Business Case

Summary Sheet

Title:
'MAINTAINING ESSENTIAL SERVICES AFTER A NATURAL DISASTER' (MAINTAINS)

Desired results:

1. This is a research programme that will develop an improved evidence base on how education, health, social protection, nutrition, and water and sanitation services can adapt and expand in response to shocks such as floods, droughts, cyclones and disease outbreaks.

2. Research will be conducted in up to six DFID country offices where there is demand for learning about how to strengthen essential service programmes in response to shocks. Potential focal countries identified to date include Kenya, Ethiopia, Sierra Leone, Bangladesh and Pakistan. Research activities will be designed jointly with country offices to ensure maximum benefit for DFID programmes. At least one of the country studies will be a robust impact evaluation. There is considerable overlap with countries which may be recipients of the London Centre for Global Disaster Protection support and ensuring read across in country selection will be one important criterion for identifying MAINTAINS focal countries.

3. In order to maximise the impact of the research, MAINTAINS will include specialist technical expertise which will be available to focal countries on a call down basis to help to embed research findings into programmes and country systems. In addition, a research uptake strategy will be developed to ensure that lessons from the research are used by other DFID country offices, donors, agencies and governments to design, fund and deliver shock-responsive essential services.

4. The programme is expected to contribute to the UK's aim of protecting poor and vulnerable people, saving lives and helping developing countries to get back on their feet more quickly after a disaster.

Programme Value: £15m over five years		**Country/ Region:** Global
Project Code:	**Start Date: December 2017**	**End Date: March 2022**
Overall programme risk rating:	**Moderate**	
Vault Number:	13054817	

Intervention Summary

1. What support will the UK provide?

The UK will provide up to £15 million over five years to generate new knowledge and evidence on how programmes and systems that deliver essential services, like health, nutrition, water, education, sanitation and hygiene, and social protection, can be designed to not only be resilient to natural disasters, but also to scale up in times of crises to provide expanded and adapted services to those in need, reducing the impact of recurring natural disasters and helping people to get back on their feet more quickly.

2. Why is UK support required?

Natural disasters such as floods, droughts and cyclones already force 26 million people into poverty and cost an estimated $60 billion every year. They disproportionately affect the poor and most vulnerable, such as children, women, people with disabilities and the elderly. Shocks disrupt essential services, including DFID programmes, and lead to higher poverty rates, reduced economic development and poorer human development outcomes.

The humanitarian system cannot keep pace with increasing global needs, mainly arising from long-term protracted crises in a handful of countries. The current model of financing and delivering humanitarian aid can be slow, unpredictable, duplicative, and expensive. Over the past few years, DFID country programmes are increasingly focusing on how to build more shock-responsiveness in to their programmes. In Sierra Leone for example, in the wake of Ebola there has been a focus on embedding early action within stronger health systems as part of efforts to maintain zero Ebola cases.

However, there has been no systematic learning from existing shock-responsive programmes, nor are there plans to evaluate whether the systems that have been put in place work. The Business Case links to a number of other DFID priorities, in particular the new London Centre for Global Disaster Protection which has recently been approved and will work with governments to strengthen their pre-disaster financial planning and use tools like insurance to provide more cost-effective, rapid and reliable finance.

3. What are the main programme activities?

The programme will be delivered by a single supplier or consortium. The focal countries are not specified in this business case as they will respond to demand from DFID country offices. Initial work suggests priority countries such as Sierra Leone, Nigeria, Malawi, Ethiopia, Kenya, Uganda, Sahel region, Pakistan, Bangladesh and Nepal. Where possible, one of the criteria for selecting MAINTAINS focal countries will be whether they are receiving support from the London Centre so that where appropriate lessons can be learned about the impact of improved financial planning on the delivery of essential services in the event of a shock. The following activities will be undertaken:

Develop a stronger evidence base on how to deliver essential services that are not only resilient to disasters, but can also expand and adapt in response to changing need during and after shocks. This will be achieved by ensuring that the research is demand-driven and that research is designed collaboratively with DFID programme teams in up to six DFID focal countries. At least one of the research studies will be an impact evaluation, with others using existing data and monitoring systems to develop robust evaluation designs. Evidence from the response to shocks in other relevant contexts will also be drawn from where appropriate to inform the research. The research will be cross-sectoral with lessons shared across essential services including health, education, nutrition, water, sanitation and hygiene, and social protection.

Integrate learning back into focal DFID country programmes. The country offices that participate in the research will be able to access specialist technical expertise on a call down basis to help them to integrate research findings into ongoing programme design to strengthen country systems. It will be crucial for focal country offices to have an identified champion for the research programme in order to facilitate take up.

Share research findings more widely across DFID and the international community, beyond the focal research countries. This will be achieved through the development of a research uptake strategy and a mid-term review lesson learning event which will share the emerging lessons with DFID offices and other relevant stakeholders.

4. What are the expected results?

The long term goal of MAINTAINS is to contribute to the broader UK objective of reducing the impact of disasters on the poorest and most vulnerable. The outcome of MAINTAINS is to develop a strengthened evidence base on how education, health, social protection, nutrition, and water and sanitation services can be designed to be able to expand and adapt to changing need in response to shocks, and for this evidence base to be used by DFID and others to improve design and implementation of country systems. With this knowledge countries will be able to effectively manage their risk, with essential services able to respond more quickly, more reliably, and at lower cost after a shock. This should ultimately lead to better health, education and nutrition outcomes for populations affected by shocks, especially the most vulnerable.

5. How does the project fit with the department's strategic objectives in the Operational Plan?

The proposed research is relevant to all of the objectives of the UK Aid Strategy, in particular those focused on strengthening resilience and response to crises. The Bilateral Development Review commits to an improvement in DFID's response in FCAS and to lead efforts in making the response to humanitarian emergencies more effective and efficient. The Humanitarian Reform Policy includes a commitment to build the capacity of national health, nutrition, education, water and sanitation and social protection systems to cope with and respond to crises. Findings from the programme have the potential to significantly improve value for money (as highlighted in DFID's Single Departmental Plan, February 2016) by improving the vfm of humanitarian interventions over the longer term.

6. What are the key risks to the success of the programme?

The main risks to the success of the programme are that:

- it **fails to provide clear evidence** on which approaches work – careful design of the research programme and country selection will be key to mitigating this risk;
- there will be **insufficient demand from country offices** for the research - the agenda is a ministerial priority and continued engagement with country offices will be built in;
- it does **not result in changes in approach** , particularly beyond DFID – this will be mitigated by ensuring that there is a strong research uptake and influencing strategy;
- the **contexts for the research are volatile** and contingency planning will be essential;
- there are **insufficient qualified suppliers** to deliver the programme – the commercial case sets out how to achieve the best outcomes through the procurement process.

Strategic Case

1. Context and need for a DFID intervention

Natural disasters set back growth and poverty alleviation

The world is experiencing more frequent and more severe shocks[1] such as floods, droughts, cyclones and disease outbreaks. On average, since 1990, 217 million people per year are affected by climate-related and geo-physical shocks, and economic losses are now reaching more than $60 billion each year[2]. Epidemics and pandemics threaten economic development in low-income countries, with Africa experiencing a new disease outbreak every four days[3]. Recent World Bank studies estimate that natural disasters, which already force some 26 million people into poverty each year, will become more intense and frequent in many regions in the coming years. This is a problem in all of DFID's priority countries. Essential services are unable to cope with changes in need generated by shocks, even when the shocks are seasonal, recurrent or could be predicted. These resulting breaks in health, education, nutrition and WASH services lead to negative long-term impacts, which often affect women more than men.

These shocks disproportionately affect the poor and women in particular. The World Bank's Shock Waves research finds that for all countries where data exists, poor urban communities are more exposed to floods than the average urban population (Hallegatte *et al.,* 2016). Similarly, there is evidence that in Bangladesh shocks have a higher impact on poorer and less educated households (Azam and Imai, 2012), with evidence showing that after disasters women are most affected, are most likely to die, and are at a higher risk of sexual violence, sexual exploitation, trafficking and domestic violence (WHO, 2014). In countries where women already have low social, economic and political status, disasters caused by natural hazards affect women more than men (Neumayer and Plumper, 2007, Combaz, 2014). Other groups such as children, older people, people with disabilities and people with chronic diseases, who face disadvantage and discrimination, are also likely to experience greater risk during shocks, and there is limited evidence on the resilience of disadvantaged groups. The ways in which gender intersects with age, ethnicity, economic status and geography also impacts how men and women experience shocks (Combaz, 2014).

Shocks have long-term impacts on poverty, economic development and human development. Shocks can increase poverty levels – for example, in their meta-analysis of 38 studies, Karim and Noy find that incomes are consistently reduced by natural disasters (2014). The poor, when faced with a covariate shock, often engage in negative risk-coping strategies that can ultimately lead to greater poverty e.g. selling assets, reducing food consumption, forced migration, or withdrawal of children from school (Dercon, 2005). A growing body of evidence suggests that households are unable to fully insure themselves against shocks (GFDRR, 2016; Porter, 2012). Health shocks such as disease outbreaks and epidemics can devastate economies – for example, national authorities in Guinea, Liberia and Sierra Leone estimated the impact of Ebola on GDP growth to have been in the range of 2 to 5 percentage points for 2014 (i.e. lower than what GDP growth would have been without Ebola) (UNECA 2015)[4].

Lost access to education and health services can also have long-term impacts on human development. In Zimbabwe, a review of the consequences of a moderate drought found children from poorer households never recovered from their reduced growth rate compared with those from better off households, thus leaving permanent damage (Hoddinott, 2006). Nutritional losses

[1] MAINTAINS is focusing on covariate shocks (those that affect a large proportion of the population simultaneously) as opposed to idiosyncratic shocks (those that affect individuals thorough life cycle events (e.g. job loss, illness etc.). These include shocks from natural hazards such as drought, cyclone, flooding, landslides, earthquakes etc. as well as health-related shocks such as disease outbreaks, epidemics and pandemics. Shocks can be rapid-onset (e.g. floods or earthquake) or slow-onset (e.g. drought)

[2] D. Guha-Sapir, R. Below, Ph. Hoyois - EM-DAT: The CRED/OFDA International Disaster Database – www.emdat.be – Université Catholique de Louvain – Brussels – Belgium. DFID analyses, averages over the period 2000 – 2016.

