) and its current rapid urbanisation and modernisation. The country regularly faces multiple hazards, mainly earthquakes, volcanic eruptions, tsunamis, floods, landslides and droughts. Coastal and urban populations are most at risk, particularly in the volcanic regions Sumatra and Java and across the islands to Papua.

Map 2 – Overview of seismic, volcanic and storm risks in Indonesia[16]

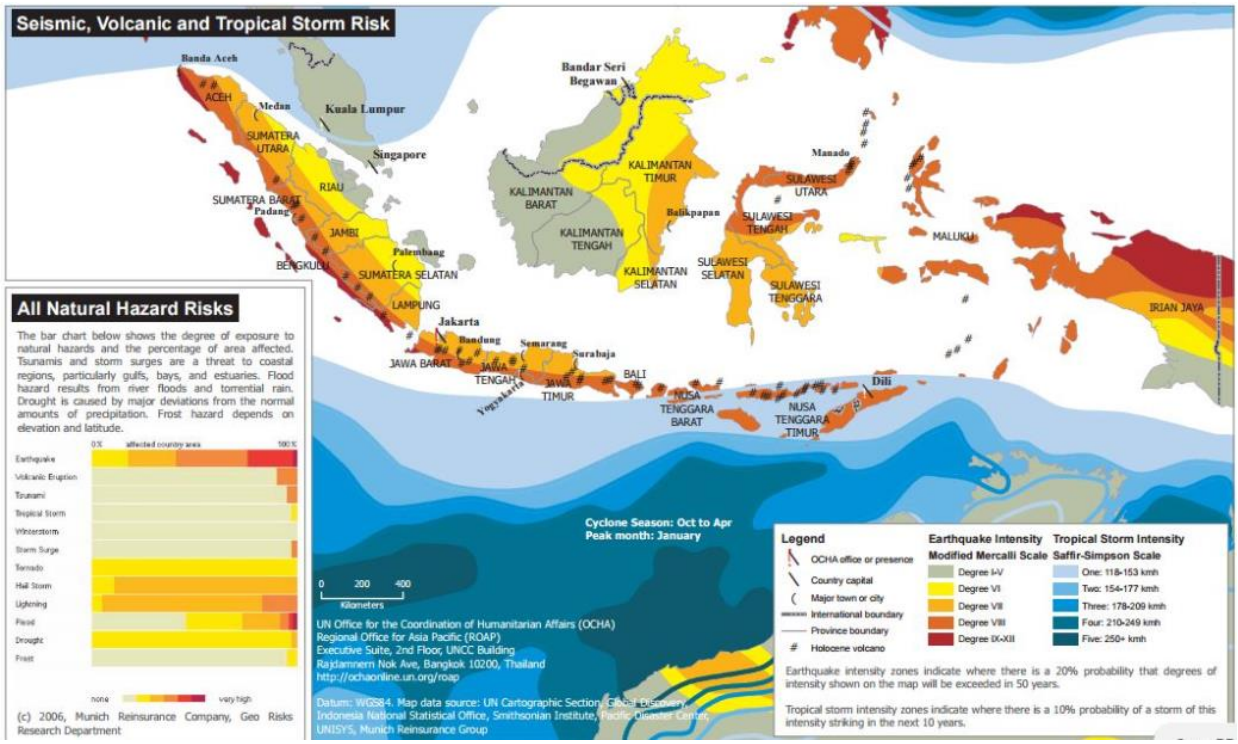

Table 7 – Risk indicators[17]

	Value	Rank	Trend

[16] UNOCHA, Regional Office for Asia Pacific
[17] Inform Index for Risk Management 2018, IASC and European Commission

INFORM Risk	**4.4**	**61**	-
Hazard & Exposure	**7.3**	**15**	-
Vulnerability	**2.5**	**116**	-
Lack of coping capacities	**4.8**	**80**	-

While its hazard exposure remain high, population's vulnerability and coping mechanisms have slightly improved over the past decade. However the government capacity to response remains relatively limited to respond to large disasters (2004 Tsunami) as well as small scale emergencies. Indeed, despite the creation of the National Disaster Response Agency (BNPB), it is not represented throughout the decentralized system and does not have capacity in Indonesia's 500 plus districts. Additionally, as the largest archipelago in the world (more than 18,000 islands), the country can face significant logistical constraints in rapid movement of emergency commodities and service.

The three main scenarios identified by CARE Indonesia in the emergency preparedness plan are earthquake, volcanic eruptions and floods. The investment analysis was made on the basis of scenario 1 (earthquake in rural areas) as it represents a common disaster in Indonesia.

Table 8 – EPP scenarios CARE Indonesia

	Risk 1	Risk 2	Risk 3
Emergency type	**Earthquake**	Volcanic eruption	Floods
Time profile	**Rapid onset**	Rapid/Slow onset	Rapid onset
Affected people	**300,000 (rural areas)** **3 million (urban areas)**	200,000	500,000 (rural areas) 3 million (urban areas)
Frequency	**Low**	Low	Annually
Cyclical/non-cyclical	**Non-cyclical**	Non-cyclical	Cyclical
Emergency duration	**3 months**	1 - 6 months	2 months
Ramping up time	**1 day**	3 days	1 – 7 days

Table 9 – Past responses since 2014 CARE Indonesia[18]

Year	**Emergency**	**Type**	**Pop Affected**	**Pop Reach**	**Total funding**
2016	Earthquake	1	85,131	2,000	23,750
2014	Floods	1	96,593	5,280	68,552

2.2. Preparedness investments in scope

3 emergency preparedness investments were analysed for Indonesia, covering 3 different types of investment defined in the study. These 3 investments were all fully funded under the Margaret A. Cargill Foundation preparedness grant.

