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Contributors:

- C. Simon
- L. Petrarulo
- A. Lyon





British Geological Survey Expert | Impartial | Innovative





Oxford Policy Management





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Prepared by: Contributors			
Work Package Leader:	Signature(s):	Date(s):	
L. Petrarulo	Quality	14/09/2018	
Approved by: Project Manager			
Name:	Signature:	Date:	
K. Smith	Kay Smith	19/09/2018	
Approved by: UKSA IPP Project Officer			
Name:	Signature:	Date:	

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Acronyms

BGS	The British Geological Survey
CAT	Catastrophe
CEA	Cost-Effectiveness Assessment
DfiD	Department for International Development
DMD	Disaster Management Department
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EQ	Evaluation Question
GEM	The Global Earthquake Model
НОТ	The Humanitarian OpenStreetMap Team
IDF	Insurance Development Forum
IPP	International Partnership Programme
KII	Key Informant Interview
КР	Knowledge Product
KPI	Key Performance Indicator
LDC	Least Developed Country
M&E	Monitoring & Evaluation
METEOR	Modelling Exposure Through Earth Observation Routines
NGO	Non-Governmental Organisation
NSET	National Society for Earthquake Technology
ODA	Official Development Aid
OPM	Oxford Policy Management Limited
QA	Quality Assurance
SDGs	United Nations Sustainable Development Goals
ТоС	Theory of Change
UKSA	United Kingdom Space Agency
UNICEF	United Nations Children's Emergency Fund
UNISDR	United Nations Office for Disaster Risk Reduction
WP2	Work Package 2 - M&E Activities





1. Introduction

1.1. Project Summary

Project Title	Modelling Exposure Through Earth Observation Routines (METEOR): EO- based Exposure, Nepal and Tanzania
Starting Date	08/02/2018
Duration	36 months
Partners	UK Partners: The British Geological Survey (BGS) (Lead), Oxford Policy Management Limited (OPM), SSBN Limited
	International Partners: The Disaster Management Department, Office of the Prime Minister – Tanzania, The Global Earthquake Model (GEM) Foundation, The Humanitarian OpenStreetMap Team (HOT), ImageCat, National Society for Earthquake Technology (NSET) – Nepal
Target Countries	Nepal and Tanzania for "level 2" results and all 47 Least Developed ODA countries for "level 1" data
IPP Project	IPPC2_07_BGS_METEOR

1.2. METEOR Project Overview

At present, there is a poor understanding of population exposure in some ODA countries, which causes major challenges when making Disaster Risk Management decisions. METEOR (Modelling Exposure Through Earth Observation Routines) takes a step-change in the application of Earth Observation exposure data by developing and delivering more accurate levels of population exposure to natural hazards. Providing new consistent data to governments, town planners and insurance providers will promote welfare and economic development in these countries and better enable them to respond to the hazards when they do occur.

METEOR is funded through the second iterations of the UK Space Agency's International Partnership Programme, which uses space expertise to deliver innovative solutions to real world problems across the globe. The funding helps to build sustainable development while building effective partnerships that can lead to growth opportunities for British companies.





2. Baseline objectives and approach

The primary objective of the baseline evaluation is to ground the evaluation in a clear picture of the social, political, and economic context in which this project sits. This effort includes at the national level (i) describing the institutional framework which governs the use of exposure data in disaster risk management policy and planning in Nepal and Tanzania, the two pilot countries; (ii) assessing baseline levels of awareness, capacity and understanding around the concepts related to exposure, risk, vulnerability and disaster planning and response; and (iii) determining national stakeholder interest in the METEOR project. At the global level, the baseline will (i) identify public and private stakeholders internationally who have clear interests and influences on project objectives and goals; and (ii) determine their level of interest in the program. Finally, in the baseline we will calculate and/or set baseline values for indicators in the project logframe and determine appropriate targets to help measure longer-term success.

One challenge of the METEOR project is that several of the impact indicators (e.g. reductions in disaster related deaths and reductions in disaster related losses) are linked to the response in the event of a disaster. Since the project has no control over when and when a disaster may strike, it is impractical to plan for a household-level impact evaluation. As such, it was agreed upfront that the impact evaluation would focus on the measurable outcomes and impacts related to improvements in policies, plans, practice around DRR/DRM and increased usage and satisfaction in exposure, hazard, and vulnerability data. The contingent KPIs (or those that rely on a disaster unfolding within the timeframe of the project) will be tracked using official national statistics. Since the project is guided by a theory of change, we will use a theory-based approach and a variety of qualitative methods and tools to evaluate impact.

