

## APPENDIX 2: FINAL AND INTERIM REPORTS TEMPLATE

### HUMANITARIAN INNOVATION FUND

#### Development and Implementation Phase Grant Interim Report

<b>Organisation Name</b>	Start Network
<b>Project Title</b>	<b>Drought Insurance for Early Response (The Start Network Drought Financing Facility)</b>
<b>Partner(s)</b>	GlobalAgRisk which sponsored Global Parametrics (GP) which became the partner toward the end of the project after GlobalAgRisk had completed their work under HIF.
<b>Problem Addressed / Thematic Focus</b>	A parametric insurance and drought risk information facility that will enable earlier, more effective humanitarian response to emerging drought-induced food security crises.
<b>Location</b>	Global: The mechanism can be applied to any country at risk of drought-induced food crises. We will focus on 12-15 countries.
<b>Start Date</b>	13 June 2016
<b>End Date</b>	13 June 2017
<b>Total Funding Requested</b>	£149,900 from HIF (of a wider £602,080 project)
<b>Reporting Period</b>	Final Report (13 June 2016 – 13 June 2017)
<b>Total Spent During The Reporting Period</b>	<b>£149,900</b>

### Achievements and challenges

- 1. Please describe further if the project is experiencing any particular challenges.**

This table provides a summary of some of the key challenges, with further detail outlined in the responses to the questions below.

<b>Challenge</b>	<b>How are you addressing this challenge?</b>
<b>1. Different conceptualisations of drought – Humanitarian food security and modelled agricultural drought</b>	<p>The objective of this HIF funding was to develop an innovative funding facility to enable timely humanitarian action in droughts. Key to the success of this initiative is a drought index model that picks up on early signs of an emerging drought.</p> <p>As the project has progressed it has become ever more evident of the need for a shared</p>

understanding around the concept of agricultural drought and recognition that drought, although primary, is only one driver in the complex and dynamic process leading to a food security crisis. Similarly, humanitarian practitioner ranking of food crises usually focuses on the scale of the impact, rather than decomposing the sources of difficulties.

Because the index models agricultural drought, it can be difficult to find clear food security benchmarks against which to test our risk transfer mechanism. In this project, the partners (lead by GlobalAgRisk and GP) have combined secondary data reviews on droughts, together with in-country discussions with the NGOs and other experts in our two design countries Pakistan and Zimbabwe.

While most serious humanitarian events coincided and matched rank with modelled incidence of agricultural drought, a number did not. From the beginning, this was an anticipated characteristic to manage which, in part, motivated the risk layering approach and holding of discretionary response funds, in addition to risk transfer. Effective communication of this nuance around model performance of agricultural drought relative to humanitarian impact is critical.

We will continue to investigate methods to reduce the potential spread between the drought index and humanitarian impact, in addition to greater stress testing the drought index within the next pilot stage of work:

1. We plan to increase the analytical work on historic humanitarian food security events, to understand their drivers and primary causes in a more rigorous way.
2. We plan to design a more rigorous community engagement system, so that affected communities themselves would be able to appraise and validate the risk models against past experienced drought events.
3. We are working to bring together an academic review panel to work with the GP team to independently review certain aspects of the model, and support with further improvements and innovations.
4. We will continue to communicate the uncertainty inherent in risk transfer and the use of modelled outputs to all stakeholders

involved, to monitor model performance, and to continue to use our contingency fund.

## **2. Including Human vulnerability in the modelling**

Drought has different impacts based on the pre-existing conditions of the populations of concern. For example, the level of ex-ante financing should be greater and the trigger for payment should be lower when the geography is under stress from conflict or extreme poverty.

It became clear throughout the design process in Pakistan and Zimbabwe that including human vulnerability in the modelling was difficult for a number of reasons

1. The consistency of vulnerability data at a district level needed to be good enough to be modelled. Which it rarely is.
2. Identifying the correct vulnerability metric to appropriately determine the likely impact of an agricultural drought.
3. Complexity of what makes a population vulnerable to drought.
4. Need for a deeper understanding of how drought conditions will influence food prices which can spike and greatly exacerbate food security crisis.