[3] Brand, S., Gamhewage, G and Utunen, H. 'A Weapong for Fighting Epidemics: Knowledge transfer', UN Special Report, May 2017.

[4] UNECA 2015, Socio-economic impacts of Ebola on Africa, UNECA.

in utero or as a young child have been directly linked to lower cognitive ability. In Ethiopia, children who were under three years of age at the time of the 1984 famine were less likely to complete primary school.[5] In Burkina Faso children with inadequate nutrition when in utero were less likely to be sent to school and more likely to work at home than their siblings.[6] Drought or war during childhood has caused shorter stature in Zimbabwe, Ethiopia, Eritrea and Rwanda, and is associated with poorer school performance, lower cognitive function, and poorer psychomotor development and fine motor skills, and a higher incidence of problems in childbirth.[7] These long-term impacts can have a greater impact on women than men. For example, girls may be kept out of school to help in the household economy and are more likely to receive insufficient food during food shortages (Combaz, 2014).

Need for "radical new approaches" to humanitarian assistance

Much humanitarian aid is tied up in long-term protracted crises in a small number of countries. On average, disasters from natural hazards and pandemics account for around 13% of international humanitarian assistance, or $1.5 billion per year, but in 3 out of the last 10 years this has spiked to in excess of $4 billion[8]. The increased frequency, severity and the often protracted nature of crises is resulting in a widening gap between humanitarian needs and available international resources. Despite an increase in overall funding, the UN-coordinated appeals only managed to obtain 61% of their total funding requirements (GHA 2014, 2015; OECD 2015; Doyle, 2016). The 20 major recipients of humanitarian assistance in 2013 received most of the total humanitarian aid given over the previous decade, even though few had experienced sudden-onset disasters (GHA 2015).

Humanitarian aid is criticised for being slow, unpredictable, duplicative, expensive and system-avoiding. Momentum is building for humanitarian financing practices to be reformed, to reduce inefficient transaction chains, improve the coherence of different public and private funding sources, to remove barriers to access for governments and to mobilise funding in the early stages of crises through developing objective and politically acceptable pre-agreed 'triggers' for early release (Cabot Venton *et al*., 2015; GHA, 2014; Poole, 2015). The 2011 Humanitarian Emergency Response Review (HERR) acknowledges that the humanitarian system needs to become more gender aware and increase its accountability to beneficiaries, particularly women, including in funding and pre-crisis arrangements.

Development funding and planning needs to better anticipate and respond to crises – particularly cyclical and predictable crises, to reduce the need for humanitarian appeals in countries experiencing recurrent or protracted crises and chronic poverty (GHA, 2014). Early warning data is either unavailable or of poor quality in many low-income countries, limiting the extent to which 'forecast-based' finance or systems can be developed so that education, health, WASH, nutrition and social protection services can quickly adapt to changes in need. This kind of shock-responsiveness could potentially allow for continued essential service provision during shocks, which would lay a solid foundation for long-term human development and ultimately improve a community's resilience to future shocks.

The recent growth in financing mechanisms for disasters unlocks new opportunities for faster, more predictable, and more cost-effective financing. There is increasing evidence that a reliance on ex-post disaster financing (including humanitarian assistance) can create incentives for countries to underinvest in government-led response. It can also reduce incentives to prevent and reduce risks ahead of time, and can lead to slow, poorly coordinated response.

[5] Dercon, S. and C. Porter. 2014. Live Aid Revisited: Long Term Impacts of the Ethiopian Famine of 1984 on Children. European Economic Journal.

[6] Akresh, R., E. Bagby, D. de Walque, and H. Kazianga. 2016. Child Labor, Schooling, and Child Ability. Mimeo, University of Illinois.

[7] World Bank (2017). Accelerating Poverty Reduction in Africa.

[8] DFID in-house analyses based on UNOCHA Financial Tracking Service data

By comparison, budgetary and financial instruments that pre-commit funding to shock-responsive systems, such as contingency budgets, contingent loans, insurance, and reinsurance can support government-led response.[9]

However, benefits from improved finance will be low unless financing is linked to pre-planned systems able to use that finance well (Figure 1). Better financial planning will not guarantee better response to disasters. When a disaster does strike, even if a financial strategy is successful, insufficient implementation capacity is likely to hinder the outcome. Disaster risk finance can ensure that funds are available quickly when – and only when – they are required. However, to have the most impact it must also bind the various financing and implementation partners to pre-agreed objectives, decision processes and implementation modalities within a shock-responsive system. To ensure the greatest benefits to the poorest, where possible, three things are needed: a) coordinated, credible response plans for post-disaster operational delivery; b) fast, evidence-based and data-driven decision-making processes to promote decisive, timely action; and c) pre-planned financing to ensure that the plan can be implemented (Clarke and Dercon, 2016).

Figure 1: Pillars of an effective approach to financial risk management for disasters

Source: Mahul et al. 2017.

The state of evidence and innovation on MAINTAINS

'Shock-responsiveness'[10] is an emerging area of programme and system design, with most progress made in the social protection field. Shock-responsive systems are designed to not only be resilient to natural disasters, but also scale up in times of crises to provide expanded and adapted services to those in need, reducing the impact of disasters and helping people to get back on their feet more quickly. The most progress to date has been in the area of social protection, where attempts have been made to adapt social protection programmes in Kenya, Ethiopia, the Philippines and Pakistan (amongst others), so they can adapt to changes in need, including scaling horizontally (more coverage) and vertically (more services for the same participants). Recent DFID-funded research on social protection[11] concluded that to improve on the current humanitarian system, shock-responsive services should focus on: increasing

[9] World Bank Group. 2016. Disaster Risk Finance as a Tool for Development: A Summary of Findings from the Disaster Risk Finance Impact Analytics Project. World Bank, Washington, DC.

[10] By 'shock-responsive' we mean the ways in which systems and programmes can be adapted to make them more resilient to shocks and more able to adapt to change in demand following shocks so that those affected are able to continue receiving the services that they need.

[11] Oxford Policy Management, in partnership with the Overseas Development Institute, the Cash Learning Partnership (CaLP) and INASP, has conducted a 2 year research programme on Shock-Responsive Social Protection Systems, funded by DFID and due to finish in 2017.

comprehensiveness and coverage (without decreasing quality or equality); improving timeliness and predictability; reducing duplication; improving cost effectiveness; and promoting sustainability and government ownership (adapted from Oxford Policy Management, forthcoming).

A major gap in current research initiatives is that they typically focus on just one aspect of what is needed to make a programme or system shock-responsive, rather than considering them jointly. For example, research funders have invested in risk data and models and the science and data that underpin these, but these are still rarely integrated into decision processes for shock-responsive essential services.[12] Similarly, much of the current research on financing planning is not fully integrated into research on operational planning, decision processes and effective delivery channels, and is targeted at the national budget rather than at the programme level.

There is currently little robust evidence which links this to specific sectors and looks across sectors. Individual country case studies and pockets of sectoral literature exist on how to provide services during a shock (for example, the education in emergencies literature), but there is very little in the way of robust, cross-sectoral empirical evidence and cross-country analysis on how the systems and programmes providing essential services can themselves become more shock-responsive. This is in part due to the small number of shock-responsive programmes that have been implemented and evaluated in these settings. There are still many unanswered questions about the transferability of lessons between sectors, what the overlaps and synergies between services might be, how to most effectively operationalise shock-responsiveness, the specific features of shock-responsive systems and programmes, risks and challenges, and the contexts in which this approach might be most (and least) effective.

There is also limited evidence on how to integrate gender and inclusion into shock-responsiveness. While we know that gender equality and improving the situation of women supports resilience to shocks (Marphatia et al 2016), less is known about the extent to which addressing gender and inclusion in planning, data and financing supports shock-responsiveness. In Pakistan, for example, a gender analysis of Pakistan's early warning system following the 2010 flood highlighted a gap between how officials communicated early warning messages and the way in which these were perceived and understood by vulnerable groups and others at risk (Mustafa et al 2015).

Box 1: Lessons from Concern Worldwide's Community Management of Acute Malnutrition Surge Model (CMAM) [13]

[12] See for example Maxwell, D. and Majid, N (2014) Another Humanitarian Crisis in Somalia? Learning from the 2011 Famine. Somerville: Feinstein International Center.

[13] Hailey, P., 2015, 'Independent Evaluation of CMAM Surge Model Pilot' Concern Worldwide and Centre for Humanitarian Change.

The model aims to strengthen the capacity of the government's health system to effectively manage increased caseloads of acute malnutrition during predictable emergencies without undermining ongoing health and nutrition systems strengthening efforts. Features of success identified include:

- Prepare and analyse data (including past trends, seasonal events and establishing baselines)
- Conduct a capacity review
- Establish thresholds to trigger response and a regular review process
- Conduct a costing of surge actions and identify pre-agreed financing (for example incorporation into annual budgets or contingency funding)
- Formalise commitments and responsibilities (including selection of facilities, approvals and decision-making processes)
- Set up real-time monitoring to provide early warning of changes in need for services

Other considerations include engaging with existing community structures, linking with contingency planning mechanisms and emergency bodies, and creating a network with national and regional stakeholders.

What are others doing in this area?

There is increasing interest from governments and the international community to ensure that programmes that deliver essential services are able to respond to crises when they occur, evidenced for example by the creation of new instruments and approaches such as the World Bank's Crisis Response Window, the Global Refugee Concessional Facility and the Protracted Displacement Window, or the World Food Programme's R4 Rural Resilience Initiative in Senegal, Ethiopia, Malawi and Zambia. DFID's Humanitarian Reform Policy includes a commitment to build the capacity of national health, nutrition, education, water and sanitation and social protection systems to cope with and respond to crises. However, there is a danger that innovative shock-responsive approaches are being designed and implemented without a solid evidence base to underpin them.