The baseline evaluation has two workstreams: country case studies and global study. The outputs of these two workstreams will be combined in a single METEOR Baseline Evaluation Report. A description of the steps for sampling, data collection, and analysis follow below.





3. Country case studies

A team from OPM will work with national partners (NSET in Nepal, DMD in Tanzania) to conduct the baseline data collection. OPM will use a team approach where international evaluators will join local OPM M&E Officers in Tanzania and Nepal in targeted in-country missions to collect and analyse data. **Data collection** will consist of (i) a <u>desk review</u> of key national documents related to exposure, DRM, DRR, and response; (ii) a series of <u>in-depth key informant interviews</u> to assess in-country levels of awareness, understanding and capacity around these issues; (iv) an <u>initial evaluation workshop</u> with national partners to discuss the design of an initial rubric that can be used in subsequent workshops (at mid-term and end-line) to assess progress along the theory of change and METEOR's contribution towards that progress. Each of these are described in more detail below.

3.1. Sampling

The case studies will use a **snowball sampling** approach where initial stakeholders are identified by national partners and desk review materials and expands based on these stakeholders suggesting other key stakeholders to interview¹. Since the sample expands as one speaks with stakeholders, the actual sample size will grow as the baseline is conducted. Indicatively, we expect 15-20 interviews in each country.

3.2. Data Collection Tools

3.2.1.Desk Review

The desk reviews involve the identification and collection of national level documents related to the METEOR project. The approach to collecting these documents includes searching for:

- <u>Documents/research papers by our local partners</u>. Look on partner websites. For example, NSET just hosted an International conference on Experience of Earthquake Risk Management, Preparedness and Reconstruction (see <u>http://www.nset.org.np/nset2012/index.php/event/eventdetail/eventid-474</u>)
- 2. <u>Available government documents on disaster risk management.</u> Often governments will publish risk management plans.
- 3. <u>Government documents on in-countries hazards</u> such as earthquakes for Nepal, Floods for Tanzania.
- 4. <u>Evaluations/reports/assessments on disaster response</u> for recent disasters in country.
- 5. <u>Useful documentation on earth observation, remote sensing or exposure data</u> related to the country

The output of the desk review will be an annotative bibliography that lists the key documents identified and briefly describes what they contain (See ANNEX A). This information will then be used to feed into the final baseline report as well as a resource for identifying additional stakeholders.

¹ Snowball sampling is a non-probability sampling approach that is frequently used in qualitative evaluations, in particular when not all the possible stakeholders are known upfront.





3.2.2. Key Informant Interviews

The key informant interviews (KIIs) represent the bulk of the data collection effort in country and will be used to explore in greater depth how each actor currently fits into the larger exposure DRM environment (stakeholder mapping) as well as to gain their view on the current elements of the national and sub-national DRM systems. OPM follows strict ethics guidelines in KIIs, particularly around consent. This would include taking written consent via email and ensuring that the participant is clear on how the data will be used (e.g. purpose of the study, procedures for the study, confidentiality and anonymity) and that their participation is voluntary (i.e. that they have the right to refuse).

The national KII guide can be found in ANNEX B and includes the following areas of questions:

- Description of their organization and role
- Description on how disaster preparedness and planning functions in-country and how their organization fits into this picture;
- Understanding of how risk is assessed
- Perceptions on the key challenges their country faces when planning for and responding to a disaster;
- Assessment of level of awareness, understanding and use of key concepts related to exposure, DRM, and vulnerability;
- Use of different data sets in their work;
- Perceptions on what is needed to improve capacity of national actors in this space

The KII guide has been reviewed by the M&E team in collaboration with the rest of the METEOR partners. As it currently stands, the guide will be initially tested and refined during the baseline mission in Nepal (September 2018). An interim M&E team call during the initial part of the mission will review the initial running of the KIIs and assess the necessary changes to the guide.

3.2.3. Evaluation Workshop

Since the full set of project stakeholders will only be identified during the baseline data collection, the initial evaluation workshop will be more informal and will only include local partner staff. This initial workshop will involve the following:

- Reviewing METEOR ToC, indicators, and targets;
- Reviewing the evaluation questions;
- Discussing the design of a rubric that can be used in subsequent workshops (at mid-term and end-line) to assess progress along the theory of change and METEOR's contribution towards progress

In the workshop, the team will establish a methodology for setting baseline values for qualitative indicators and for consistently assessing progress towards results. To do so, the OPM team will take local partners through an exercise where they discuss each result in the ToC (outputs, outcomes, and impacts) assessing where they are now, identifying what is planned for in the future (if known), and agreeing upon what would constitute forward progress in the medium and longer-term. Using this information, the team will establish baseline levels and finalize a rubric on how to measure progress in the mid and end-line evaluations. The below box presents an indicative example of how a rubric might work as extracted from the M&E Plan. See ANNEX C for example workshop slides.