The current financial model doesn't have the utility at present to incorporate a human vulnerability metric; the geographical weighting is applied to agricultural vulnerability only. It is still possible to move ahead with a pilot without this component, but this is an area of further research and development of the financial and response models.

## **3. Increasing volatility in climate and weather and related planting cycles**

During in-country workshops, some participants felt that the usual period of key crop planting was no longer as certain due to volatility around the start of the rainy season (climate change). This is important, because soil moisture during the critical period of crop growth and reproduction is what will trigger the funding. If that period is misaligned, then it may result in over or under estimation of drought intensity<sup>1</sup>. The GP model allows local knowledge regarding the current cropping season to be incorporated.

There is still work to be done to 'truth test' drought modelling with local knowledge that will reflect

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<sup>1</sup> This problem was demonstrated by the failure of the African Risk Capacity insurance mechanism in Malawi in 2015/16, due to the modelling being based on the wrong type of maize. See here for further discussion: <https://startnetwork.org/news-and-blogs/disaster-financing-debate>

perceived shifts cropping systems and volatility that will follow. A solution offered by GP is to implement an editable version of the crop growth critical period in the design to accommodate local knowledge and preferences. At the same time, GP also cautioned against potential overfitting, which could have a similar deleterious effect.

#### **4. Gathering analytical work from operational programme staff**

A key learning was around the participatory approach the DFF team took, which required NGO staff in-country to research previous droughts, the ensuing responses and their costs to properly prime the pre-financing. However, the results of this were not as hoped. The reasons for this being that many NGO staff have very high workloads and a skill set for operational response, rather than research and analytics. Going forward we will do this differently, so that an initial DFF Risk Assessment is carried out by an in-country consultant or academic to source and analyse the information required. The NGO operational staff will then be brought in to validate the findings, and use them to build the overall facility design. This lesson learnt is relevant to wider Start Network labs projects.

#### **5. Resolution of the return period calculation and index granularity**

The drought index was designed as a country-wide index, to capture the harshest and most pervasive drought events. As the model was applied operationally it became evident that the humanitarian community were concerned about were the ongoing and more regular onset of medium and small-scale events typically occurring within smaller geographies, which cumulatively were resulting in emergencies. One example was an event occurring in Pakistan Sindh province in 2015 that did not register strongly in the country-wide drought index and so this was of concern to people. The reason these events were not being picked up was due to return periods being calculated on a national or large geographical block basis. This overshadowed some of the smaller events due to other areas of the country offsetting it.

It was concluded that an option would be to maintain the large-scale index for catastrophic events which may trigger an insurance payment, but to create more granular (e.g., district level) indexes which would trigger for smaller more regionally defined crises which could be covered

	out of a contingency fund. GP are working on testing this approach.
<b>6. Potential need for multiple trigger points in the season for multiple action windows</b>	During the exercise to identify what actions would be appropriate in the contingency planning and when in the season they would take place, it became apparent that a potentially useful feature could be multiple trigger points during the season, and for some very early on – i.e before the planting itself (to enable info campaigns, distribution of drought resistant seeds, rainwater capture techniques etc). Bearing in mind the additional transaction cost and uncertainty around early and multiple payments, action and trigger windows could potentially be implemented from mid cultivation/rain onset onwards. This still presents ample opportunity for early action windows which focus on protection and preparedness actions, over mitigative work. In addition, it may in the future be possible to trigger much earlier by using forecasting techniques within the soil moisture index, which is a component of future work for GP.
<b>7. Strategically positioning such risk financing facilities with long terms resilience building efforts.</b>	Some of the continuing reflections within the humanitarian community have included questions such as “why investments would be made into something like this when we should be building communities’ long term resilience”. However, all risk reduction and resilience building efforts will always leave residual risk and will still require response mechanisms for larger events to prevent that resilience from being eroded. In Zimbabwe, we tested this by designing a layered risk management approach, in which the DFF is used to surge and protect programme outcomes of a community resilience programme run by UNDP and NGOs. (See sections below)