[18] CARE International (CEG), *Global Emergency Response Tracker*, September 2017

2.2.1. Supplies and equipment

CARE International Indonesia pre-positioned 2,000 hygiene kits (buckets, soap, detergent, sanitary napkins) in Jakarta for a total cost of 10,000USD.

Table 10 – Summary of cost for supplies pre-positioning

COST	Relief Items Cost	Warehousing Cost	Operations Cost[19]	Staff effort[20]	TOTAL Investment
With preparedness investment (current situation)					
2000 hygiene kits	10,000	1,636	10,800[21]	1,235	**23,671**
Without preparedness investment					
2000 hygiene kits	10,500[22]	-	11,340[23]	250	**22,090**

Table 11 – Summary of lead times for supplies pre-positioning

TIME	Time to procure items	Supplier to warehouse	Warehouse to distribution	TOTAL Lead time
With preparedness investment (current situation)				
2000 hygiene kits	-	-	3 days	3 days
Without preparedness investment				
2000 hygiene kits	3 days	-	1 day	4 days

Contribution to emergency response

Similar to the other pilot countries, the investment seems to meet several quality criteria: first of all effectiveness as the hygiene kits are aiming at improved health and access to safe water. However in the case of CARE Indonesia, the hygiene kits were not utilised for a long period of time (no responses between 2014 and 2016), perishable items such as soap will need to be replenished therefore decreasing the return on investment. Similarly the pre-positioning of 3,000 masks (not analysed in the case study) does not match the quantity of hygiene kits (2000 kits cover needs of around 8000 persons) when looking at potential number of population affected, its humanitarian impact would be limited.

Effectiveness is not particularly improved as lead times to deliver assistance are similar. Because of a stable supply system in Indonesia, goods quality seems less of an issue; it remains possible to procure up to standards relief items during emergencies, especially in large urban centres[24]. The need for a pre-agreed vendor's list remains critical in a scenario without preparedness investment: if the

[19] Operations costs include transport from supplier to distribution site as well as potential handling costs (scenario based)
[20] Staff effort include all staff related cost regarding procurement, warehousing, security.
[21] Cost incurred in the case goods cannot be shipped *pro bono* by the logistics cluster or Red Cross
[22] Average inflation of 5% during emergencies
[23] Cost incurred in the case goods cannot be shipped *pro bono* by the logistics cluster or Red Cross
[24] The Logistics Institute Asia Pacific*, Disaster Relief Supply Chains: addressing challenging in robustness and resilience to enable efficiency and effectiveness in humanitarian response*, December 2015

investment does not affect product quality, time and costs still have a significant impact on the investment.

Time and financial savings

CARE Indonesia's investment in supplies pre-positioning does not yield significant return on investment. Time and cost savings are similar with and without the investment

CII tends to rely on national procurement mainly, even in large emergencies. Because of its unique geography (world's largest archipelago composed of more than 18,000 islands), the return on investment of pre-positioning in Indonesia appears limited. Procurement lead times are similar usually fast in urban centres (around 3 days) and remain the same during and before emergencies. However if the pre-positioning appears to yield a gain of time of at least 3 days, transportation on the other hand tends to temper the investment. Most agencies tend to pre-position stocks in Jakarta, this central location increase transportation costs if the emergency is located in a remote area and might involve several modes of transport to reach beneficiaries (air, sea, land)[25]. In the risk scenario explored, transportation could take up to 3 days more when items are shipped from Jakarta compared to items purchased and shipped from a closer local location. From a time perspective the return on investment remains low. This depends on the location impacted and time gain could be sensibly higher if an area is less difficult to access however, historical data shows the whole country can be struck by emergencies. Another factor that can delay delivery is the kits packaging: during the Pidie Jaya earthquake response, hygiene items had to be reconditioned into kits before being shipped to the emergency location, the delay accumulated was about half a day[26].

The main elements of financial savings for this investment are of two sorts: avoid price inflation for goods and storage, common in large emergencies (prices doubled in some locations during the 2004 tsunami although this is a unique case, common price increase in small disasters are between 1 to 5%)[27] and avoid extra effort/time for procurement at the onset of an emergency. It is also important to note that warehousing costs are generally more expensive in the field and prices can double compared to Jakarta or other large urban centre. This is mainly due to the lack of warehousing infrastructure[28]. Finally, domestic transportation can also impact cost savings: as explained above shipping to remote location from Jakarta can significantly increase costs compared to transportation from a field location. When computing these various factors in the risk scenario, the investment's cost savings appear limited: cost for storing pre-positioned items and for transportation from the central hub Jakarta are similar to a situation where relief items are purchased locally at the onset of the emergency. However CARE Indonesia seeks free or discounted transportation and storage from partners. The current stock has been stored at an extremely low cost at a partner's warehouse. Free transportation is provided by the logistics cluster or other partners. During the Pidie Jaya response in 2016, the Red Cross provided free air cargo. This tempers the low return on investment.