There are relevant research programmes on resilience and risk management both internationally and within DFID. The United Nations Office for Disaster Risk Reduction and the Global Facility for Disaster Reduction and Recovery have both invested heavily in research on disaster risk management. The Building Resilience and Adaptive Capacity to Climate Extremes and Disasters (BRACED) Programme is investing in helping people become more resilient to climate extremes in Asia and Africa. The World Bank has commissioned a scoping exercise on Adaptive Human Development and shock-responsiveness but this exercise is only anticipated to last for a few months. DFID's Science for Humanitarian Emergencies and Resilience (SHEAR) and Weather and Climate Information Services for Africa (WISER) programmes, and others such as USAID are investing heavily in climatic data. The START Network and IFRC are looking at how to link trigger-based systems up with essential services.

The London Centre for Global Disaster Protection which is being established aims to provide direct independent advice and capacity building on risk financing mechanisms and product development. UNICEF and others are interested in trialling bonds for preparedness and the newly established fund 'Education Cannot Wait' will leverage new forms of financing as a core part of its fundraising strategy. Within DFID, there is research into how health systems can be designed to 'flex' in order to maintain services through shocks and is researching health systems through the ReBuild Consortium.

However, there is no applied research programme dedicated to shock-responsive services, learning about how services can respond to need, and facilitating cross-pollination of evidence and innovation between sectors, systems and shocks. Existing research programs on risk and resilience are either much broader than shock-responsive essential services or much more focused. None focus on the full supply chain of shock-responsive services. The value add of the proposed research will be to bring together learning from across sectors and to strengthen the evidence on what systems need to be in place to support donors and government to design systems and programmes that enable essential services to adapt and expand to changing needs in the face of shocks. It will also seek to understand better how to meet the needs of the most vulnerable, including girls, women and the disabled. Collaboration with other research initiatives and with others in the international community will be important and there may be opportunities to leverage in financing from others to this research agenda.

2. Why should DFID invest in evidence and innovation on MAINTAINS?

Investing in research on MAINTAINS speaks to DFID's humanitarian reform priorities. The 2011 Humanitarian Emergency Response Review (HERR) recommended that DFID invests in building government capacity to withstand shocks and where it is possible, works with governments to strengthen disaster resilience.[14] The 2016 Bilateral Development Review calls for a new approach to protracted conflict and refugee crises through increased focus on service delivery and economic development and better integration of development, humanitarian and stabilisation expertise. DFID's new Humanitarian Reform Policy proposes to deliver this approach through longer-term funding in support of essential service system strengthening and jobs creation, and calls for more of the risk associated with natural hazards to be financed through government-led arrangements, drawing on insurance and other risk-based financing instruments to support predictable disaster response.

Similarly, MAINTAINS is relevant to all the objectives of the revised UK Aid Strategy, in particular 'strengthening resilience and response to crisis', and it has the potential to significantly improve value for money (as highlighted in DFID's Single Departmental Plan, February 2016) by improving the vfm of humanitarian interventions over the longer term. The UK Aid Strategy commits 50% of UK aid to fragile and conflict-affected states (FCAS), which will be a focus of study for MAINTAINS, and commits that all its development spending, will continue to prioritise the needs of girls and women.

DFID is well placed to drive progress, and is able to ensure continuing high-quality research outputs in line with RED's principles. These are that: research addresses a practical development challenge; is high quality; can deliver benefits within a realistic timeframe; and addresses an important gap in research funding. DFID has a strong understanding of the research landscape and potential suppliers and can ensure research produced is of a high quality. DFID is also a leading humanitarian donor, with a good understanding of the challenges of operating in relevant countries, and has been a major contributor to responses to many of the recent major refugee and internal displacement crises, including in the Syria region, Horn of Africa and Great Lakes. Recent work on adaptive programme design has created the conditions for programmes to be more responsive to changing circumstances and gives DFID more flexibility than many other agencies. DFID is therefore very well placed to ensure that research commissioned is policy and operationally relevant, impacts on its programmes, and influences the work of other donors and humanitarian agencies.

DFID also has expertise across the sectors and thematic areas and is seeking to break down humanitarian/development silos. MAINTAINS requires the ability to straddle humanitarian and development programming, policy and thinking for which DFID is well placed.

[14] Ashdown Lord P. (2011), Humanitarian Emergency Response Review.

As shown above, other organisations are tending to focus on singular aspects of the problem, individual potential solutions or a particular sector / country. To tackle the complex set of inter-related problems and needs set out above, an organisation with sufficient reach and breadth is required. DFID has a comparative advantage given its large humanitarian and essential services investments in fragile and conflict-affected states, and in countries with weak service provision capacity. DFID is therefore very well placed to ensure that research commissioned is policy and operationally relevant, as well as to work with other donors and humanitarian agencies to ensure strong uptake of research findings.

DFID's country programmes provide a context for the kind of innovative research being proposed under MAINTAINS. Discussions have been held with the Kenya and Ethiopia offices, where advances in shock-responsive social protection have already been made. Embedding research with country-level and regional teams will help enable those interventions demonstrated to be scaled up in those contexts. Researchers working on MAINTAINS will be able to work alongside, learn lessons from and help influence programmes that DFID is involved with related to essential services. MAINTAINS will provide DFID country offices with an opportunity to benefit from research findings as they emerge, rather than waiting for the publication of results. It will allow innovative developments in DFID programming across a range of countries and sectors, which should ultimately lead to enhanced vfm of other DFID humanitarian and sectoral spending.

3. Proposed focus of the MAINTAINS programme

The overarching research question for MAINTAINS will be:

- **How can programmes and systems be designed so that they are not only resilient to disasters, but can also expand and adapt their provision of essential services in response to shocks?** How can they be best targeted, financed and implemented to ensure a rapid, cost-effective and reliable response that reduces the impact of disasters and enables people to get back on their feet more quickly?

In this context, DFID is interested in education, health, nutrition, WASH and social protection services delivered by both state and non-state providers. The focus of the research is to explore how development programmes and systems can evolve to provide greater coverage or expanded services in the aftermath of a shock. Research will explore how such programmes and systems could complement humanitarian or other traditional emergency interventions, and where over time they could offer a faster, more cost-effective and reliable way to protect people from recurrent shocks. The aim would be to understand how programmes and systems could provide timely, predictable, less duplicative, inclusive and equitable, more cost-effective services that meet the commitments of the Grand Bargain and also promote sustainability.

This overarching research question is supported by four sub-questions:

- **How should decisions be made about targeting shock-responsive essential services?** For example, during a slow-onset drought, at what points during the season should services adapt and expand based on the evidence available, and how should they adapt and expand? What kinds of essential services are most critical for different types of shock in different contexts? How should decision making work when a shock occurs, and how should data be used in decision making? How can targeting decisions be consistent with humanitarian principles, and how can it cater for the most vulnerable such as children, women, people with disabilities and the elderly? What happens after services flex – when and how do they return to normal steady state capacity?

- **What should be in place before a shock strikes so that scaled response can be implemented efficiently?** For example, what operational logistics, human resources, pre-

positioning, or accountability mechanisms need to be in place? When is additional surge capacity needed in order not to overwhelm system capacity?

- **How should risk financing be designed** to support timely, reliable, cost-effective response? What financial and budgetary mechanisms are most appropriate for different kinds of shocks and in different contexts? How do new forms of pre-committed finance change the incentives for investment by different stakeholders, and what does this mean for overall resilience?

- **How feasible is a shock-responsive approach in different contexts?** Can it meet both humanitarian and development goals? How does design and implementation need to be tailored, for example, to avoid 'premature loadbearing'? In what circumstances can shock-responsive systems deliver more timely, predictable, less duplicative, inclusive and equitable, more cost-effective services that meet the commitments of the Grand Bargain? In what circumstances can they be politically sustainable for all stakeholders?

MAINTAINS will focus on DFID countries and build upon existing programmes. It is well understood that countries with stronger service delivery systems that are governed inclusively are better able to deliver organisationally complex tasks such as disaster response. They are more resilient to disasters, and the state is able to take more of a leadership role in shielding their populations from the impact of shocks.[15] By contrast, in countries with weaker capacity or where governance is less inclusive and gender inequality is greater, service delivery provision is far less effective and resilient to shocks and leaves populations, especially women, much more exposed to the impact of disasters. DFID's focus countries tend to fall into the second category (with the exception of some countries receiving support in the Middle East) with some contexts where legitimacy and capacity are so weak as to make long term research on this agenda extremely challenging (South Sudan, Yemen for example).

Box 2: Proposed criteria for selecting focal research countries

Case study countries will be decided in discussion with the programme implementers and DFID country offices, using the following criteria as a guide (it is not expected they will all be met in every country):

- presence of DFID programmes suitable for adaptation
- recipient of support from the London Centre for Global Disaster Protection
- high vulnerability to recurring natural disasters
- maturity of systems and governance context
- geography and security considerations

Possible case study locations at this stage include Sierra Leone, Nigeria, Malawi, Ethiopia, Kenya, Uganda, Sahel region, Pakistan, Bangladesh and Nepal.

MAINTAINS will have to strike the right balance between high quality and operationally relevant research. Conducting high quality research that has relevance to programmes is likely to be challenging given the unpredictability of shocks. It is envisaged that research methods will need to be adapted to different contexts, whilst also ensuring that cross country and cross sectoral conclusions can be drawn. The programme will commission research which is tied to particular country contexts rather than starting from a one size fits all research design. At least one of the country studies is expected be a robust impact evaluation, with others building on existing data and monitoring systems to robustly evaluate impact. Evidence from the response to shocks in

[15] World Bank (1999), Empirical Studies of Governance and Development: An Annotated Bibliography. Mcloughlin, C. with I. Idris, 2016, Fragile states: Topic guide, GSDRC, University of Birmingham.

other relevant contexts may also be drawn on to inform the research. Focal countries will need a DFID champion for the research who will be responsible for ensuring that it is aligned with relevant programming and that the results will contribute to programme improvements. This could be a HoO, a Deputy HoO or a lead advisers/SRO.