Outcome #1 – "The governments of Tanzania and Nepal utilise project datasets to improve their national sectoral policies, plans and practice." Sector representatives and other stakeholders will discuss activities that they have undertaken that demonstrate progress towards change. While in the early years policies may not have changed, there could be progress towards change such as meetings held on specific DRM/DRR topics, drafts policies circulated, public declarations, etc. demonstrating progress towards end goals. Once this information is gathered, the group will use it as evidence to 'grade' efforts towards achieving the result, using an agreed upon rubric. An example rubric is described in Figure 1. Please note this is just an example. The actual definition of the criteria and scoring will be discussed and agreed upon in the first workshop. Each year, at the conclusion of the workshop we will have 'grades' for each indictor and action steps for the coming year. In the following year, this progress will be reviewed and updated. The evidence gathered at these workshops will be the centrepiece of describing the contribution story.

Criteria	Score
No progress has been made in any sector	0
Some discussions/activity but no substantive progress in any sector	1
Some progress made in 1-2 key areas	2
Substantive progress made in 1-2 key areas and some progress made in 1-2 other areas	
Substantive progress in 3-4 key areas, including resourcing	
Goals achieved in at least one area, substantive progress in other areas	
Goals achieved in 2 or more areas	

Criteria	Evidence	Score
OUTCOME 1: The governments of Tanzania and Nepal utilise project datasets to improve their national sectoral policies, plans and practice	 Agriculture sector policy disseminated draft of revised policy that includes more specific and actionable DRR/DRM, including x,y,z. Office of the president announced increase in National budget support for DRR/DRM Revised building code in the process of development Remains weak enforcement of building codes 	3

Figure 1: Example of evidence to 'grade' efforts towards achieving the result for Outcome 1





3.3. Country baseline execution plans

3.3.1.Nepal

For Nepal, the baseline evaluation will be conducted **September 14-24, 2018**. To date, key documents identified are included in Table 1.

Title	Source organization
National Position Paper on Disaster Risk Reduction and Management Nepal	Ministry of Home Affairs, Government of Nepal, 2017
Nepal Disaster Report, 2017: The Road to Sendai	Ministry of Home Affairs, Government of Nepal, 2018.
National Disaster Response Framework,	Ministry of Home Affairs, Kathmandu, Nepal GON, 2013.,
National progress report on the implementation of the Hyogo Framework for Action (2013-2015).	HFA, 2015., Ministry of Home Affairs (MoHA) Nepal:
Disaster Risk Reduction in Nepal: Achievements, Challenges and Ways Forward,	National Planning Commission Paper for the AMCDRR 2016, MoHA
Disaster risk Reduction National Strategy Implementation Plan.	GON, Ministry of Home Affairs. 2018
Nepal Disaster Risk Reduction and Management Act.	GON, Ministry of Home Affairs, 2018.
Nepal Earthquake 2015: Post Disaster Needs Assessment: Key Findings. Vol. A.	Kathmandu: National Planning Commission, Government of Nepal.
Nepal Flood 2017: Post Flood Recovery Needs Assessment,	Kathmandu: National Planning Commission (NPC), Government of Nepal, (2017).
Nepal Earthquake 2015: Post-Disaster Recovery Framework, 2016-2020.	National Reconstruction Authority, Government of Nepal, (2016).
Rebuilding Nepal. NRA Newsletter.	National Reconstruction Authority, Government of Nepal, (2017).
Nepal Post Disaster Reconstruction Experience: Current Status and Lessons Learned. A paper presented and discussed in SAWTEE Dialogue on Post Disaster Reconstruction	Pokharel, Jagadish C. (2017).
Disaster Risk Reduction, Climate Change Adaptation and Resilience.	Swiss NGO DRR Platform. (2016).