[25] *Ibid*
[26] CARE Indonesia/CARE Canada, *After Action Review earthquake response in Pidie Jaya*, May 2017
[27] Indonesia Investments, *Business and natural disasters*, June 2017
[28] The Logistics Institute Asia Pacific*, Disaster Relief Supply Chains: addressing challenging in robustness and resilience to enable efficiency and effectiveness in humanitarian response*, December 2015

2.2.2. Skills

CARE Indonesia invested 4000USD for capacity building in key areas over the past 3 years. 2 logistics staff attended supply chain management training. The Program Support Director participated in the emergency leadership and management program (ELMP)

Contribution to emergency response

CARE Indonesia's investment in skills improved internal coordination and increases responses efficiency

The main objective of these investments is to increase the availability of skilled humanitarian staff and ultimately to improve the impact of humanitarian responses.

Two CARE International Indonesia staff members participated in a four days of Logistic and Supply Chain training organized by CARE. The training covered basic concepts of supply chain to operational and management level Country Office staff. One of the main impact of the training is the improvement of inter department communications. CARE Indonesia staff mentioned the setup of new communication practices through Google Drive and Facebook as well as providing regular updates on challenges in supply during staff meeting in order to reduce the gap often seen between program and program support departments[29]. This would greatly increase efficiency of a response through better design of emergency operations, better start up and monitoring. The investment in skills increased the production of tangible outputs (better and quicker decisions, new ways of working…). During the review of Pidie Jaya earthquake response, the program support team mentioned an increased coordination with program teams although improvements are still needed especially around program design[30].

The emergency leadership and management program is one of CARE's most valued training targeting senior country and regional level managers. It is likely that the investment supports more appropriate responses through better management and leadership (relevance criteria): greater efficiency in CARE operations, including program delivery has been reported[31] (effectiveness criteria). This should be further explored.

Time and financial savings

The same method to calculate time and financial savings for CARE Nepal's investment in skills was applied (see 1.2.2) however because the lack of historical data on previous deployments to support responses, it was not possible to quantify the return on investment. The two most recent responses of CARE Indonesia (Jakarta and West Java floods in 2014 and Pidie Jaya earthquake in 2016) were of

[29] CARE USA (EHAT), *Regional Supply Chain Management Workshop Impact report*, September 2017
[30] CARE Indonesia/CARE Canada, *After Action Review earthquake response in Pidie Jaya*, May 2017
[31] CARE International (CEG), *ELMP Impact Report*, June 2017

small scale and did not require any international deployment or recruitment of senior staff to support the response.

In the hypothesis of a small earthquake scenario, the deployment of a team leader for 1 month would cost approximately 10,800USD. Assuming that CHEOPS provides trainees adequate skills to lead a small scale response without additional support, this amount could potentially be saved.

2.2.3. Contingency agreement

CARE Indonesia developed and signed non-binding agreement with five partners in August 2016. These agreements create a framework "to exchange information, discussion or explore the possibility to cooperate in the preparation or response the disaster, emergency and/or development program"[32]. Agreements, and related due diligence process were developed at a minimal costs, implying only limited staff time (unfortunately staff effort could not be quantified). It should be mentioned that CARE Indonesia's strategy is focusing on delivering humanitarian assistance through local partners[33].

Contribution to emergency response

The main purpose of these agreements is aiming at enhanced collaboration at preparedness stage through active coordination, joint planning and capacity building. It means strengthening performance of all parts (both CARE and partners) in future emergencies. This is an important part in the humanitarian agenda which seeks to support local ownership in humanitarian action[34]. Therefore this investment goes beyond emergency response only and looks at institutional capacity strengthening. CARE Indonesia developed the agreement to formalise relationship and start this process. For instance all five partners attended Gender training in April 2017 and were also invited to participate in the emergency preparedness planning workshop in May 2017. Unfortunately there is insufficient data to measure if these investment show improvements in humanitarian results during responses. Training impacts should be first assessed, secondly evaluating partners' performance in the training field (gender for instance) during a response through quality indicators would assess the improvement in results attributable to partners capacity development and training initiatives.

Time and financial savings

CARE Indonesia's investment in contingency agreements potentially accelerate emergency response time of 14 days

The agreements are non-binding and focusing on preparedness and capacity building. It means a new agreement would be needed to formalise a partnership during an emergency. If this can be seen as a small gain of time (need to negotiate a new agreement, finalise it and activate it), the collaboration at preparedness actually yields significant return on investment from a time perspective. With a low

[32] CARE Indonesia and partners (PKPU; Yayasan Pusaka, Yayasan Jamari Sakato, KOMPIP), *letter of agreement*, August 2016
[33] CARE Indonesia, *Humanitarian Strategy*, 2017 (draft)
[34] CARE International, *Humanitarian and Emergency Strategy 2013-2020*

investment at the start (only staff time – unable to quantify), the mapping of partners, due diligence and Bridger test process takes about 2 weeks (if one staff is fully dedicated to the task). Launching this process in the midst of a response would significantly delay the response whereas with the pre-agreement in place, it takes only 2 to 4 days to finalise and activate a partnership agreement, thus saving more than 1 week to launch the response through partners.