MAINTAINS will focus on multiple sectors because of inter-related outcomes and shared systems. As noted above, research on shock-responsive services tends to be siloed sectorally, with minimal exploration of cross-sectoral synergies and opportunities. MAINTAINS is proposing a different approach that is more mindful of how outcomes of the sectors inherently inter-relate, for example health and nutrition, or social protection and education outcomes. Also, the kinds of programme features and systems which will be the focus of the research are shared across sectors, for example, links to early warning data or financial planning processes. It is therefore likely that findings in one sector will provide insights for another sector. MAINTAINS joined-up approach offers the opportunity for findings to have broader impact, outside individual sectors.

The research will include an element of support to focal countries to facilitate the uptake of research findings into country office programmes. There is a need for researchers to work with practitioners in country to translate research findings into action. In order to facilitate this, specialist technical expertise will be made available on a call down basis and will be designed to support the country office to use lessons from the research to adapt programmes and to ensure complementarity with other initiatives such as risk financing funded by the London Centre. Ultimately, in addition to strengthening the evidence base through MAINTAINS over the long-term, it is anticipated that the programme will be an accelerator of innovation and improved programming in the short-term, including in situations of fragility and extremely weak capacity.

It is estimated that this research will require funding of up to £15m. This figure has been determined by looking at the number of country case studies that would be included in the study (up to six to ensure a range of contexts with differing maturity levels for their existing essential services), the minimum costs of carrying out quality research in these contexts (including at least one robust impact evaluation), and the complexity of the research areas that would be addressed. The figures are based on benchmarking with other similar research programmes. For example, the Business Case for the DFID's Humanitarian research team's flagship Forced Protracted Displacement estimated that four country case studies would need a budget of £10 million over four years. The Research on Improving Systems of Education (RISE) programme conducts country research of similar complexity which can cost up to £1 million/year. £15 million over five years in up to six countries would represent up to £500,000 per year per study which is relatively modest for robust multi-methods research. The precise budget will, of course, be determined by the contracting process.

Research uptake activities will be vitally important to ensure that MAINTAINS has maximum impact. There is a substantial research uptake challenge associated with humanitarian research, and a similar scaling challenge with innovation. The sector has so long relied on accepted wisdom and practice that bringing about policy and programmatic change is challenging even when solid research is generated, while short funding cycles also do not lend themselves to embedded research, evaluations or pilots. Therefore, MAINTAINS will need to include a strong component focussing on communications and uptake. Dissemination and influencing activities will need to focus on knowledge sharing within DFID, across country offices and across Whitehall. In order to influence wider humanitarian and development actors, there will also have to be specific attention paid to sharing knowledge with external actors, including governments, NGOs, bi-lateral and multi-lateral agencies. Evidence needs to be championed by agencies and networks with operational credibility if it is to have operational impact. MAINTAINS will seek to create an active and informed community of practice and ensure that research findings are presented with operational relevance and actionable guidance.

4. Compliance

Compliance with the Gender Equality Act: Climate, conflict and health related shocks disproportionately affect the poor and women and girls. Research suggests that on average, more women are killed by natural disasters than men as a result of their lower socio-economic status, the discrimination they face in accessing resources, social norms, and unequal power relations in society[16]. Children under five years of age (and also pregnant and breastfeeding women) are at specific risk of morbidity and mortality. However, the elderly, those with specific disabilities and marginalised groups may also face specific risks. Shocks can also have a disproportionate impact on children and women (due to risk of injury or death, sexual violence, forced/early marriage and disruption to household food security, health services and education).

Providing better essential services in anticipation of and response to shocks may help improve outcomes for women and girls. However, further research is required. For example, research from more stable contexts suggests that social assistance can provide major benefits across protection, health, nutrition, education and empowerment objectives[17]. Directly addressing gender inequality is likely to help tackle low birth weight, child malnutrition and mortality[18]. There is a need for further research and evidence to build sensitivity to these objectives into the initial design phase of any programme or policy work. A gender-sensitive approach to the research will involve: including gender in the research questions and design (in line with the RED Operational Plan); addressing gender equality in programming (in line with DFID Smart Rules); selecting implementing partners that undertake gender-sensitive programming and have a track record of designing and delivering programmes and policies that address any barriers to women and girls accessing essential services; ensuring disaggregated data that can, for example, inform early warning systems; including gender analysis in any political economy analysis to ensure that programme design is informed by the practical and strategic needs of women and girls; and ensuring outcomes for girls and women are at least equal to those for boys and men.

Risks, Terrorism and Financing: This programme is assessed to be a medium risk. This is as a result of the inclusion of fragile and conflict-affected states that are also at risk of covariate disasters related to climate and natural hazards. DFID's ability for direct oversight in these contexts is limited and terrorist groups may also be active. In any research in conflict-affected states, a conflict sensitive approach based on do no harm principles will be applied. This will include analysis of the context, the interaction between the context and the research, and ensuring the negative impacts and unintended consequences, that could exacerbate tensions, are minimised. However, given a focus on research, knowledge services and technical assistance, many of the activities planned will be low risk. Depending on the context there could be high risks for researchers working in these contexts.

5. Expected results of research

MAINTAINS' ultimate outcome is intended to be countries more able to effectively manage their risk, with essential services able to respond more quickly, more reliably, and at lower cost after a shock. As a result of these changes, more people, especially women and other vulnerable groups, will have access to quality essential services before, during and after shocks. This should ultimately lead to better health, education and nutrition outcomes for populations affected by shocks, especially the most vulnerable.

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[16] Neumayer, Eric and Plümper, Thomas (2007) The gendered nature of natural disasters: the impact of catastrophic events on the gender gap in life expectancy, 1981–2002. Annals of the Association of American Geographers, Vol. 97 No.3. pp. 551-566.

[17] OECD (2009) Promoting Pro-Poor Growth: Social Protection available at https://www.oecd.org/dac/povertyreduction/43280899.pdf.

[18] Marphatia, A., Cole, T., Grijalva-Eternod, C., & Wells, J. (2016). Associations of gender inequality with child malnutrition and mortality across 96 countries. *Global Health, Epidemiology and Genomics, 1*. doi:10.1017/gheg.2016.1

The outcome will be achieved by conducting research in up to six DFID focal countries to find out how essential services can better adapt and expand in response to shocks. It is expected that there will be important cross sector learning which has not to date been captured elsewhere. It is intended that focal countries will use the evidence to adapt the systems and programmes that underpin essential service delivery and reduce the need for costly humanitarian interventions and disruptions to essential services. Research uptake activities will ensure that lessons are shared more widely in DFID and with wider actors and governments to design, fund and deliver more effective shock-responsive essential services to people in need. Further details on the expected impact and outcomes are outlined in the Theory of Change diagram in the Appraisal Case.

Appraisal Case

1. Feasible options for research which impacts on shock responsive essential service delivery

As set out in the Strategic Case, there is a clear need to understand what works, and how to apply this knowledge, to deliver shock-responsive essential services. The Strategic Case has also articulated DFID's strong position as a major investor in supporting high quality research and working across the humanitarian and development sectors. The options therefore focus on how best to help DFID, and its partners, continue to make progress in terms of their knowledge and delivery, and make a cultural shift in approach as funding and delivery agencies. The focus will be on learning how to better design and deliver essential services that can adapt and respond more effectively to shocks and therefore reduce the need for separate emergency responses[19]. The following options are considered:

a. **Do nothing**

b. A **commercial tender** which links the research to DFID country/regional programmes.

c. Partnering with a **multilateral(s)** to manage and procure the research on our behalf.

Option A: Do nothing

Description: Under this option it is assumed that DFID would not allocate additional resources to strengthen the evidence base on what works to build more shock-responsive essential services. DFID centrally could encourage country offices to evaluate and document innovative approaches to building shock-responsive essential services.

Benefits: the main benefit of this approach would be that it would incur no additional costs to DFID.

Costs: the opportunity cost is likely to be significant, as design and delivery of shock-responsive essential services will make more limited progress. There are also efficiency losses, as country offices will seek to make improvements in a more ad hoc way, with greater time costs for staff to learn and share lessons. It is likely that this approach would lead to disjointed and very context specific evidence that could not be generalised for wider policy and programmatic uptake.

[19] As noted in the findings of "ICAI: How DFID Learns" http://icai.independent.gov.uk/wp-content/uploads/How-DFID-Learns-FINAL.pdf Recommendation 3: All information commissioned and collected (such as annual reviews and evaluations) should be synthesised so that the relevant lessons are accessible and readily useable across the organisation. The focus must be on practical and easy-to-use information. Know-how should be valued as much as knowledge.

Risks: DFID will be behind the curve on shifting its emergency response capacity to increasingly work through shock-responsive essential services (as opposed to post-shock design and delivery, primarily through the humanitarian system, with associated costs and delays). This in turn will stretch capacity for the UK to respond to humanitarian crises, as well as lost opportunities to reduce the cost and suffering to affected communities.

Option B: Commercial tender to a single supplier or consortium

Description: for this option, the work-stream would be put out to commercial tender, with a supplier (or a consortium) providing and/or procuring all the research outputs in this area and managing the technical assistance and research uptake activities. The administration and programme management, after the tendering process, would be managed by the supplier. DFID would retain oversight and would facilitate links between the supplier, other DFID initiatives, DFID country offices, as well as with key development partners.

Benefits: one of the benefits of this approach is that, once the initial contracting process was complete, the management relationship between DFID and the supplier would be straightforward. A competitive tendering process would help to ensure value for money. If the research was delivered by a consortium that included operational agencies (e.g. NGOs) some implementing activities could be included for testing in the research as well as working with DFID country offices and relevant programmes. Research uptake and synthesis could be built into the Terms of Reference. DFID would explore tendering this work alongside other initiatives, such as the London Centre for Global Disaster Protection, in case this could offer even better value for money. Regardless of the outcome of this, DFID would ensure that the consortium made links with DFID programmes that are testing new approaches as well as using its convening power to influence others in the international community. The flexibility that a contractor or consortium can offer in terms of packaging information and providing timely technical assistance is likely to make working with country offices and their partners in-country easier and therefore more effective.

Costs: aside from the investment costs, there will be the costs of paying a commercial supplier to manage the portfolio. Management fees vary depending on the bidders; size of the portfolio, type of research tendered and research locations. Typically, management fees for RED projects are around 5-13% total budget. Uptake and implementation of findings outside DFID (i.e. in multilaterals) is likely to be more challenging, with cost of DFID staff time (to influence, lobby, etc.) would need to be considered.