## INNOVATION AND LEARNING

### 2. How is the innovation performing against the criteria identified in the project work plan?

Original Criteria	Update
<b>Effectiveness:</b> These metrics will capture whether the project succeeded on its own terms.  Completed	In general terms, the project has succeeded in successfully delivering the outputs identified at the start of the project. Key successes include: <ul style="list-style-type: none"> <li>• Technical drought index work completed and uploaded on publically accessible platforms</li> <li>• Two country-level design processes run in Pakistan and Zimbabwe</li> </ul>

	<ul style="list-style-type: none"> <li>• Significant donor engagement, and promising leads for funding next stage of piloting</li> <li>• Design of M&amp;E framework</li> <li>• Full design report to capture outcomes of the project and plans for next steps</li> </ul> <p>A key challenge is that as we answer questions, we continue to uncover others (such as how to improve the matching of an agricultural drought model with humanitarian impact, how to improve the rigour of the contingency planning component, how we involve local communities in the mechanism). Many of these questions are an entire research project in their own right. In addition, most of the design processes completed during the project would benefit from being re-done with additional rigour as part of the first stage of a pilot.</p> <p>Therefore, there is a question as to how certain we need to be before entering a pilot, and how much can be built as we go. From our perspective we believe that we are ready to commence a pilot, subject to 3-4 months of funded preparation work to re-do some of the design and country engagement work. This is a good outcome for the project, but the ultimate indicator of success will be when this work is funded by a donor and enabled to commence.</p>
<p><b>Efficiency:</b> The perceived value for money of the proposed mechanism is key to the success of this innovation.</p>	<p>A key efficiency enabled by this project is firstly that technical data services being delivered by partners GP had an overlap with partners like VisionFund<sup>2</sup>. A second efficiency is that a wider network of NGOs are experiencing the challenges and opportunities created by building a risk financing instrument, rather than each having to innovate separately. On the latter point, we have seen this in evidence as one of Start Network members (Welthungerhilfe,) who has been involved in the DFF project, is now designing a drought forecast-based-financing initiative in Madagascar, and has invited the Start Team to join the bid to join up with the DFF.</p> <p>The value for money proposition of this mechanism has not developed substantially beyond the initial calculations drawing from research that earlier action, such as that enabled by the DFF, tends to be more cost effective. In fact, the monitoring framework commissioned under this grant recommends a move away from single cost-benefit-analysis calculations which tend to be poorly grounded in evidence, towards a more nuanced analysis around speed,</p>

<sup>2</sup> The Rockefeller Foundation provided funding to GlobalAgRisk to work with VisionFund on drought.