Other benefits also includes common understanding of each other's vision and mandate, systems, communication lines, personal relationship developed in advance between staff of all parties. For instance during the Pidie Jaya earthquake response, CARE Indonesia and PKPU were able to speed procurement by establishing regular meetings between the program and program support teams of both agencies[35]. Smoother communications, better understanding of procedures and challenges lead to a quicker procurement, thus faster response.

2.3. Beyond traditional investments

Follow the sun protocol

Initially set up during the Haiyan response in the Philippines, the "follow the sun" approach[36] was also introduced to rotate CARE members support to CARE Indonesia during emergencies. CARE Canada being eleven hours behind Jakarta, head office support in times of emergencies has proven to be difficult. With this approach, continuous support from CARE Australia (Canberra) and the CARE Emergency Group (Bangkok and Geneva) is possible before handing over to CARE Canada at the end of each day. Despite being difficult to quantify, it is highly likely that it saves significant amount of time and allows faster decisions as it ensures 24/7 media coverage and any other support needed by the Country Office (designing response strategy, writing proposals, get technical support, etc.). However it may lead to some confusion around decisions' approval which ultimately lies with CARE Canada, the lead member. In that regard, roles and responsibilities have to be clearly defined and understood[37].

Supporting preparedness in a transitioning presence

Because of Indonesia's recent development (now a middle income country), international assistance through INGOs have significantly reduced. Operational and financial volume considerably reduced since 2012. As a consequence, CARE Indonesia restructured its operations from an almost purely humanitarian Country Office post 2005 tsunami to a development focused country office. However Indonesia remains a high risk country prone to recurrent disasters. Acknowledging the Country Office capacity limitations, CARE Australia offered its support as a preparedness and response resource in the region. The main component of the memorandum of understanding cover preparedness and response: technical support but the main element is providing "financial contribution for the CARE Indonesia Emergency Response Coordinator"[38]. CARE Australia was able to partly cover this position through HPA funding (Australia DFAT) and

[35] CARE Indonesia/CARE Canada, *After Action Review earthquake response in Pidie Jaya*, May 2017
[36] CARE International, *After Action Review Haiyan response in the Philippines*, April 2015
[37] CARE Indonesia/CARE Canada, *After Action Review earthquake response in Pidie Jaya*, May 2017
[38] *Memorandum of Understanding between CARE Australia and CARE Canada for support during humanitarian emergency response in Indonesia*, June 2015

complement MACP funding (which supported funding for this position for 6 years). This investment as well as CARE Australia staff time (CARE Australia humanitarian team providing technical support and backstopping during emergencies) increased CARE Indonesia's readiness and capacity to respond to disasters.

3. CARE Madagascar case study

3.1. Country Profile

Madagascar is a low income country located in the Indian Ocean. It is amongst the least developed countries in the world and ranks 158th out of 188th in the 2016 UNDP human development report. Madagascar faces significant risks imposed by increasingly variable and changing climate. While the south suffers from recurrent droughts, cyclones (often accompanied by floods) can strike several parts of the country. Historically, the eastern coastline was the main area suffering cyclones however cyclones have also started to strike western coast in the last decade, with increasing frequency and intensity. The increasing fragility of the ecosystem caused by inadequate education, insufficient productive infrastructure (including agricultural infrastructure) and poverty is a major cause of the increased vulnerability to shocks and food insecurity.

Map 3 – Map of Madagascar[39]

Map Sources: ESRI, UNCS.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Map created in Sep 2013.

Table 12 – Risk indicators[40]

	Value	Rank	Trend
INFORM Risk	5	46	-

[39] UNOCHA, September 2013
[40] Inform Index for Risk Management 2018, IASC and European Commission

Hazard & Exposure	**3.9**	**76**	-
Vulnerability	**4.2**	**71**	-
Lack of coping capacities	**7.6**	**11**	-

Madagascar has been heavily affected by the political crisis following the coup of 2009 that led to the suspension of the majority of international aid. Although the situation is stabilising, the volume of international assistance remains lower than before the crisis. As a consequence, the government lacks significant resources to invest in basic services and to assist population during emergencies (Madagascar ranks 11th for countries lacking coping capacities). The humanitarian and development community plays a central role in supporting the government strengthening its capacity and ability to respond to disasters.

Table 13 – EPP scenarios CARE Madagascar

	Risk 1	**Risk 2**	Risk 3
Emergency type	Drought	**Cyclone and floods**	Floods
Time profile	Slow onset	**Rapid onset**	Rapid onset
Affected people	850,000	**1,5 million**	500,000
Frequency	Annually	**Annually**	Annually
Cyclical/non-cyclical	cyclical	**Cyclical**	Cyclical
Emergency duration	3 - 6 months	**1 month**	1 month
Ramping up time	3 months	**1 - 7 days**	1 – 7 days

The three main scenarios identified by CARE Madagascar in their emergency preparedness plan are drought, cyclone and floods. Although it would have been interesting to explore the drought scenario, information were not collected on time and the investment analysis was made on the basis of scenario 2 (cyclone and floods). It remains one of the most common disasters faced in country.