Risks: a contracted agency or consortium of commercial organisations and/or NGOs may not be well positioned to engage governments in multiple countries on sensitive policy and legal issues. Engagement with DFID centrally and with DFID in country will be required to lead on this influencing agenda.

Strength of Evidence: the extent to which these risks materialise would depend on the exact composition of any bid, but the evidence for the likely costs and benefits of running a commercial tender for this type of programme is strong given wider RED experience.

Option C: Multilateral partnership

Description: for this option, DFID would provide funding to a multilateral such as the World Bank and/or UN agencies to carry out and/or procure the research work. An advisory committee would be established with key stakeholders (policy, operational and academic) to guide the work, and to work collaboratively on influencing and research uptake issues.

Benefits: the main strength of this approach is the ability, through a partnership, to leverage additional multilateral human and financial resources. In the protracted displacement research

work stream, for example, DFID is partnering with the World Bank and UNHCR to leverage IDA, the planned new $2bn protracted displacement fund, and UNHCR programmes and funds. This is not only important for financial reasons, but because of the central role of these organisations in bringing about policy change and in scaling up successful interventions. It should be noted that for the protracted displacement research programme, there was clear leadership in the World Bank. This is currently not the case for shock-responsive essential services, aside from social protection.

In the case of the World Bank, the quality of the research is likely to be high, however with a risk of not being applied enough or drawing fully on humanitarian perspectives. Other multilaterals with stronger humanitarian experience may struggle to ensure research quality. This can potentially be mitigated to an extent through agencies working together should the contract be structured through multiple agencies.

Costs: the internal DFID administration costs would be similar to or lower than those under option B, given that DFID has agreements already in place for Trust Fund funding agreements with multilaterals with pre-negotiated fee rates. Management fees would typically be between 5%-13% depending on the multilateral agency with some additional charges for staff charged for technical oversight for example.

Risks: there is a risk that locating the research with a multilateral agency would reduce its policy impact on DFID, but that could be mitigated by engaging relevant country office/regional colleagues around plans and findings, and potentially opening the research up to partnerships with DFID programmes where DFID is working in partnership with multilaterals on the ground. There is also a risk that the multilateral will not allocate sufficient staff to manage the programme well. This would need to be monitored carefully and written into partnership agreements. Finally, there is no clear leadership on the issue amongst multilaterals.

Strength of Evidence: there is a range of RED experience of working in partnership with multilaterals that can be drawn on. DFID needs to engage closely to make sure it gets the best out of these arrangements.

2. Appraisal of the delivery options

The overarching research question is: **How can programmes and systems be designed so that they are not only resilient to disasters, but can also expand and adapt their provision of essential services in response to shocks?** These programmes will then be able to function either as a complement to or as a replacement for separate emergency responses. This points to a shift of approach in DFID, and also other major development partners and governments. In other words, the research supported by technical assistance and research uptake activities is to make interventions more effective and increase the likelihood of meeting the SDGs.

Criteria used to assess delivery options

1. **Quality of research, especially in fragile country contexts.** This criterion is to determine a) ability to carry out quality research in fragile and conflict-affected contexts, and b) ensure cross-lessons and wider applicability. In the 'does nothing' scenario, it reflects what would happen anyway (so not what could happen if country-office led).
2. **Potential for DFID operationally relevant research across DFID and partners.** Reflects ability to deliver research that can then be easily adopted by DFID as well as other partners.
3. **Flexibility for adapting research portfolio.** Assesses the ability to respond flexibly to evolving realities, while managing research quality.

4. **Set up costs to DFID.** Process of contracting and agreeing delivery including KPIs, log frame indicators.
5. **Ongoing costs of administration and management to DFID (internal DFID resources, plus cost of outsourced work).** The programme management and advisory time required for oversight and facilitating delivery.
6. **Potential for financial leveraging of others.** Ability to enable shock-responsive essential services design and delivery funded by other partners including governments.
7. **Potential for good research uptake to influence DFID programming.** The likely effectiveness of lessons being communicated, drawn on, and implemented by relevant DFID programmes.

Table 1: Scoring relevant appraisal criteria

Scoring: Scores are from 0-5, 0 representing no benefit for MAINTAINS, and 5 representing the most benefit.

OPTION / ASSESSMENT CRITERIA	A. Do nothing	B. Commercial Tender	C. Multilateral partnership
Quality of research, especially in fragile country contexts	**2** Country office led research is primarily evaluations of specific programmes which while often good / high quality, are not designed with MAINTAINS as an objective.	**4** Control over selection of suppliers by experienced DFID research team.	**4** Quality control would be fully outsourced, risk of unclear leadership if multi-agency.
Potential for DFID operationally relevant research across DFID and partners	**1** This would depend on relevant DFID evaluations and lessons shared by partners.	**5** Strong degree of DFID oversight to help inform relevance	**3** Moderate DFID oversight and some risk of capture/over-exposure to Bank or other multilaterals
Flexibility for adapting research portfolio	**1** Ad hoc studies.	**5** Maximum flexibility	**3** Medium degree of flexibility
Set up costs to DFID	**5** No set up costs	**3** Medium resource intensity (but DFID's existing commercial tender processes well-established).	**4** Low resource intensity using pre-negotiated frameworks. Agreeing focus of research and overall approach can be more time intensive.
Ongoing costs of administration and management to DFID	**1** Without intervention, individual teams in DFID will need to try to	**3** Moderate costs of administration for DFID after initial	**4** Moderate costs of administration for DFID. Getting timely

(internal DFID resources, plus cost of outsourced work)	learn which would be resource intensive.	procurement. Estimated overheads 8%-13%.	financial and technical reporting from multilaterals can be challenging at times adding to costs. Estimated of multilateral management fees range from c.5%-13%.
Potential for financial leveraging of others	**1** Low likelihood	**4** Better informed and technically supported DFID teams will be well placed to leverage funding from others including managing the political economy in-country.	**4** Opportunity would primarily be with significant World Bank funds, weaker more widely.
Potential for good research uptake to influence DFID programming	**1** Low likelihood	**5** Potential for strong links to DFID programming, including through timely provision of operational support to DFID programmes.	**3** Links to DFID programming weaker and operational support likely to be diluted across a range of programmes
Score	**13**	**29**	**25**
Risk rating (risk to achieving impact on programming)	**Major**	**Moderate**	**Moderate**

Overall vfm assessment of the different options

The do nothing option is discounted on the basis of the low likelihood that it will achieve impact on the programme. The main cost drivers through either option 2 or 3 would be similar – these are primarily the costs of research personnel to deliver high quality country level studies, the costs of research uptake (for example web platform and outreach activities), the costs of providing operational support to programme teams, and monitoring. The analysis assumes that these personnel costs would be similar under both options although competition does allow DFID to potentially drive down these costs if sufficient quality bids are received from suppliers).

The overall vfm recommendation is that a contract is issued through competitive tender, and centrally managed by the Humanitarian Research Team. This option is judged most effective in terms of ensuring maximum impact on DFID programmes. It will also enable collaboration and political economy engagement with other agencies and partner governments led by DFID staff, as well as the winning contractor/consortium working with other agencies directly themselves. The assessment also reflects the judgment in the Business Case that there is currently limited multilateral expertise and leadership on this issue. Leveraging additional financing from other donors for shock responsive research will be one of the objectives of the research.

While funding through relevant multilateral agencies is likely to support internal changes within those organisations as well as potentially leverage financing, the overall impact is likely to be weaker and it would also reduce DFID's own ability to respond to the UK government's

commitment to improve resilience of systems and communities to which MAINTAINS will directly contribute. Although management costs could be slightly higher under Option 2, the benefits in terms of impact on DFID country programmes and the judgement on the current lack of leads to the recommendation.

Theory of change of the preferred option

The ultimate outcome of MAINTAINS will be that countries are more able to effectively manage their risk, with essential services able to respond more quickly, more reliably, and at lower cost during and after a shock. The Theory of Change diagram (see below) sets out how the MAINTAINS programme is designed to tackle a set of complex and intertwined problems, which will ultimately lead to this outcome.

The programme will deliver through three components, reflected at activity level in the Theory of Change. These will be:

a. Research activities to build a robust base of empirical evidence

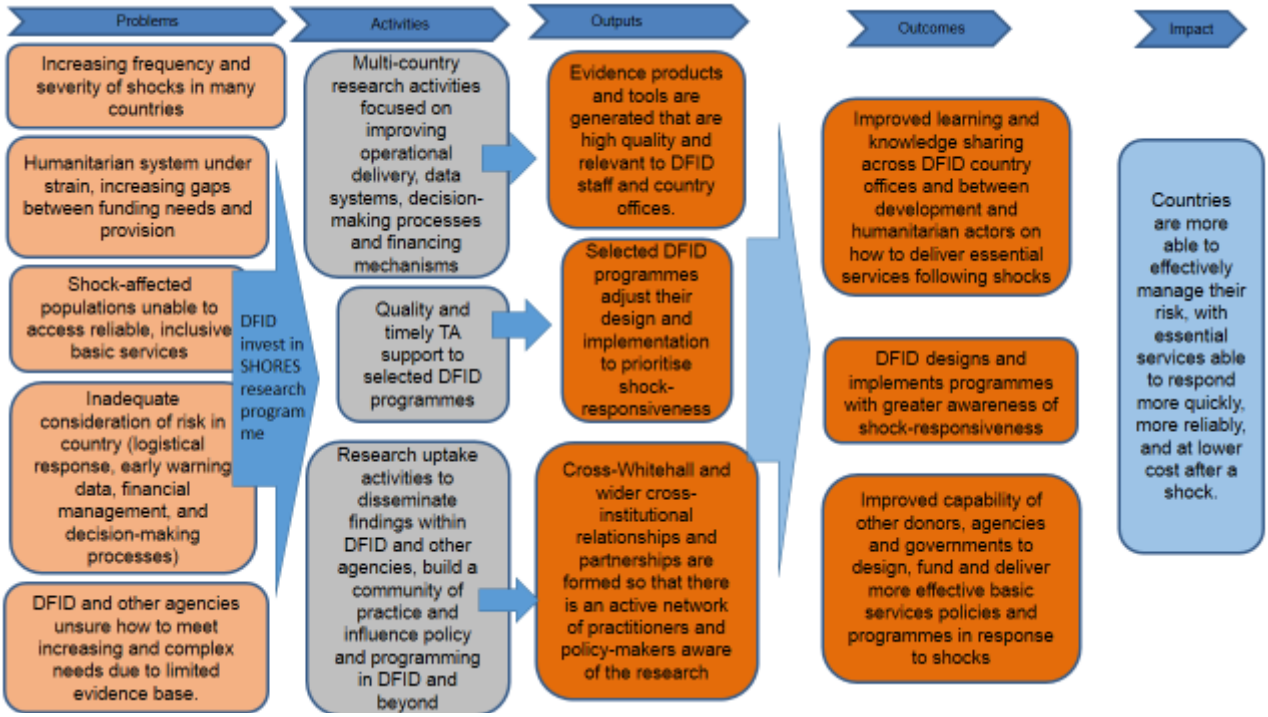
b. Targeted support to a focal countries to help programmes to learn from the MAINTAINS research

c. Research uptake activities to ensure that findings lead to maximum impact

Targeted support to focal countries and research uptake activities are considered integral to delivery, to ensure uptake within DFID and with partners[20].