Table 1: Key documents identified from baseline evaluation in Nepal





The initial set of stakeholders include a variety of public and private institutions. This initial list includes those institutions provided by NSET, program partners, and through desk research (Table 2)

Туре	Institution Name
Government	Central Bureau of Statistics
	Department of Mines and Geology, Ministry of Industry, Commerce and Supplies
	Department of Water Induced Disaster Management, Ministry of Irrigation
	Department of Urban Development and Building Construction
	National Emergency Operation Centre, Ministry of Home Affairs
	Department of Survey (Ministry of Land Reform and Management)
Development Agencies	DFID
	JICA
	DFAT
	USAID
	EU
Academia	Institute of Engineering, Tribhuvan University
	Central Department of Geography, Tribhuvan University
	Department of Geology, Tribhuvan University
	Institute of Engineering, Pulchowk, Tribhuvan University
	TU Central Department of Environmental Science
	Nepal Academy of Science and Technology
Civil Society	Kathmandu Living Labs
	The International Centre for Integrated Mountain Development
	Red Cross Society
	Action Aid – Nepal
	Oxfam - Nepal
Private sector	Genesis Consultancy (P) Ltd.

Table 2: Initial stakeholders identified in Nepal





3.3.2.Tanzania

For Tanzania, the baseline evaluation will be conducted **November 05-09, 2018**. To date, key documents identified are include in Table 3.

Title	Source organization
Disaster Management Act (2015 & 1990)	Government of Tanzania
Disaster Management Regulations (2017)	Government of Tanzania
Local Government Act (2006)	Government of Tanzania
National Disaster Preparedness and Response Plan (2012)	Government of Tanzania
National Operational Guidelines for Disaster Risk Management (2014)	Government of Tanzania
National Security Council Act (2010)	Government of Tanzania
Tanzania Urban Resilience Programme (TURP) Socioeconomic Vulnerability Study (2018)	Panman et al.
DarMAERT Emergency Response Plan	Government of Tanzania
DISASTER RISKS AND CAPACITY NEEDS ASSESSMENT FOR TANZANIA MAINLAND (2008)	DMD
National Environment Statistics Report for Tanzania Mainland (NESR 2017)	National Bureau of Statistics
Africa Regional DRR Strategy (2004)	African Union et al.
Dull Disasters? (2016)	Clarke & Dercon
The East African Community DRR and DRM Bill (2013)	East Africa Community
UN Development Assistance Plan to Tanzania 2016-2021 (UNDAP II)	United Nations

Table 3: Key documents identified from baseline evaluation in Tanzania





The initial set of stakeholders include a variety of public and private institutions. This initial list includes those institutions provided by DMD, program partners, and through desk research (Table 4).

Туре	Institution Name
National government	Tanzania Communication Regulatory Authority (TCRA)
	Ministry of Works, Transport and Communication
	Ministry of Lands, Housing and Human Settlements Development
	Geological Survey of Tanzania
	Ministry of Water and Irrigation
	Tanzania Meteorological Agency (TMA)
	Prime Minister's Office – Disaster Management Department
	Tanzania Disaster Relief Committee (TANDREC) / Tanzania Disaster
	Management Council- IMDC
	Regional Disaster Management Committees
	Vice President's Office (VPO): Environment Division
	National Bureau of Statistics
	Tanzania Insurance Regulatory Authority (TIRA)
Local authorities	Dar es Salaam Multi Agency Emergency Response Team (DarMAERT)
Academia	Ardhi University
	University of Dar es Salaam
Civil Society	Tanzania Red Cross Society (TRCS)
	Humanitarian Open StreetMap Team (HOT) Tanzania
Development Agencies	DFID
	World Bank
Private sector	Main insurance companies

Table 4: Initial stakeholders identified in Tanzania





4. Global Study

This workstream focuses on international stakeholders with a vested interest in METEOR outputs. Interviews with this stakeholder set will reveal key information about project relevance and sustainability, tracing overtime growing awareness, interest, and uptake of METEOR outputs outside the pilot countries.

4.1. Sampling

The global study will use **purposeful sampling**, selecting key informants based on the knowledge, expertise, and experience of the consortium partners. These interviews will mostly be conducted by skype/phone. However, OPM team members plan to attend at a minimum one international conference on exposure/insurance/DRM where they will interview people in person. The target **sample size for the global study is 7-10 interviews** – five with international humanitarian organizations and five with insurance actors working in the space. An initial list of stakeholders is presented in Table 5.

Туре	Institution Name
Humanitarian Orgs	UNICEF
	UNISDR
	World Bank Group
	UNDP
	European Commission
Insurance Orgs.	Insurance Development Forum
	AXA
	Lloyd's
	Swiss Re
	International Insurance Society
	Munich Re
	Aviva Global Insurance
	AON Corporation

Table 5: Initial list of Global stakeholders

Possible conferences to attend include:

- American Geophysical Union fall meeting (Dec. 2018)
- Understanding Risk Conference (Mexico City, Mexico)
- Global Assessment Report (UNISDR) events (Geneva, Switzerland)
- World Conference of Earthquake Engineering (Sendai, Japan)
- Annual Risk Assessment workshops supported by GEM





- NSET 25th Anniversary, Risk2Resilience Conference (Kathmandu, Nepal)
- State of the Map 2018 conference (Milan, Italy)
- Global Platform on Disaster Risk Assessment (May 2019)

4.2. Data collection tools

The baseline will focus on interviews with members of the humanitarian response community and the insurance industry and will involve a series of key informant interviews². These two interview guides can be found in ANNEX D and ANNEX E respectively. Where possible, the questions are similar to those found in the national stakeholder interview guide. However, they also cover additional technical details. The topics covered are listed below.