Table 14 – Past responses since 2015 CARE Madagascar[41]

Year	Emergency	Type	Pop Affected	Pop Reach	Total funding
2017	Cyclone	2	433,612	20,703	797,201
2017	Drought	2	1,140,000	54,778	2,872,342
2016	Drought	2	1,140,000	12,554	80,000
2015	Drought	1	200,000	4,478	209,615
2015	Floods	1	35,000	2,850	50,000[42]

[41] CARE International (CEG), *Global Emergency Response Tracker*, September 2017
[42] ERF allocation, complete data not available

2014	Cyclone	1	2,141	1,680	20,000[43]
2013	Cyclone	1	40,154	10,000	50,000[44]

3.2. Preparedness investments in scope

3.2.1. Supplies and equipment

CARE Madagascar prepositioned 600 NFI and hygiene kits and 400 emergency shelter kits (tarpaulins) in 2 locations, Vatomandry and Antala (East Coast). The investment's calculations below are based over the past 3 years of pre-positioning.

Table 15 – Summary of cost for supplies pre-positioning

COST	Relief Items Cost	Warehousing Cost	Operations Cost[45]	Staff effort[46]	TOTAL Investment
With preparedness investment (current situation)					
600 NFI kits & 400 tarpaulins[47]	19,316	23,601	17,000[48]	3,003	**62,920**
Without preparedness investment					
600 NFI kits & 400 tarpaulins	26,560[49]	725	17,000[50]	85	**44,370**

Table 16 – Summary of lead times for supplies pre-positioning

TIME	Time to procure items	Supplier to warehouse	Warehouse to distribution	TOTAL Lead time
With preparedness investment (current situation)				
600 NFI kits & 400 tarpaulins	-	-	3 days	3 days
Without preparedness investment				
600 NFI kits & 400 tarpaulins	20 days	12 days	3 days	35 days

Contribution to emergency response

CARE Madagascar's investment in supplies improves appropriateness during emergency response

[43] Idem.
[44] Idem.
[45] Operations costs include transport from supplier to distribution site as well as potential handling costs (scenario based)
[46] Staff effort include all staff related cost regarding procurement, warehousing, security.
[47] Tarpaulins are USAID donations, total amount covers only NFI kits
[48] Cost incurred in the case goods cannot be shipped *pro bono* by the logistics cluster
[49] Average inflation of 37.5% during emergencies for relief items
[50] Cost incurred in the case goods cannot be shipped *pro bono* by the logistics cluster

Madagascar faces cyclones and floods almost every year and CARE Madagascar has been consistently responding thus building strong knowledge and understanding of this type of response. The Country office was able to design their pre-positioned kits based on past responses needs assessment and project evaluation. Emergency teams for instance found out that cooking utensils were the first goods to be lost by vulnerable households during cyclones. By using that type of information the country office was able to put together the most relevant kit. The investment increases appropriateness of the response.

The national supply chain system is weak and country can often face issues with items quality. It is particularly the case during emergencies where the demand significantly increases while the offer remains limited. Pre-positioning is a unique opportunity to procure up to quality standards goods.

Time and financial savings

CARE Madagascar's investment in pre-positioned supplies accelerate response time by 35 days on average

The initial investment is costly, especially in terms of warehousing (in this case stored for a period of 3 years) and transport. Even when we consider the potential high inflation during emergencies (about 37.5% on average), again due to a poor national supply chain, pre-positioning is more expensive than purchasing at the onset of the emergency. This should be tempered by the fact that emergency stocks were not used for a long period of time in this case, minimising the return on investment. Stocks were eventually used during the recent cyclone response (Enawo).

On the other hand, the benefits on time savings are tremendous. Procurement is a lengthy process in Madagascar as suppliers cannot always quickly meet requests. This could be explained by the specificities of Madagascar, remote location, poor infrastructure and limited road access to remote locations[51]. Procurement and transportation of goods can take to one month (on average), seriously delaying relief operations. In such context pre-positioning appears vital so that CARE can have a quick humanitarian impact. The gains in time are such that the expensive investment is still worth it.

3.2.2. Contingency agreement

CARE Madagascar has developed an agreement[52] with 4 international agencies (ACF, HI, MDM and Medair) to increase collaboration and coordination at preparedness stage and during emergency response.

Contribution to emergency response

[51] Logistics Cluster Madagascar, *Concept of Operations*, May 2017
[52] *Accord de partenariat CARE-MdM-ACF-HI-Medair - Urgences à Madagascar*, 2014

CARE Madagascar's investment in contingency agreement improves effectiveness, coverage and coordination of humanitarian responses as well as advocacy impact with other humanitarian stakeholders.

This agreement aims at increasing coordination at all stages with a clear objective to ensure maximum coverage of needs through an integrated approach. Indeed, the parties to the agreement clearly divided their sector coverage according to their areas of expertise (CARE covers Shelter and food security, MdM health, MEDAIR Wash, etc…) as well as potential geographical coverage through joint preparedness planning. It also extends to needs assessment protocols. The investment thus reduces gaps and redundancies in humanitarian response. By agreeing in advance to provide a full package of services, this investment helps meeting priority humanitarian needs and reaching affected population groups with assistance proportionate to their needs.