Figure 2: MAINTAINS Theory of Change

[20] The inclusion of a technical assistance as well as a research update component, reflect, inter alia, lessons from HIEP "Evaluation of the Humanitarian Innovation and Evidence Programme (HIEP): Summative Evaluation Phase 1" including recommendation "Develop and contract out a HIEP communication project or set of projects to promote uptake and application of HIEP findings particularly at the national and regional levels."



3. Economic Appraisal of the Theory of Change

The economic appraisal seeks to a) test the theory change and chosen delivery approach to confirm a likely positive return to investment, b) identify the main drivers of costs and benefits which will help inform log frame indicators and wider management of the project, and c) sensitivity test the conclusions.

The cost-benefit is primary driven by:

a. The costs of applied research, technical assistance, information sharing.
b. And the potential benefits in cost savings and improved impact on shock-affected communities.

The management costs (of the implementing partners and DFID staff time) do not vary sufficiently to be a factor in terms of costs. The sensitivity analysis explores the impact on relatively higher/lower uptake, with the case already made that a commercial tender in this case is better placed in terms of likely uptake within DFID and partners.

Conceptual overview of the benefits of MAINTAINS

The proposed investment is primarily to increase the efficiency and effectiveness of DFID and partner funded interventions in terms of shock-responsive essential services, reducing humanitarian costs and needs and increasing the likelihood of achieving SDGs especially in FCAS.

This is less about developing new approaches and supporting major innovations; but primarily about learning what works and supporting DFID and the wider humanitarian response to be more efficient and effective.

From an economic perspective, this is about supporting delivery to be more consistently closer to the production possibility frontier (rather than pushing the production possibility frontier further out through major innovation).

Benefits and Costs of DFID's Intervention

The quantifiable benefits are the improvements in returns to DFID's investments in terms of reduced humanitarian need and more effective essential services provided post-shock to affected households and communities.

The simplified model used to capture benefits is based on:

a. An assumed 15% return for adjusted design and delivery of shock responsive essential services in health, education, WASH and nutrition, i.e. for every £1 that is invested into shock responsive essential services, the return will be £1.15[21] compared to spend through a conventional humanitarian response.
b. Half of these benefits are assumed from savings though more *economic* and *efficient* delivery mechanisms (e.g. lower delivery costs, reduction in duplication)
c. Half are from more *effective* outcomes as impacted communities are better served than otherwise the case through shock responsive essential services shared equally between improved impacts in education, health, nutrition and WASH.
d. Where programmes target women and girls and address gender inequality, it is assumed the investment is more effective.

These highly simplified benefits are prudent assumptions based on findings from relevant studies [22];[23] however, these would need to be tested as part of the research given the relative lack of information (and part of the rationale for the research to be carried out).

The savings and increased benefits then are based on 5% of current DFID humanitarian spend in countries where DFID has an established development programme[24] that is adapted to more effectively deliver essential services by year three of the programme, and reaching 10% by year four. It also assumes no further increase (or decrease) beyond year four and estimates run to year 10. This means around £40 million additional funds would be annually invested into shock responsive essential services (and so a similar figure is then not invested into post-shock humanitarian delivery mechanisms). This figure would be driven by increased investment into the delivery of essential services in shock-likely delivery environments, and surge disbursements in the event of a shock. It also does not exclude the resources from other agencies and partner governments seeing adjusted delivery mechanisms through shock resilient essential services, but uses the 10% of the DFID total humanitarian spend in priority DFID countries to reflect the scale of potential resources.

Costs are based on the total investment of £15 million by DFID over five years, and include an additional 2% of DFID staff time (based on approximately x1 FTE in year one and x0.5 FTE in years 2 to 5).

Economic returns and sensitivity testing

[21] This 15% implies a significantly higher return compared to a post-shock humanitarian response if just looking at the return in the year that a significant shock occurs, however populations do not generally face large covariate shocks every year. The rate of return would go up where shocks are more frequent (e.g.: every 2-3 years) and lower where relatively less frequent (e.g.: every 10 years or more).

[22] DFID funded Strengthening Humanitarian Preparedness for Effective Response found in three sampled economic case studies benefit-cost ratios of between 3.3:1 and 14.4:1 (discount rate 10%). The three examples have generated savings in the region of £5.1 and £7.5 million as lower and upper bound estimates associated with 5 and 10 year timelines respectively. Within these three examples it has saved the equivalent of 26% to 38% of the cost of the project over 5 and 10 years respectively.

[23] Being able to prevent losses to shock affected communities can lead to very substantial savings. One study of the impact of drought on a community in Kenya estimated that total of $176m in costs/losses due to the drought reflected by a total beneficiary population of 367k as determined by the HEA modelling.

[24] This excludes humanitarian spend that is primarily focused on the impacts of major conflicts or one-off responses to very significant humanitarian situations that are not in DFID focus countries. It also excludes funding that is provided as core funding to international organisations such as the World Bank, EU, UN agencies.

Based on this simplified model and using a 10% discount rate, the benefit: cost ratio would be a healthy 2.16:1, with an economic rate of return of 33%. Designs and delivery that are weaker in terms of reaching women and girls would reduce this to 1.94:1 and 27% given the lower returns to investment that are associated with higher gender inequality and exclusion[25].

Sensitivity testing

Scenario 1:
- economy and efficiency savings are lower than anticipated, and/or
- shock-resilient essential services are mostly implemented in lower-risk countries/regions[26].

This can be reflected by a lower 10% return on shock-resilient services (rather than 15%).
The benefit: cost ratio would remain positive at 1.29:1, and the economic rate of return would be 9%.
In other words, the returns are sensitive to the likelihood of a shock occurring. Investments in areas with moderate risk still likely to make a positive return, however significantly lower than in high-risk areas and populations.

Scenario 2:
- Lower uptake of the research findings in relevant programmes.

This is tested using just a 5% total update of relevant humanitarian spend, around £20 million.
The benefit cost ratio falls to 1.08:1 and the economic rate of return to 2% - effectively a break even scenario. This scenario could be used as a proxy indicator for the outcome where MAINTAINS just limits its investment to research only with a very limited communication and no technical assistance component. Active management to enable take-up of lessons will be important to manage this risk.

Scenario 3:
- Variable discount rates, using 5% and 15%[27].

With a lower discount rate, the benefit: cost ratio increases 2.5:1 and economic rate of return rises to 39%. Using a higher 15% discount rate, the benefit: cost ratio falls to 1.55:1 and economic rate of return to 18%.
This suggests moderate sensitivity to discount rates.

Taking into account the fact that information is limited, which research and application will help confirm, **what do these figures suggest?**

a. Integrating shock-responsiveness into essential services is likely to provide a significant benefit stream, especially where applied in regions and countries that face regular shocks. There is a small risk the research does not lead to applicable findings than can be used more generally. This will be a core risk that will be monitored and managed.
b. Moderate uptake will already fully justify DFID's investment into MAINTAINS. Conversely, low uptake is arguably the highest risk that will require risk management. The technical assistance/research uptake activities offered integral to the MAINTAINS design significantly reduces this risk.
c. Prioritising higher risk areas and populations would have a higher return; however moderate risk areas and populations are still likely to provide significant benefits.

[25] Multiple sources in the literature such as Overseas Development Institute Background Note (2009) *Gender vulnerabilities, food price shocks and social protection response (focus on food security)* and Neumayer and Plümper (2007) The Gendered Nature of Natural Disasters (included impact on life expectancy post-shock).

[26] For example, if there is higher uptake in countries which less frequently face occurrences of major shocks/humanitarian needs.

[27] Discount rates would normally vary depending on the country context, with lower rates applying in more developed economies, and higher rates in less developed and especially fragile countries. Lower rates are often applied where reviewing global goods (e.g.: climate change).

d. Ensuring gender and other forms of exclusion are central to the research and technical assistance/research uptake activities is important, given the significant value in terms of impact as well as the strong ethical case.

To ensure at least a break-even return is tracked and accounted for, log frame indicators will reflect outcomes that involve DFID (or partner) investments fully, including new designed and implemented shock-responsive essential services where attributable to MAINTAINS. Similarly, clear gender related indicators will be included to ensure higher returns to investment.

Commercial Case

1. Clearly state the procurement and commercial requirements for the intervention

The Appraisal Case makes the recommendation that the humanitarian research work is delivered through Commercial tender to a single supplier or consortium. The value of this programme meets the criteria (>£5m; contracted), the programme will require additional approval through the Cabinet Office through the Sourcing Strategy. Upon Business Case approval, the Humanitarian Research Team will work with RED's Commercial Advisor and the Procurement and Commercial Department to fulfil this requirement. The sourcing strategy will explore and rationalise the exact route to market. This route to market will be scrutinised by the Head of PCD and a panel of commercial experts before seeking approval from Cabinet Office. During this time, the Humanitarian Research Team will explore innovative ways of contracting, including the possibility of hybrid modality (e.g. joint contracting of a Research and Intellectual Leadership team/Programme Directorate during inception phase).