Humanitarian organization interview guide:

- Description of their organization and role
- Perceptions on the key challenges LDC face when planning for and responding to a disaster;
- Assessment of familiarity to exposure data, how they use it in their work, and perceptions around the key challenges with using the existing data
- Interest in METEOR standards and protocols
- Perceptions on what is needed to improve capacity of LDC stakeholders in this space

Insurance industry interview guide:

- Description of their organization and role
- Perceptions on the key challenges LDC face when planning for and responding to a disaster;
- Description of the insurance/financial products organization is working on in LDCs
- Challenges designing and selling insurance/financial products to LDCs
- Challenges of existing exposure, vulnerability, and hazard datasets
- Interest in METEOR standards and protocols
- Perceptions on what is needed to improve capacity of LDC stakeholders in this space

² The M&E plan references an on-line survey. After some internal discussion, the team determined that this survey should be directed at policy-makers from other ODA countries so as to track broader awareness and interest in METEOR products. Since, the project is just getting started, there will be little awareness of METEOR outside of our lighthouse countries. As such, the online survey will only happen at the end-line evaluation.





5. Work plan – Baseline

	Milestone / Deliverable											
	٠	In-country activity										
		Activi	ty									
Project month	1	2	3	4	5	6	7	8	9	10	11	12
Calendar month	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19
Baseline evaluaiton				•								•
Desk review												
Stakeholder mapping					•		•					
Baseline missions preparation												
Baseline missions (incl. participatory workshop)							•		•			
Baseline data collection - National Case Studies												
Baseline data collection - Global Case Study												
Baseline Report preparation												
Final Baseline Evaluation Report												

Figure 2: Baseline workplan





ANNEX A

Annotative bibliography template

Index of Articles

In a folder, save each article in numerical order using the following convention: #_Lead Author Last Name_Article Title. So that they will look like this in the folder:

01_Simon_shortened version of title 02_Regmi_ shortened version of title

Then enter the information into this table to serve as a listing of the articles we have collected

#	Lead Author (last name, first name)	Date of article	Article Title
01			
02			
03			
04			
05			
06			
07			

What to look for:

- <u>Documents/research papers by our local partners</u>. Look on their websites. For example, NSET just hosted an International conference on Experience of Earthquake Risk Management, Preparedness and Reconstruction (see <u>http://www.nset.org.np/nset2012/index.php/event/eventdetail/eventid-474</u>)
- 2. <u>Any available government documents on disaster risk management.</u> Often times government will publish risk management plan.
- 3. <u>Any government documents on in-countries hazards</u> such as earthquakes for Nepal, Floods for Tanzania.
- 4. <u>Any evaluations/reports on disaster response</u> for recent disasters in country.
- 5. Any useful documentation on earth observation and remote sensing data I wonder if our partners at GEM or ImageCat could provide some useful basic documents on the technology and the issues.





METEOR ANNOTATED BIBLIOGRAPHY

In this table, make sure the numbers line up to those in the index. Then, including the full citation (as if it was going to go into a bibliography for an article) and then a brief description of the content of the article/document and a summary of what you think are the key points – in particular those that relate to the METEOR project.

#	Full citation (authors, date, title, publisher,)	Brief description of content and key points – try to use bullet points.
		Overview:





ANNEX B

METEOR KII GUIDE FOR: NATIONAL ACTORS

PREPARATION

Country:		
Name of Interviewee	Title/Role:	
Name of Organization:	Date of interview:	
Name of interviewer	Name of Note- taker	

INTRODUCTIONS

Introduce yourself and inform the respondents about the background of the study and why you are there. Ensure you have **their consent** to proceed with the interview. Let them know that the interview **will take about 1-hour** and that their responses will be anonymous. They can stop anytime if not comfortable with a question. Here is some suggested text:

Good morning/afternoon/evening. My name is [......] from Oxford Policy Management. OPM is working with a consortium of organizations led by the British Geological Society on a project called Modelling Exposure Through Earth Observation Routines or METEOR. METEOR is a three-year project funded by the UK Space Agency to develop new ways of using space-related technologies such as Earth Observation (EO) techniques - particularly satellites - to improve understanding of exposure. Exposure in this context means the location and key characteristics infrastructure such as housing, factories, hospitals, and roads in an area that could be impacted or destroyed by a hazard such as an earthquake or a flood. The primary objective of the project is to develop rigorous and open-source standards and protocols that allow for the quantitative assessment of exposure in a multi-hazard setting. The goal is to help improve the ownership and use of exposure data by national stakeholders who can apply this information for use in disaster risk management and response activities. The project will also work closely with the insurance industry to help support the development of better-informed disaster risk insurance products in ODA countries.