Through the agreement, partners pool their resources during response (mainly through human resources for instance during joint needs assessment) and preparedness (for instance sharing storage space) and increase response efficiency.

Consistent information management and sharing between the partners is also central to the agreement and increases access to information on humanitarian needs. This also facilitates improved targeting both in terms of geographic areas and in terms of how accurately different categories of population are targeted. Lessons learnt and good practices are also systematically shared among the partners to improve future responses.

This agreement also lays the foundation for greater advocacy impact: from coordinated approaches to participate in Humanitarian Country Team meetings and clusters to ad hoc joint advocacy initiatives. A concrete example is the current work undertaken by the parties to the agreement on improving government disaster management tools developed by the BNGRC. The partners provide technical support to ensure tools are up to international standards and include appropriate sectors and cross cutting thematic. Inclusion of gender and diversity considerations as well accountability to affected populations in needs assessment tools for instance is a priority for the partners. The partners will also be able to advise on the national response plan and support integration of these various aspects.

Time and financial savings

Although difficult to quantify, the agreement appears to yield time gain through various elements:

- A joint assessment process enables quicker and thorough collection of data with the right level of expertise in all core sectors.
- As described above, improved information management between partners saves precious time in collecting disasters data and preparing for the response and allows faster decisions
- Awareness of other key stakeholders (partners) operational capacity and area of expertise allows a quicker definition of the response strategy

Partners in this agreement often decide to work in a consortium. As donors are looking more and more for global and coordinated response, this type of agreement can be used as a basis to form consortia; it reduces competition for common resources and increases efficiency.

The initial investment is staff time only and represents 7,600USD in staff time and effort. The initial negotiations and drafting the agreement was the more time consuming (about 5 month of discussions before reaching an agreement between parties). The investment is minimal compared to potential benefits and yields a positive return on investment.

3.3. Beyond traditional investments

Preparedness with the private sector platform

In order to raise awareness and increase the private sector's role in emergencies, UNOCHA and BNGRC (disaster management governmental authority) launched a "humanitarian contest" for private companies in Madagascar in 2012. Telma Foundation, winner of this initiative, took a growing role in coordinating private sector stakeholders and set up the private sector humanitarian platform, officially launched in December 2014. The platform is primarily motivated to contribute to humanitarian efforts and to promote mutual aid to create a network facilitating the achievement of humanitarian actions by providing human, material, and financial resources. The platform members are asked to adopt an approach dictated by Corporate Social Responsibility. Beyond emergencies, the private sector humanitarian platform builds capacities benefiting to local populations in the long term.

CARE Madagascar became partner of the platform in 2015 through a Disaster Risk Reduction project following floods in Antananarivo. The project included specific capacity building of the private sector platform members (training on Disaster Risk Reduction and emergency response) as well as technical support in developing their contingency plans. On the other hand, CARE benefits from preferential rates on relief items (they very recently replenished their emergency stocks with a 40% discount and provided shelter reconstruction kits during the ENAWO cyclone response) as well as faster procurement processes. Most companies have many branches across the country which can also facilitate local procurement if needed. The initial investment to develop the partnership was staff only, estimated around 2 staffs for 3 months full time (meetings, workshops, negotiations, etc.). CARE Madagascar is now in the process of formalising a long term agreement (rather than ad hoc contracts when purchasing) and extending it to other type of services with other members such as transport or mobile banking.

4. Case study framework

Return on Investment – Impact Statement

1. Investment examined

Country	*State which country office*
Name	*Brief description of the investment and its purpose*
Cost	*Data from 3.1.*
Effort	*Data from 3.2.*
Timeframe	*What time frame of investment is analysed? (Consider staff turnover, planned future investments, new technology, evolving context,…)*

2. Investment objective

Type	*Choose among 4 types: Supplies and equipment, Skills, Contingency Agreements, Processes*
Impact	*Brief description of the desired humanitarian results of the investment*
Outputs	*Brief description of the outputs of the investment necessary to achieve impact*
Activities	*What activities contributing to outputs*

3. Investment information (*see detail in excel workbook*)

3.1. Investment cost

	Year 1	Year 2	Year 3	Total
Activity 1				
Activity 2				
Operating costs				
Total				Investment Cost

3.2. Investment effort

	Year 1		Year 2		Year 3		Total
	Staff grad	Days/year	Staff grad	Days/year	Staff grad	Days/year	
Activity 1							
Activity 2							
Total							FTE/Cost

4. Disaster risks (*as identified in EPP*)

This section helps understanding the investment's context

	Risk 1	Risk 2	Risk 3
Emergency type			
Affected people			
Frequency			
Cyclical/non-cyclical			
Emergency duration			
Ramping up time			

5. With/Without scenario

How an emergency response would proceed in the absence of the investment (need to apply assumptions based on the best information available).