Procurement and funding arrangements

Advice has been sought from RED's finance and commercial experts on the procurement and funding arrangements.

A budget breakdown and programme delivery plan will be agreed before the contract is signed to set out initial performance expectations. The supplier will be required to develop a detailed work plan in a three month inception period. This work plan, to be agreed by DFID, will form the basis for performance measures which will be linked to payments. The inception phase will also be used to design the approach and methodology for delivering the service, including consolidating current best practice in adaptive management. On successful completing the implementation phase, the service provider will be contracted for the remainder of the five years to implement the programme.

In the adaptive spirit of the programme, and reflecting its innovative nature, programme delivery will remain flexible and open to adaptation in the face of information gathered through implementation. Monitoring data and the annual review process will be used to assess progress and achievements to the output level. Client feedback will be collected. If opportunities or implementation challenges are highlighted in any of these processes, then in conversation with the supplier we will seek to adapt the programme accordingly (see the Management Case).

The contract will include a mid-term programme review. This will be linked to a break clause, whereby the programme may be terminated or substantially modified due, for example, to poor performance or insufficient demand for services.

Oversight and decision-making responsibilities

A Programme Advisory Committee will be established to assess the evidence to date, identify research priorities and provide technical and policy advice. The Committee will be comprised of representatives from DFID and the partner/supplier. The Committee will draw up and approve terms of reference for their work during the inception phase during the first three months. The programme will be managed on a day-to-day basis by the successful supplier who will be responsible for daily oversight and implementation of the programme and oversee the contracting of research and impact evaluations, both internally within externally to qualified partners. A Technical Working Group will be established to peer-review work commissioned, and support dissemination activities. Terms of reference for this will also be drawn up in the inception phase.

In this way, DFID will retain strategic oversight, with the RED Humanitarian Team Leader remaining as SRO for the programme. RED (the Humanitarian research team) would manage the Administrative Agreement, and maintain oversight over the programme. The programme would undergo DFID's Annual Review process, in addition to quarterly reporting and discussion.

2. **What assurance has been obtained on the organisation's capability and capacity to deliver?**

The contracted Service Provider will be subject to a due diligence assessment completed by DFID's Procurement and Commercial Department (working with the Humanitarian research team) both at pre-qualification and the invitation to tender stage. Payment will only be made on agreed deliverables. If any issues are encountered with a supplier, the termination clauses set out in the contract will be initiated.

3. **How do we expect the market place will respond to this opportunity?**

There is a strong interest in taking forward research and innovation work in the humanitarian sector. It will be important to attract a wide range of partners into the process where appropriate to maximise competition and catalyse new and innovative approaches. The range of organisations with a potential interest in this work is considerable, with the likely work to be commissioned covering a wide range of technical areas and therefore attractive to a wide range of NGOs, commercial companies and academic institutions. The degree of response from the market will be monitored carefully to ensure that a strong and wide field of potential suppliers is being accessed through any procurement processes.

4. **How will value for money be achieved?**

This Business Case seeks approval for £15m of funding over five years, until 2021/2022.

What measures can be used to assess value for money for the intervention?

Assessing the value for money of research programmes is necessarily very difficult, as VFM will be best demonstrated through the uptake of research in the longer-term. Research interventions often do not lend themselves to monetising potential benefits or to carrying out specific cost benefit analysis. It is not possible either to carry out a unit cost analysis as many outputs are still unknown and the inputs will differ according to the type of project. Some assessment of VFM can however be carried out, as outlined below.

Programme-level VFM

RED is currently working on improving VFM at divisional level by establishing a clear framework for ensuring and measuring VFM for research programmes. There are two levels for assessing

VFM – at programme level, and at the individual research project level. RED achieves good overall VFM through its portfolio by:

- **Picking the right problems** - allocating resources to research areas that are likely to achieve high rates of return on investment (problems that are amenable to tackling partly through research)
- **Working through strong partnerships** - most programmes are co-funded and managed, allowing us to leverage substantive and administrative expertise
- **Always requiring good quality** – as poor research may not merely be of low value but may cause damage and reputational risk to DFID and others
- **Procurement** - controlling quality and costs via open, competitive processes run often by partners and sometimes by DFID. RED has worked with PCD to pilot innovative approaches to increase the range of institutions we work with and strengthen Southern research capacity so higher quality research can be conducted at lower cost
- **Programme Management** – Tight oversight of programme delivery, including through results based contracts. Robust financial and delivery oversight allows us quickly to identify projects which are going off track and take action (including closing projects when required)
- **Learning and sharing across RED** – through our own reviews, audit meetings and other activities and through selective external evaluations and reviews.

There are several useful elements to the new framework: guidelines on 'Key Questions for VFM' under each of the '4Es' (economy, efficiency, effectiveness, equity); intended as an overview one-page guide to thinking through VFM. A more detailed Full Checklist helps focus on detailed matters of relevance to the appropriate phase of a particular programme. Finally, there is an evolving set of good practice examples. The Framework does not proscribe new practice or additional tasks (other than more sharing of good examples). Rather it seeks to consolidate existing practice found across RED, in order that current and, especially, new colleagues can more straightforwardly absorb and build upon what is done to ensure VFM in programmes. A full VFM Checklist is in draft and can now be used throughout the HIEP programme cycle, from the inception phase, through monitoring and evaluation and through to project and programme closures.

Project-level VFM

Key cost drivers for individual research projects are direct and indirect staff, travel costs, supervision and transport costs. For non-research projects, these are often measured through indicators (metrics and measures). As mentioned above, measuring VFM of research through indicators is challenging. We cannot readily measure quality and volume of daily activity, and hence comparators and benchmarks are hard to identify. That said, there are some straightforward measures which can be useful. The measures below inform ongoing monitoring and evaluation activities as the programme develops, as set out in the Management Case.

Table 2: vfm indicators

Economy	•Partner administration and management charges as % total programme budget •Overheads/indirect costs of research institutions as proportion of their total programme allocations •Mean salary/rate per researcher day (including employee benefits/employer taxes and contributions) •Mean daily expenses (for working away)

	•Mean person day cost for events (workshop/conference/annual meetings, etc.) •Additional funding leveraged, as % of DFID funding (potentially suitable if such additionality was a stated objective for the programme) •Value of in-kind contributions of partners, as % of DFID funding (potentially suitable if such additionality contributes significantly to running the programme)
Efficiency	• Unit cost per output •Unit cost per peer-reviewed journal article •% of scheduled outputs delivered on time (i.e. where at least some outputs have a due by date, % of these that meet their deadline). •Staff turnover: annual % rate
Effectiveness	•Rating of research uptake strategy (0,1, 2); % budget on comms and uptake •% of articles in journals with top quartile impact factors •Collaboration - % of outputs that have international co-authorship •Unit cost per download of each key online publication •Number of instances of technology being adopted for use by commercial or public sector body; numbers of users. •No of case studies of rigorous evidence being put into use to shape policy or programming
Equity	•Number of Southern Principal Investigators and Co-Investigators •Women authored papers •Southern authored papers – lead authors and co-authors •Southern woman authored papers – lead authors and co-authors •Ratio of salaries/rates funded by programme (e.g. highest to lowest, junior to senior researcher). •Carbon footprint of DFID spend

Financial Case

1. **<u>What are the costs, how are they profiled and how will you ensure accurate forecasting?</u>**

For the Shock Responsive Essential Services work stream, the proposed funding is **up to £15 million over five years**, until the financial year 21/22, through a Commercial tender to a single supplier or consortium. As the contracting process is expected to take up to 6 – 9 months from business case approval, spending is expected to be minimal in this financial year. The key outputs for this work stream were outlined in the Strategic Case, but it is not yet possible to know the exact costs for the research projects within those questions, as procurement is not yet underway. However, these are estimated below

Table 3: Estimated financing

Research package	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	Total projected spend
Shock Responsive Essential Services (MAINTAINS)	0.2	3.8	4.5	4.5	2	**15**
Management fee (estimated at 10%)	0.02	0.4	0.5	0.5	0.2	**1.62**

0.5 FTE A2 programme funded post	0	0.05	0.05	0.05	0.05	**0.2**
Inception phase	0.18	0	0	0	0	**0.18**
Case studies (x6)	0	3	3	3	1	**10**
Operational support	0	0.15	0.45	0.45	0	**1.05**
Research uptake	0	0.2	0.5	0.5	0.75	**1.95**

The proposed funding of £15 million for this work stream will allow for a strategic approach to key evidence gaps and will make significant progress towards filling those evidence gaps with high-quality research. The rising spend profile takes into account the time needed to establish the work plan during the inception phase, and assumes that processes will naturally speed up over time. If it is possible to achieve the desired research objectives for a smaller investment, we would propose reinvesting any value for money savings back into the programme. The funding could be used to either supplement complementary influencing work, or extend research projects where there are useful opportunities to do so. For example, it may be that for some research projects, it may be beneficial to replicate research in other locations, extending the scope of the project and broadening the evidence base overall.

In addition to funding for research projects, this amount will include allocated funding for research dissemination, uptake and communications activities for projects. The overall communications and influencing strategy will be developed between DFID and the other partners as a key channel for achieving the programme's objectives, and will therefore include contributions in-kind from those partners.

The RED Humanitarian Research Team will continue to ensure accurate forecasting through monitoring of quarterly reports and regular reporting to the relevant finance teams. Quarterly payment requests will include an updated forecast of payments for the next financial year, which will allow officials to ensure DFIDs forecasts are accurate. The provision of 0.5 FTE of a programme funded A2 post will strengthen the Humanitarian Research Team's oversight of the programme and ability to share lessons across DFID. The exact responsibilities will be developed during the inception phase of the programme.

2. **How will it be funded: capital/programme/admin?**

Research projects are funded from DFID programme capital resource allocation (CDEL), drawn from the provision for the Humanitarian research team in DFID's Research and Evidence Division budget. HM Treasury reclassified research spend from programme RDEL to programme CDEL, effective from 1 April 2016. This project will be funded by RED from the centrally-agreed research settlement of £1.5bn over four years, as set out in the Strategic Case.