We were given your name from our local partners [NSET or DMD] as a person who is actively engaged in this area. We would like to ask you a few questions about what you do and your activities around exposure, disaster risk management and response. The interview will take about one hour. The information you give us is confidential and will only be used for reporting purposes. Your name will not be revealed to anyone and your responses will be combined with others to show combined views and opinions. There are no right or wrong answers. It is your true opinion that is important to us.





DISCUSSION TOPICS

I want to start by getting a better understanding of your organization and your role.

- 1. Can you talk a little about [*insert name of organization*] and how it is structured? What is its primary mission/objectives? (*stakeholder mapping*)
- 2. What is your role in the organization?
- 3. Can you briefly describe the in-country procedures/processes/policies the government and other stakeholders undertake around <u>disaster preparedness and planning</u>? Is your organization involved? What other organizations are involved? *PROBE* here for working groups, regular meetings they have each year, programs or initiatives with supporting documents, regular documents that are produced or reviewed? How all of these efforts are financed? (Impact 1.2 and outcomes 2.1 and 3.1)
- 4. Can you talk about the most recent disaster [insert name of disaster] and describe the types of procedures/processes the government and other stakeholders undertook in the <u>response</u>? Is your organization involved? What other organizations are involved? PROBE here for task forces? Who has authority to determine disaster? How government, private sector and civil society work together? If they work together? Who are the various agencies involved and their respective roles? Probe to get the names of documents/laws/policies, etc. (Impact 1.2 and outcomes 2.1 and 3.1)





5. Are you familiar with the process of assessing the risks of a disaster? If yes, can you describe in more detail what data or information is used to assess risk? What types of models are used? Where the information comes from? Who is involved?

6. In your opinion, what are the major challenges facing [Nepal/Tanzania] when it comes to planning for and responding to a disaster?

7. I am now going to ask you about a series of words/concepts related to planning and responding to a disaster. For each concept I will ask you to describe what the concept means to you and briefly discuss if or how you use this concept in your work. Review the rating scale before proceeding. (impact indicator 3, outcome indicators outcome 1.1 and 2.1)

Interview rate level of understanding 0 = Does not a clear idea of the concept 1 = familiar with the term; and can provide 2= very familiar with the term and use it reg	 What the terms means to the stakeholder If/how the stakeholder uses this concept in their work 	
Concept	Rating	
Disaster Risk Reduction (DRR)		
Vulnerability		
Exposure (data)		
Hazard		
Risk		
Loss estimation models		
Uncertainty (in terms of disaster risk)		





8. ONLY FOR THOSE THAT DO RISK ASSESSMENT IN THEIR WORK: What kind of data and information do you use to assess exposure and disaster risk in your work? How do you access these datasets? Where do they come from? What are the challenges in using these data sets? How can we improve these data sets to make better use of them in emergencies? What kind of additional skills training would you like to see within your organization around data? (Outcome 2.2)

9. ONLY FOR NON-TECHNOCRATS THAT DON'T USE DATA SETS: What type of data/information do you use in your work? How do you access this information? Where does it come from? What, if any, are the challenges of the information? (Outcome 2.2)

10. In your opinion, what is needed to improve the effectiveness DRM/DRR efforts within government, civil society and the private sector? PROBE: What would you use the finances for? *training/education, risk awareness and communication activities,* etc. (*outcome 1.2 and impact 3*)

Thank the person you are interviewing for their time and ask whether the respondent has any questions for you.





FOR THE NOTETAKER AND INTERVIEWER

After the interview, in this area, please enter any other interesting information about the interview. For example, do you think the group was being open? Were they holding anything back?





ANNEX C

Example of evaluation workshop's slides



Workshop objectives



Ensure everyone has a clear understanding of the METEOR Theory of Change (ToC);

Discuss where Nepal/Tanzania is today with regards to the ToC results and identify the evidence there is to support that position;

Identify what types of evidence would indicate progress along the theory of change;

Discuss the rubric for evaluating that evidence.