	<p>efficiencies and avoided losses. This will provide much richer learning as to the conditions in which these mechanism work, and will be the approach taken forward into the pilots.</p> <p>The pricing of the insurance component of the mechanism is yet to be finalised. A competitive process is planned once funding is secured, to ensure that the best pricing is being obtained by our risk transfer provider. One challenge has been how to run this competitive process, given that there are very few providers in this space, and none that do the end-to-end risk modelling, risk transfer and advisory services provided by our current partner GP. We have been building relationships with different organisation to better understand their offerings, so as to be able to properly evaluate the efficiency of our partnership arrangement with GP and compare to alternatives</p>
<p><b>Relevance and Appropriateness:</b> The extent to which the mechanism meets the documented need in relation to funding for food crises is critical</p>	<p>Relevance of the mechanism has been addressed by ensuring that the end users, the Start Network NGOs, have been central to the design and development of the mechanism. The two design countries themselves were self-selected by NGOs, and the final pilot reports reflect the early action timing and priorities of the NGOs in-country. One key learning was the value of having an economist from our partner GP in the room with us during the design workshops with NGOs in Zimbabwe. This allowed for much more direct feedback that could be rapidly incorporated into the index and models, and provided the NGOs with a measure of control and comfort over the index design. This same process was not possible in Pakistan due to travel restrictions on US nationals; we have tried to replicate the process online but it has not been quite as successful.</p> <p>One measure of appropriateness is that NGOs and wider humanitarian stakeholders have demonstrated active support and signed-up to be part of this mechanism. In general there is significant interest in both Pakistan and Zimbabwe with NGOs having volunteered their time for free to be part of the process. Engaging with external stakeholders has had more mixed outcomes; in Pakistan we have had a fair amount of success, particularly with the government. However in general we have experienced less real interest and time committed from potential county-level partners (outside of our own NGO community), until we have some funding for a pilot. This is not a surprise as until this point this initiative is perceived more as a research project than a real new risk financing instrument that deserves inclusion in country strategies. This will change once we enter the pilot phase, and the mechanism becomes operational.</p>

<p><b>Impact:</b> The extent to which the project facilitates the intended theory of change (improved financial preparedness and increased protection for communities at risk)</p>	<p>A key measure of impact is whether this project will graduate into a funded pilot. Over the course of the project a number of donors have expressed interest in the project, both at global and Pakistan/Zimbabwe level. We have some good indications of support for operational/launch/support costs from one US donor, if we can find matched funding to cover the actual fund/premium costs to be released through this facility. We are finalising the pilot design reports which we will then use to pursue our funding discussions with our 3-4 target donors who are already warmed up to this opportunity. We will keep the HIF informed of the outcome of these discussions, and would appreciate any support that you can provide in terms of helping us to fundraise to advance this project to the next pilot stage.</p> <p>Since the original design of this mechanism in early 2015 (funded by a small HIF grant) the external environment has changed greatly, with risk financing now gaining increasing attention as a means to facilitate improved humanitarian response. What is a good sign is that all of the original design features (using parametric triggers, pooling risk across countries, layering a fund with insurance) are still consistent with the best practice being promoted in this risk financing space, and we are still somewhat ahead of the curve in combining these into an actual mechanism for civil society actors. In addition, the lessons that we have learnt through this initiative are greatly contributing to our work on other disaster risk financing schemes (such as the ARC Replica project).</p>
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### 3. In what ways is your understanding of the innovation changing through the project period?

At the start of the project we outlined that we wanted to achieve the following deliverables over the HIF-funded development period: (i) detailed historical drought risk information for four blocks of countries illustrated on a prototype online platform which is accessible to all of our members, (ii) tools to help NGOs customise the risk models and conduct joint contingency planning and costing exercises, (iii) assessment of NGO due diligence requirements, (iv) a MEAL / Cost-Benefit-Analysis framework, (v) indicative pricing for the insurance product and (vi) a fundraising strategy that contains input from key stakeholders.

We believed that with these six different components in place, we would be in a position to attract funding for the mechanism and start to launch it. This has to some extent played out as anticipated, but with many lessons learnt and small and well-informed adjustments along the way.