3. **How will funds be paid out, and how will expenditure be monitored, reported, and accounted for?**

How will funds be paid out?

Payments will be made quarterly in arrears, upon SRO approval of the payment requests accompanied by an expenditure report and narrative report. The payments will be made to the successful contractor or consortium, who will manage the funds.

4. **How will expenditure be monitored, reported, and accounted for?**

DFID will conduct Annual Reviews and a Project Completion Report against the log frame, which will be finalised during the Inception Phase, and a timetable for reviewing the log frame will also be agreed.

Expenditure reports will accompany payment requests, which will require SRO approval of payment in arrears.

No specific assets are expected to be required.

5. What is the assessment of financial risk and fraud?

Overall, we assess the financial and fraud risks of the new research packages as Moderate (see Management Case). The contracted Service Provider will be subject to a due diligence assessment completed by DFID's Procurement and Commercial Department both at pre-qualification and the invitation to tender stage. Payment will only be made on agreed deliverables. If any issues are encountered with a supplier, the termination clauses set out in the contract will be initiated.

Some key risks remain. Humanitarian research is often carried out in fragile and conflict-affected states, where the risk of diversion of loss of funds cannot be eradicated. However, the recent Independent Evaluation has stated that the HIEP has been able to remain flexible and has coped well with the challenges of working in these states[28], and the new research work stream can use these lessons learned to reduce risks for the new research projects as much as possible. There have been no reported or detected instances of financial fraud to date under the current HIEP programme, and as most of DFID's funding would be channelled directly into research activities, which are more difficult to divert funds from compared to many other types of programming interventions, this also reduces the risk compared with normal humanitarian programming in these contexts.

Due diligence

Following approval of this Business Case, the RED Humanitarian Research Team will consider any existing assessments and complete a further due diligence assessment specific to this research using the standard DFID template. The supplier will then be responsible for conducting due diligence assessments for any downstream partners. Therefore, we are confident there are sufficient mitigations and escalation routes in place.

In addition to due diligence assessments, reporting requirements for the suppliers, and their downstream partners, would be clearly established during the inception phase. Partners will be required to report any suspicion or detection of fraud to the supplier immediately, and recovery of funds will be sought to return to DFID.

Management Case

1. What are the management arrangements for implementing the programme?

The project will be managed and implemented by a single supplier or consortium) contracted through open, international tender against a detailed ToR in which the deliverables and reporting requirements will be specified. It is anticipated that the supplier will be a single company or

[28] *DFID - Evaluation of the Humanitarian Innovation and Evidence Programme (HIE* Summary section, ITAD, draft report, (January 2016).

partnership of companies who collectively have the appropriate range of expertise to deliver a high quality programme. The supplier will manage the partners through appropriate sub-contracts. The supplier will be responsible for:

- Financial management and activity reporting
- Intellectual leadership and quality control of research
- Selection of countries for the research programme (jointly with DFID)
- Ensuring that high quality academic research is conducted in focal countries
- Mobilising call down specialist technical advice as requested by focal country offices to support getting evidence into programmes to strengthen country systems
- Research dissemination and uptake
- Monitoring the programme

The proposed governance arrangements and functions are outlined in the table below:

Table 4: Management arrangements

Responsible Owner	Detail of responsibilities
1. RED programme management	• The programme will be managed by the Humanitarian research team. This team would include a percentage of a Programme Manager who would be directly responsible for the day-to-day management and delivery of the programme and also some dedicated advisory time. The Humanitarian research team leader would act as SRO for the programme
2. Programme Advisory Committee	• To be effective, the delivery partners will need to work very closely with DFID country programmes. It is planned that a small Programme Advisory Committee comprising country office representatives will be formed, with any other members as agreed. The precise composition and TORs will be agreed in the inception phase of the programme.
3. Technical Working Group	• In addition, a technical working group will be convened to provide feedback to the programme and management team. Membership of the group will include representatives from multilaterals, donors, academics and others to be determined. TORs and composition will be agreed in the Inception phase.

2. Monitoring and Evaluation arrangements

The programme outputs and outcomes will be determined during the initial three-month Inception Phase in line with DFID's Smart Rules. The expected outcomes for this work are that policies and investments on shock responsive essential services are based on evidence, and as a result are better prioritized and targeted, delivering better value for money.

Within DFID the Senior Responsible Owner will be the Humanitarian Research Team leader. The programme log frame will be the standard management tool for reviewing performance, augmented by a quarterly narrative and financial reports provided by the lead supplier based on work agreed in their quarterly work plans. Reporting will be structured according to output and clearly link to the log frame milestones. DFID will establish a framework for regularly meeting with the programme's Team Leader and to receive updates on progress.

Suppliers will be asked to include in their bid how they plan to ensure that the research commissioned under the programme is of high quality and how they will monitor the impact of the research in the selected countries.

3. What are the risks and how these will be managed?

The new risk management framework classifies risk as below:

Minor	Low probability of risk materialising; limited loss in outcomes if this occurs.
Moderate	Low probability of risk materialising; higher but still limited loss in outcomes if this occurs.
Major	Higher probability of risk materialising; outcomes reduced if this occurs, but *some* important outcomes still likely.
Severe	High probability of risk materialising; very significant loss in outcomes when this occurs.

Following mitigation actions, the programme is assessed as having a 'moderate' level of risk. This is for several reasons. Firstly, research is never without inherent risks, as the outcomes and impact of the research cannot be known in advance, and while research uptake in this sector is always challenging the particularly sensitive nature of the some of the topics this research will cover makes this risk significant. Secondly, research in the contexts outlined in the strategic case presents an extra dimension of risk compared to some other types of research, given the necessity of working in difficult or dangerous fragile or conflict-affected states. This means that there are risks that research is not completed, in addition to the personal risks to those working in these contexts. These risks can be mitigated if the contracting process ensures that the bidders have strong safety frameworks and duty of care requirements for all projects. And thirdly, as outlined in the Financial Case, financial fraud risks cannot be eradicated completely, despite the robust measures taken.

In addition to the mitigations outlined above, disbursement arrangements will be compliant with counter-terrorist legislation and DFID's wider counter-terrorism processes and procedures. We have included this risk in the assessment below, and the programme will regularly review the risk register in collaboration with the contractor to ensure that emerging or intensifying risks are mitigated in good time, or escalated where necessary.

Overall, these factors mean that the research cannot be classed as 'minor' risk, but the 'moderate' scoring reflects the reduced risk to the projects and programme when all reasonable mitigation measures are well-implemented. To date, research projects funded by the HIEP have been able to flex to adapt to changing country contexts, by moving case study countries for example, and there have been no detected or reported incidents of fraud.

Table 5: Overview of research project risks

	Risk type	Detail of risk	Overall risk	Mitigation	Overall risk, post-mitigation

1	**Financial and fraud**	DFID research and innovation funds are diverted or fraudulently used by either the lead supplier, or research suppliers in countries, reducing value for money. Risk that this money could be used for terrorist activities.	**Moderate**	- Initial pre-qualification and selection through competition followed by strong support and management by the lead supplier. - Ensuring specific counter-terrorist advice is provided to all partners, and all DFID's counter-terrorism policies are followed during contracting and implementing phases. - Regular reviews of the programme's risk register.	**Minor**
2	**Resource management**	There is not enough resource in the RED humanitarian team to manage the new work stream alongside existing research.	**Moderate**	- Inclusion of a 0.5 FTE programme funded A2 post - Ensure clarity of responsibilities when agreeing contractual arrangements and management fee. - Regularly review internal resourcing within RED. - Continue to engage DFID policy, country and regional office staff.	**Minor**
3	**Research delivery**	Research outputs are poor quality or do not address the agreed research questions.	**Major**	- Contracts retain DFID's right to regularly assess project progress and outputs, and retain funding, or seek funds back, where necessary. - Funding is disbursed in arrears where possible. - Lead supplier includes required academic expertise to quality- assure outputs and works closely with Programme Advisory Group	**Minor**

4	**Research delivery**	Partnership with one or several organisations results in reduced DFID control over research questions and methods, or a small pool of suppliers.	**Major**	- Work with partners with relevant academic and financial expertise. - DFID provides funding in line with DFID's standards and processes - M&E frameworks established. - DFID ensures the supplier approaches as wide a range of researchers as practically possible.	**Moderate**
5	**Research delivery**	The relatively limited supplier base of relevant researchers/academics results in low response to research competitions and potentially poor value for money.	**Major**	- Use DFID's convening power and supplier relationships to tender widely for the supplier. - Supplier to plan good communications across the sector and include respected academics in the bids. - Close working with country offices to ensure good fit between research and programmes	**Moderate**
6	**Research delivery**	The research outputs do not change what is happening on the ground	**Major**	- Research designed in close collaboration with country offices - Provision of specialist expertise to support country offices to use the evidence to adapt programmes	**Moderate**
6	**Research / Security**	Conflict or unexpected events result in research projects in fragile and conflict-affected states being delayed or curtailed.	**Major**	- Ensure duty of care requirements met by lead supplier in relation to research teams in country. - Ensure close monitoring of potentially worsening situations. - Ensure researchers plan work in achievable stages, with flexibility to	**Major**

				move research locations if needed.	

4. Risk escalation and close-out scenarios

The RED humanitarian team will monitor all reporting from the supplier carefully. Any emerging risks will immediately be escalated to the project SRO for consideration, which will make decisions as needed and/or escalate further where necessary. Where the performance of a project needs to be improved, DFID will set out clear steps for the supplier to take and deadlines for action to be taken. If a project is judged to be failing to deliver, DFID retains the right to ask the lead supplier to close the project and return the money to DFID. RED will work to recover any funds. The contract with the lead supplier will include clauses to this effect.

In the case of suspected financial fraud, the RED humanitarian team will follow the Smart Rules for investigating and reporting fraud. Partners will be required to report any suspicion or detection of fraud to the lead supplier immediately, and again, recovery of funds will be sought to return to DFID.