5.1. Without scenario

Activity 1	*In the identified risk scenarios how would the emergency response take place if the emergency preparedness were NOT made?*
Activity 2	

5.2. With scenario

Activity 1	*In the identified risk scenarios how would the emergency response take place if the emergency preparedness were made?*
Activity 2	

6. Investment risk

	Description	Mitigation
Investment risk 1	*ex: political, legal, security, infrastructure, market conditions, local resilience, operational capacity, etc.…*	
Investment risk 2		

7. Return on investment

7.1. Contribution to response

Indicator	Score	Comments
OECD criteria		

7.2. Time savings

Assess and compare the expected lead time between the request for assistance and the delivery of the good or service, assessment, or other asset enabled by the investment. Any time saved as a direct or indirect result of the investment or its absence should be factored into the with and without scenarios.

Indicator	Score	Comments

7.3. Financial savings

Assess and compare cash flows occurring in both the with and without scenarios. This involves asking, for each risk scenario, what costs are incurred to carry out the emergency response.

Indicator	Score	Comments

7.4. Other savings

5. Investments questionnaires for case studies

1. Supplies and equipment

Investment scoped	

1.1. GOAL CHECKLIST

Purpose: pre-positioning commodities so it improves the speed and reduces cost of the response

Is the investment replenished (i.e. are stocks of relief items replenished on a regular basis to account for stock-outs)?	
Are the relief items re-usable (i.e. can they be used more than once by affected people)?	
What other parts of the supply chain need to be in place for this investment to function?	
What are the sourcing options foreseen as part of this investment? (Distinguish between vendor location, and shipping origin as necessary)	
What are the average lead times for national and international procurement?	
Are warehousing conditions adequate?	
Are relief items going to be used if emergencies do not materialise? If so, how?	
Are relief items perishable/non-perishable/mixed?	

1.2. WITH AND WITHOUT SCENARIO

In writing the *with* and *without* scenarios, users should work through the following:

Cat	**Area of inquiry**	**With preparedness investment**	**Without preparedness investment**
Sourcing	*Where are items sourced?*		
	What are the procurement arrangements?		
	What is the quality of items?		
	How much do items cost?		
	Item weight		
	Item volume		
	Are there multiple sourcing options? (This may mean there are multiple without scenarios, even within one risk scenario.)		
Shipt - suppli er to	*Costs*		
	Modes		
	Time		

	Are there multiple transport options? (This may mean there are multiple without scenarios, even within one risk scenario.)		
WH	*Costs*		
	Conditions (perishability, probability of theft, temperature control, etc.)		
Shipt WH - Benef	*Costs*		
	Modes		
	Time		
Scale	*Are there economies of scale in the with scenario that do not occur in the without scenario?*		

2. <u>Skills</u>

Investment scoped	

2.1. GOAL CHECKLIST

Purpose: greater availability of skilled staff and partners

Training content: What knowledge or skills are developed? How do these contribute to humanitarian performance? Are these skills re-usable across emergencies?	
Is the training investment replenished (i.e. are new staff and partners trained on a regular basis to mitigate turnover)?	
What costs are associated with holding the training (staff time, transportation, per diem, etc)?	
What is the training format? (Workshop; Training course; E-Learning initiative)	
What is the skills investment's duration?	
Who are the training participants? (Government; Partners; CO/RO staff; HQ staff; Other agencies…)	
Describe the training curriculum	
Does the investment change staff deployment decisions during emergencies? (Y/N) How?	
What is the expected average turnover of people trained (% per annum)?	

2.2. WITH AND WITHOUT SCENARIO - QUALITATIVE

In writing the *with* and *without* scenarios, users should work through the following:

Area of inquiry	**With preparedness investment**	**Without preparedness investment**
Was a capacity assessment carried out in advance to identify skills gaps? If so, what are the main skills gaps?		
How does each of the skills investment outputs contribute to improved humanitarian response?		
What are other factors affecting contribution to response?		

2.3. WITH AND WITHOUT SCENARIO - QUANTITATIVE

In writing the *with* and *without* scenarios, users should work through the following:

Area of inquiry	**With preparedness investment**	**Without preparedness investment**
Which humanitarian personnel is during an emergency? (CO Staff, RRT, RO staff…)		

How many people are being deployed?		
Respondent breakdown by sectors/departments;		
Respondent transport modes;		
Respondent transport frequency;		
Respondent deployment duration;		
What other factors affect lead times? - *Bureaucratic time costs for deployment differing across the with and without scenarios;* - *Availabilities resulting from respondent rosters formed in the with scenarios;*		
What other factors affect cost? - *Respondents' daily salary rates and benefits differing across the with and without scenarios, particularly when the without scenario means relying on partners;*		
Risk scenarios in which trained people can be deployed		
Are there economies of scale in the with scenario that do not occur in the without scenario?		

3. Agreements and partnership

Investment scoped	

3.1. GOAL CHECKLIST

Purpose: reaching agreement before they are needed

Name of the implementing partner/contractor(s)	
Which services/goods are covered under the agreement?	
Does the Partner/Provider ensure sufficient delivery capacity in case of emergency?	
How many beneficiaries will these goods/services reach?	
What are the financial terms of the agreement?	
How quickly can the agreement be activated/mobilised in the event of an emergency?	
What staff time was required to establish the agreement?	