13 September 2018

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2





METEOR project overview

- Three year project, funded by the UK Space Agency International Partnership Programme. Led by the British Geological Survey,
- Developing innovative Earth Observation (EO) routines to deliver robust national-scale exposure and natural hazard data with a focus on Nepal and Tanzania.
- METEOR takes a step-change by developing and delivering rigorous and open routines (protocols) and standards to allow quantitative assessment of exposure with explicit uncertainties.



DELIVERABLES

- Exposure taxonomy and data models
 Country-wide exposure data for 47
- countries Hazard footprints for
- Nepal and Tanzania Training materials and tutorials

13 September 2018



METEOR Theory of change



"A theory of change (ToC) is a comprehensive description and illustration of how and why a desired change is expected to happen in a particular context."

--www.theoryofchange.org/what-is-theory-of-change/

step two." Image credit: Sidney Harris

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steps







Step 1: Identify key stakehok

- Which organizations are involved in disaster risk reduction?
- What is their role?
- How do they work together?
- Which organizations specially work on issues related to loss estimation and exposure?

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Step 2: Describe the situation today



Procedures/practices	Behaviors	Policies/regulations
Describe how DRR/DRM happens in your country Think about how data (e.g. around exposure, vulnerability, hazards) are used (or not used) in these activities	 What behaviors work well or add quality to the process? (i.e. coordination/ collaboration across ministries, following existing policies and plans, use of evidence in decision- making) What behaviors impede the process? 	 Make a list of the known policies, regulations, standard used to plan/prepare for and respond to disaster.

Think of differences between government, civil society and private sector actors!

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Step 3: Describe what an ideal process of disaster planning and preparedness would look like?

Procedures/practices	Behaviors	Policies
 What would be the components of a 'perfect' system of disaster preparation and planning? What data would be available and used? 	• What types of behaviors would you like stakeholders to demonstrate in a 'perfect' system?	 What policies would be in place in this 'perfect' system? What policies would be removed? What would be the key components in these policies?
		• How would they work at the national level? Local level?
Think of differences betw	ween government, civil society and priv	vate sector actors!
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Step 4: Describe what a 'better' or improving system of disaster planning and preparedness would look like?

Procedures/practices	Behaviors	Policies
• What are some small types of changes to practices would demonstrate that things are improving?	• What types of small changes in behaviors would indicate that things in the system are improving?	 What are small changes to policies that would indicate improvements? What are steps along the way to the approval of a
 What are some smaller steps that would indicate that data availability and use are improving? 		new policy/regulation to show that would show progress?

Think of differences between government, civil society and private sector actors!

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5. Maturity Matrix

1	Procedures/practices	Behaviors	Policies
Works very well		_	
Working better			
Working with issues			
Not working			
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6. How would you rate Nepal's current level of disaster planning and preparedness?

Procedures/practices		RUBRIC A Works very well
Behaviors	➡ □	 B Works; but could use improvement C Works; but not very well D Does not work at all
Policies	→ □	
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Next steps in the evaluation

- Nov 2018 Collect interview data in Tanzania
- Dec 2018 Analyse data
- Jan 2019 Get feedback on draft baseline report
- TBD 2019 Hold similar workshop with key stakeholders to assess progress

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ANNEX D METEOR KII GUIDE FOR: HUMANITARIAN ORGANISATIONS

PREPARATION

Country:		
Name of Interviewee	Title/Role:	
Name of Organization:	Date of intervie	w:
Name of interviewer	Name of Note- taker	

INTRODUCTIONS

Introduce yourself and inform the respondents about the background of the study and why you are there. Ensure you have **their consent** to proceed with the interview. Let them know that the interview **will take about 1-hour** and that their responses will be anonymous. They can stop anytime if not comfortable with a question. Here is some suggested text:

Good morning/afternoon/evening. My name is [......] from Oxford Policy Management. OPM is working with a consortium of organizations led by the British Geological Society on a project called Modelling Exposure Through Earth Observation Routines or METEOR. METEOR is a three-year project funded by the UK Space Agency to develop new ways of using space-related technologies such as Earth Observation (EO) techniques - particularly satellites - to improve understanding of exposure. Exposure in this context means the location and key characteristics of people and infrastructure such as housing, factories, hospitals, and roads in an area that could be impacted or destroyed by a hazard such as an earthquake or a flood. The primary objective of the project is to develop rigorous and open-source standards and protocols that allow for the quantitative assessment of exposure in a multi-hazard setting. The goal is to help improve the ownership and use of exposure data by national stakeholders who can apply this information for use in disaster risk management and response activities. The project will also work closely with the insurance industry to help support the development of better-informed disaster risk insurance products in ODA countries.

