

# Return on Investment for Emergency Preparedness Study

## METHODOLOGY AND FINDINGS

### Background

In early 2015, a joint UNICEF/WFP research initiative supported by DFID and conducted by the Boston Consulting Group established that the average financial return on investment (ROI) for 49 humanitarian preparedness interventions analyzed in high risk contexts is more than 200%.

This means that every \$1 spent on preparing is worth more than \$2 in the event of an emergency. Preparedness was also shown to save responders more than one week of operational time on average – reaching more people faster to save more lives.

### What exactly did the study examine?




It analyzed how specific preparedness interventions impacted the time or costs of a future emergency response in high risk humanitarian contexts. The study assessed 49 specific programme and operational preparedness investments made by UNICEF and WFP in 2014 in three pilot countries - Chad, Madagascar and Pakistan.

Each of the investments represented an interventions the agencies took to support preparedness for an array of context-specific emergency scenarios. The activities can be broken down into four main categories: supplies & logistics, staff capacity, contingency partner arrangements, and infrastructure development.

### How was the impact of preparedness measured?

1. Emergency scenarios defined: First, the research team worked with country office staff to determine 2-3 of most probable/imminent contextual risk scenarios. For example, staff in Chad identified food/nutrition crises, flooding and conflict scenarios as their highest risk scenarios. The likely geography of each crisis type was then mapped and assigned a realistic affected population caseload range, according to the intensity of the emergency shock.

#### Without investments

-  **SUPPLIES & LOGISTICS:** Offshore emergency supplies must be rapidly mobilized into an emergency, usually by air until emergency supply pipelines are established.
-  **STAFF CAPACITY:** Staff are surged into an emergency to meet urgent capacity gaps in specialized humanitarian response functions.
-  **CONTINGENCY ARRANGEMENTS:** Operational scale up requires agencies to negotiate and sign new agreements with partners as a crisis is ongoing.
-  **INFRASTRUCTURE:** Infrastructure that is damaged or poorly maintained inhibits humanitarian response, causing delays and obstructing access to affected people.

#### With investments

-  Offshore emergency supplies are pre-positioned in advance of a crisis, usually using overseas shipping. This saves on transport costs, carbon and time toward response delivery.
-  Trainings and simulations on humanitarian response functions reduce the need to surge staff into an emergency, as those skills are already in place. This saves money, carbon and time.
-  Emergency contingency partnership agreements allow humanitarian agencies to rapidly shift gears and scale up operations to meet a new crisis. This saves valuable time in an emergency, and often money as well.
-  Strategic infrastructure development in vulnerable contexts enables more efficient and effective emergency response in a timely and cost-effective manner.

2. Future risk parameters defined: Historical data and expert interviews were used to estimate the likely frequency and impact of each risk scenario occurring over a 10 year period - e.g. Level 2 food/nutrition crisis in Chad would be concentrated along central Sahel belt, affect X people and occur every X years.

3. Preparedness “counterfactual” scenario defined: Then, for every preparedness intervention taken, the research team asked “what would happen if there were no investments in this activity?” To answer this question, the team collected both historical evidence and expert analysis to define and quantify how future emergency response would differ according to whether advanced preparedness investments had been made. In situations where no historical data were available, the estimates of topical experts were used.

4. Time & cost return on analysis modeled: Using figures collected, the team created an excel-based financial/time model to calculate the impact (if any) of each investment on the cost and speed of a response for each emergency scenario, as measured in US\$ and response days.

#### What is an ROI?



An ROI (return on investment) is a financial measure in which a rate of 1 indicates that future costs will be reduced by the same initial investment amount, i.e. returns will come to 100% of the investment. All rates greater than 1 indicate a higher cost saving than the original investment.

## What were the parameters of the research scope?

All analysis assumed the number of beneficiaries reached and the quality and quantity of goods and services would remain constant. No shortcuts resulting in diminished programmatic outcomes were considered. Only preparedness activities that were directly under the agencies’ control were included in scope. The findings therefore reflect the impact of preparedness efforts on UNICEF and WFP’s internal operations in terms of time and cost efficiencies, with the understanding that these efficiencies have direct implications for the aid received by beneficiaries.

## Insights from findings

The findings show that humanitarian preparedness is complex and must be tailored. Investments with high returns in one country may not necessarily indicate similarly high returns in another country. However, patterns have emerged from the study:

- Pre-positioning of internationally-sourced emergency supplies yield ROIs of 1.6 – 2.0 and significant time savings (14-21 days average) across all pilot countries.
- Large infrastructure investments yield the highest absolute money savings.
- High dependency on external goods and services coorelates with higher ROI rates.
- The higher the local coping capacity, the higher the ROI for human capital.
- All investments have various additional qualitative benefits for humanitarian action.

## What are the implications of the findings?

There is a large gap between potential savings from preparedness investments and the actual cost of humanitarian response – implying substantial investment opportunities in high-risk contexts. Advancing funding into these settings would optimize efficiencies in humanitarian action for UNICEF and WFP. More importantly, it implies that we can double the impact of donor contributions if humanitarian action is pre-financed in these settings. Since the savings from preparedness accrue to donors, they have a financial incentive to partner with us on preparedness.

## What comes next?

The ROI model will be peer reviewed and futher tested in three additional pilot countries in 2016, with UNHCR and OCHA now joining in the analysis. The resulting methodology will be used to inform investments in preparedness made by individual agencies as well as partnership investments within the wider humanitarian system. In addition, complementary research is also underway to evaluate and reduce the greenhouse gas emissions impact of future humanitarian responses.