3.2. WITH AND WITHOUT SCENARIO

In writing the *with* and *without* scenarios, users should work through the following:

Area of inquiry	**With preparedness investment**	**Without preparedness investment**
Duration of agreement?		
Services covered by agreement?		
Service quality?		
Goods covered by agreement?		
Quality of goods?		
Shared specifications between joint procuring parties?		
Other relevant contractual terms?		
Time necessary to activate the agreement during an emergency?		
Delivery time in an emergency?		
In the without scenario, are some goods not provided at all		
How are the goods and services delivered		

When computing lead times, factor in the following, distinguishing whether these steps occur prior to or after an emergency occurs: - *Agreement negotiation;* - *Agreement finalisation;* - *Agreement activation.*		
Are there economies of scale in the with scenario that do not occur in the without scenario?		

4. <u>Processes</u>

Investment scoped	

4.1. GOAL CHECKLIST

Purpose: more efficient and effective processes, systems and standards

What thematic areas does the investment target? Cash programmes; Alternative delivery mechanisms; Technical; Support functions (ICT, admin, HR); etc…	
What is the primary way in which the investment produces time and financial savings?	

4.2. WITH AND WITHOUT SCENARIO

Area of inquiry	**With preparedness investment**	**Without preparedness investment**
What is the state of each of the following aspects of humanitarian delivery? (Policies; Procedures; Standards; Specifications; Systems; Infrastructure…)		
What external support (by partners, contractors, etc.) is needed to ensure the resilience of each of the above during emergencies?		
How do processes affect programmatic work outside of emergencies?		
*In the **short term** and **long term**, how do the following elements affect successful implementation?* - *Dissemination;* - *Accountability;* - *Clarity;* - *Maintenance;* - *Other factors*		
Are there economies of scale in the with scenario that do not occur in the without scenario?		

6. Contribution to response - Framework for case studies

Criteria	Definition	Questions to consider
Appropriateness / relevance	How well humanitarian activities are tailored to local needs and priorities.	Will the investment… - Meet the priority humanitarian needs of the recipients as identified through needs assessments? - Include affected people in programme design and be culturally sensitive? - Account for the needs of different groups, including those defined by age, gender, and ethnicity? - Provide communication channels for affected people to feedback to agencies on their performance? - Promote local ownership of humanitarian activities (government, national NGOs, local communities)?
Effectiveness	How well an activity has achieved its purpose, or can be expected to do so on the basis of existing outputs.	Will the investment… - Meet the priority humanitarian needs of the recipients as identified through needs assessments? - Increase the speed at which targeted affected populations will receive aid? - Support the provision of appropriate resources to vulnerable or 'at risk' populations?
Efficiency	A measure of the outputs, qualitative and quantitative, achieved as a result of inputs.	Will the investment… - Provide the best feasible intervention for the least resources expended?
Connectedness	The extent to which short-term emergency response steps take longer-term and interconnected problems into account.	Will the investment… - Support broader capacity building efforts, including among local partners? - Support resilience to future shocks? - Support longer-term development gains?
Coverage	The extent to which assistance reaches all major population groups affected by the crisis.	Will the investment… - Reach all affected population groups with assistance and protection proportionate to their needs? - Promote equitable delivery of aid? - Support humanitarian actors that have the best and most rapid access to affected populations?
Coherence	The extent to which there is consistency across security, developmental, trade, military, and humanitarian policies, and to which all policies take into account humanitarian and human-rights considerations.	Will the investment… - Support core humanitarian principles, as well as improved protection approaches? - Support the achievement of broader peace and development goals? - Promote alignment among all actors working toward humanitarian goals?
Coordination	The extent to which different actors' interventions are harmonised, promote synergy, and avoid gaps, duplication, and resource conflicts.	Will the investment… - Reduce gaps and redundancies in humanitarian action? - Support national actors in coordination mechanisms? - Support improved information management systems?
Impact	The extent to which humanitarian interventions have had a wider effect (socially, economically, technically, environmentally)?	Will the investment… - Have wider social, economic or environmental effects? (immediate, longer term, positive or negative…)

7. List of stakeholders consulted

Organisation	Name	Role
CARE Australia	Stefan Knollmayer	HERU Manager
CARE Canada	Jean Dominique Bodard	RRT Team Leader
CARE Cambodia	Joanne Fairley	Country Director
CARE France	Emilie Martin	Emergency Manager
CARE Indonesia	Wahyu Widayanto	Emergency Coordinator
CARE International	Sally Austin	Head of Emergency Operations
CARE International	Heather Van Sice	Head of Program Quality
CARE International	Kathleen Obrien	Humanitarian Surge Coordinator
CARE International	Gregor Jack	Capacity Building Coordinator
CARE International	Uwe Korus	MEAL Coordinator
CARE International	Alio Namata	Regional Humanitarian Coordinator West Africa
CARE International	Nick Brooks	WASH Specialist
CARE International	Justus Liku	FNS Specialist
CARE International	Step Haiselden	Shelter Specialist
CARE Madagascar	Rija Haritiana	Emergency and Resilience Coordinator
CARE Mano River	Balla Sidibe	Managing Deputy Regional Director
CARE Nepal	Santosh Sharma	Emergency and Recovery Team Leader
CARE Nepal	Shivani Dixit	ACD Program Support
CARE USA	Holly Solberg	Regional Director MENA
CARE USA	Lex Kassenberg	Humanitarian Director
CARE USA	Rachel Gordon Roberts	Logistics Manager

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9. Terms of Reference