## Where the project is at

### (i) Risk Information

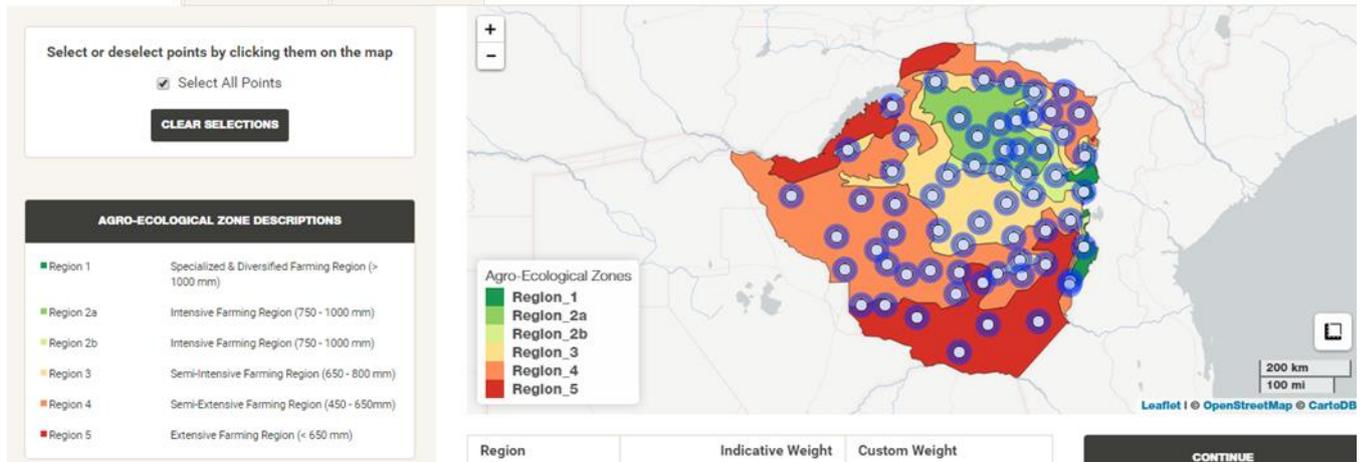
- Major progress was made over the course of the HIF-funded period in the technical modelling work lead by GP. Key decisions were made (documented in previous reports) such as selecting soil moisture as the basis for the drought contract, selection of US National Weather Service's Climate Forecast System version 2 (CFS2)<sup>3</sup> dataset as the appropriate climate model at this time for our needs, and shifting from taking a country perspective to blocking into regional units to allow for impacts of droughts across borders.
- A second key area of progress was in developing our own understanding of the technical modelling work. This emerged as hugely important to the Start Team and NGOs, who (i) need confidence that they have the most accurate model available for their needs and (ii) that it is accurate *enough* to build a new risk financing instrument off the back of it (sub-text being that if we get it wrong this can have a large impact on many poor people). A key deliverable was a set of [technical briefing sheets](#) which gained good feedback from in-country teams.
- The third aspect to this work was to put this risk information onto publically available platforms so that others can use it for their own purposes (e.g community preparedness). The platform can be accessed [here](#), and is in a searchable, downloadable format so as to make it accessible for the user. However, our experience in Zimbabwe and Pakistan is that this 'off-the-shelf' information generally requires a fair degree of local customisation before it captures the humanitarian drought events of interest to our community. Therefore, it is currently not clear who the users of this data will be. Further investigation is being done to look into whether the wider risk financing / open data community may be interested in this for example through the Oasis portal.

### (ii) Tools to help NGOs customise the risk models / indicative insurance pricing

- One of the most successful outcomes of the project was the development by GP of the interactive platforms for Pakistan and Zimbabwe that walk the user through the various design decisions to experiment with building a risk financing contract. The user is able to select the geographic areas to include, the amount of risk coverage, and the different amounts required for different scales of event. They are then fed back an indicative pricing of covering this risk, as well as documented previous years that would have triggered under these parameters. This allows for an experimental and iterative approach to designing contracts which users can do alone, or in a group workshop format. The Zimbabwe platform can be accessed [here](#), and the Pakistan platform [here](#).

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<sup>3</sup> <http://cfs.ncep.noaa.gov/>



### (iii) Customising and contingency planning

- Over the course of the project we delivered two design and contingency planning workshops in the two selected countries (Pakistan and Zimbabwe). A key part of this process is a collaborative workshop that brings together the NGO design group and wider stakeholders to examine recent case-studies of previous droughts (small, medium and large). They are then supported to identify the drivers of the crises, what losses/impact happened, the humanitarian response, and when an earlier window for humanitarian action could have made a real difference. The NGOs and wider stakeholders work together to identify the kinds of early actions that could have protected communities at risk, how and at what point in the season, and convert this into an approximate cost per household for the response.
- The full methodology for this contingency planning process is outlined in a toolkit, but it is currently very long. In addition, in Zimbabwe we started to innovate around different methodologies to bring more rigour to the approach, using Household Economy Analysis baseline data-sets. There is therefore further work to be done to turn this work into a more rigorous scenario development tool that can inform more accurate contingency planning. We hoped that this work would be done under Q4 of this grant, and had lined up a consultant to complete this work, but were prevented from hiring this individual by our host organisation due to inadequate time to complete standard child safeguarding checks. We will now test this design work in the next phase of piloting.

### (iv) Due diligence

- Under the due diligence work we have completed (i) initial collation of information on our partners Global Parametrics, (ii) solicited advice from specialist insurance lawyers Clyde & Co (pro-bono), (iii) consulted with key stakeholder in GP DFID and (iv) begun internal risk mapping with our host organisation.

- There is still significant due diligence to be done to ensure comfort and confidence in (i) risk models (see below) and (ii) pricing of both risk information services and risk transfer services. This will continue to move forward in the build up to securing funding for an active pilot.
- (v) MEAL framework**
- The HIF funds were used to commission a MEAL framework from two well-known consultants in the early warning-early action space; Simon Levine and Bill Gray. They have designed a monitoring framework that breaks risk financing instruments into many component parts (risk pooling, insurance, funding mechanisms, risk profiling, contingency planning, early response, etc.) to allow for much faster generation of learning, even in years or countries where the mechanism was not actually triggered. This framework will be developed into operational tools that allow us to measure the impact that the DFF is making in enabling more effective responses to vulnerable communities once it is operational. We are finalising/copy editing the framework now, and will put it out into the public domain shortly.
  - The MEAL framework was developed in consultation with the Start Network Forecast, Response and Early Warning Network (FOREWARN) group made up of NGO practitioners, academics and wider partners, and a smaller working group of MEAL advisors from Tufts, ODI and Mercy Corps.
- (vi) Fundraising strategy**
- We have been engaging with a number of key donors over the course of this project, focussing on those who are known to be active in this space (e.g donors of ARC, members of Insurance Development Forum etc). In general, most donors seem to be struggling in this space, as they recognise the benefits of this approach but are wary of committing to year-on-year premiums. There is significant work to be done in analysing the political economy of risk ownership, and how international donors can/should engage with this space – we are in contact with a number of think tanks (ODI, E3G) who are looking to work on this area. Nonetheless there are a few braver donors, who are committed to these approaches and seem to be willing to play a part in testing them.
  - The key output of this project is not a fundraising strategy but a comprehensive 45 page ‘pitch’ document. This outlines in detail the structure of the mechanism, the design work completed in Pakistan and Zimbabwe to date, and the objectives and funding required for the two pilots. The latest draft of the document is currently being finalised and will then be used as a concrete ‘ask’ for donors to fund the next stage to pilot this initiative. We will be happy to share this document with the HIF.

## **Methodology**

**4. Is the methodology proving successful in collecting data and producing credible evidence on the performance of the innovation? If not, what steps are being taken to address this?**

The 'agile design' methodology taken by this project has generally been satisfactory. We have balanced independent development work by the GP and Start Teams, with opportunities for collaboration and consultation involving wider Start Network NGOs. One complicating factor has been that this project is very 'new' to the humanitarian community that consultation on any aspect cannot be achieved in a quick 2 hr meeting/workshop, but only through sustained engagement. This requires stakeholders to be willing to set aside time. This was achieved in Pakistan and Zimbabwe, however, even amongst the NGO staff who participated in the design workshops, very few of them currently feel confident enough to present the DFF to others or to external donors due to its perceived 'newness' and complexity. This presents an additional fundraising/stakeholder engagement challenge.

A second methodological challenge has been building understanding and confidence of Start Network team and NGOs in the technical modelling work completed by GP. This has required a great deal of communication and trust building on both sides, as well as navigating issues of intellectual property rights. As a next step, Start Network is currently seeking to develop a peer group of academics and other practitioners in the sector to work with Start and GP to validate technical approaches and see if there were other advances that could improve the drought risk model. Under the time frame of the HIF this was not possible, but Start Network is working on a research funding bid to enable this work to take place alongside the pilot.

**5. What adjustments have or will need to be made to the methodology during the course of the project? Why are these needed and what are their implications?**

Many adjustments have been made to the methodology over the course of the project. These have already been documented at length in the Q1, Q2 and Q3 reports and so are not repeated here. There were no adjustments in Q4.

**Dissemination and up-take**

**6. How is the project being shared with others (e.g. events, publications, media, and informal interactions)?**

Over the course of the project the Start Network has been involved in a number of cross-sectoral forums around risk financing; these include the Insurance Development Forum, the Working Group on Catastrophe Insurance for Humanitarian and Emergency Assistance led by the Center for Global Development and a new BOND humanitarian group on disaster risk financing. Discussions in these fora are frequently narrowly government/UN dominated (see my blog [here](#)). This project has been key in allowing us to actively

demonstrate in a tangible way the role that civil society can play, both as active business development partners as well as future clients. It has also allowed us to explore and test practical questions around the complexity of risk models, and how premiums will be paid, and to use the learning to lobby for global level solutions to these problems. In the past quarter alone we referenced/explained the DFF at:

- Panel discussion at the Insurance Development Forum annual event (audience 300+)
- Presentation to the Good Humanitarian Donors working group in Geneva
- Panel discussion at the launch of the Oasis open risk platform

In terms of communication products, our key tool has been developing a [short animation video](#) to explain the project concepts in 3 minutes. This tool has been disseminated on twitter (with HIF support), via the Start Network website, by email to key partners and via a [news article published by Reuters](#) (picked up by Daily Mail, Pakistan Tribune and others).

In addition to the video, we have also published a number of blogs on the Start Network and HIF websites including:

- <https://startnetwork.org/news-and-blogs/start-network-and-pakistan-government-collaborate-new-way-finance-drought-response>
- <https://startnetwork.org/news-and-blogs/disaster-financing-debate>
- <http://www.elrha.org/hif-blog/challenges-scaling-crisis-modifiers-potential-solution/>

We have been careful to reference HIF support in all communications materials as well as reports.

Finally, we also continue to communicate and build support for this project within the network itself, in particular via the Start Network Forecast and Early Warning Network (FOREWARN) who include key practitioners in this space.



## Workplan changes

If you would like to make significant changes to your project, then you **must** submit an *Agreement Amendment Form* to HIF for discussion before these changes are undertaken.

If there are changes that have **already** occurred in your project workplan - or there are changes that you wish to **propose** – that you do not think will require an Agreement Amendment form, then please record them in the tables on the next page. These are changes that will impact the results, milestones or objectives you set out in your original workplan, but do not affect the location, methodology or evidence-building and do not change the budget by more than 15%.

*If there are **no changes** to your project workplan since your application, OR if you have included all changes in an Agreement Amendment form, you do not need to fill in this section.*

Please use Table 1 for completed changes and Table 2 for proposed changes. Please copy in all of the principal results, milestones or actions from your original proposal that you wish to change; then record in the next column the changes. Please note it is important that you provide a description of the possible affects these changes will make.

**No changes in Q4.**

**Table 2: Proposed changes**

<b>Original results or activities</b>	<b>Proposed new results or activities</b>	<b>Why the changes are necessary</b>	<b>Potential effect of the change</b>



humanitarian  
innovation fund



**elrha**  
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