We would like to ask you a few questions about what you do and your activities around exposure analysis and disaster risk management and response. The interview will take about one hour. The information you give us is confidential and will only be used for reporting purposes. Your name will not be revealed to anyone and your responses will be combined with others to show combined views and opinions. There are no right or wrong answers. It is your true opinion that is important to us.





DISCUSSION TOPICS

I want to start by getting a better understanding of your organization and your role.

1. Can you talk a little about [*insert name of organization*] and how it is structured? What is its primary mission/objectives?

2. What is your role in the organization?

3. In your opinion, what are the major challenges facing less developed countries when it comes to improving DRM/DRR and disaster response?





- 4. Are you familiar about the process of assessing exposure and the risks of a disaster?
 - If yes, can you describe in more detail what data or information is used to assess risk? What type of data sets/models does your organization use? Where the information comes from? How do you access this information? Who else is involved?
 - If yes, what do you see as the major challenges with the data sets that underpin these types of risk assessments? In your opinion, how can we improve these data sets to make better use of them in emergencies?
 - If no, what type of data/information do you use in your work? How do you access this information? Where does it come from? What, if any, are the challenges of the information?

5. Describe METEOR's work (protocols and data sets) and ask about their interest. PROBE: what would be most useful to them? How would they use these datasets/protocols to help improve their work?

6. In your opinion, what is needed to improve the effectiveness of DRM/DRR within less developed countries?

Thank the person you are interviewing for their time and ask whether the respondent has any questions for you.





FOR THE NOTETAKER AND INTERVIEWER

After the interview, in this area, please enter any other interesting information about the interview. For example, do you think the group was being open? Were they holding anything back?





ANNEX E METEOR KII GUIDE FOR: INSURANCE ORGANISATIONS

PREPARATION

Country:	
Name of Interviewee	Title/Role:
Name of Organization:	Date of interview:
Name of interviewer	Name of Note- taker

INTRODUCTIONS

Introduce yourself and inform the respondents about the background of the study and why you are there. Ensure you have **their consent** to proceed with the interview. Let them know that the interview **will take about 1-hour** and that their responses will be anonymous. They can stop anytime if not comfortable with a question. Here is some suggested text:

Good morning/afternoon/evening. My name is [.....] from Oxford Policy Management. OPM is working with a consortium of organizations led by the British Geological Society on a project called Modelling Exposure Through Earth Observation Routines or METEOR. METEOR is a three-year project funded by the UK Space Agency to develop new ways of using space-related technologies such as Earth Observation (EO) techniques - particularly satellites - to improve understanding of exposure. Exposure in this context means the location and key characteristics of people and infrastructure such as housing, factories, hospitals, and roads in an area that could be impacted or destroyed by a hazard such as an earthquake or a flood. The primary objective of the project is to develop rigorous and open-source standards and protocols that allow for the quantitative assessment of exposure in a multi-hazard setting. The goal is to help improve the ownership and use of exposure data by national stakeholders who can apply this information for use in disaster risk management and response activities. The project will also work closely with the insurance industry to help support the development of better-informed disaster risk insurance products in ODA countries.

We would like to ask you a few questions about what you do and your activities around the use of exposure data in the design and development of insurance products for ODA countries. The interview will take about one hour. The information you give us is confidential and will only be used for reporting purposes. Your name will not be revealed to anyone and your responses will be combined with others to show combined views and opinions. There are no right or wrong answers. It is your true opinion that is important to us.





DISCUSSION TOPICS

I want to start by getting a better understanding of your organization and your role.

1. Can you talk a little about [*insert name of organization*] and how it is structured? What is its primary mission/objectives?

2. What is your role in the organization?

3. In your opinion, what are the major challenges facing less developed countries when it comes to improving DRM/DRR and disaster response?

4. Can you talk to me a bit more about any insurance or financial products your organization is working on related to disaster risk management and focused on LDCs? Do you know of any insurance and or financial products that others are working on in this area?





5. What are the major challenges/issues you see when it comes to designing and selling insurance products or other financial products for disaster risk management, in less developed countries?

6. What do you see as the major challenges with the data sets that underpin these types of insurance products or other financial products? In your opinion, how can we improve these data sets to make better use of them in emergencies?

7. Describe METEOR's work (protocols and data sets) and ask about their interest. PROBE: what would be most useful to them? How would they use these datasets/protocols to help improve their work?

8. In your opinion, what is needed to improve the effectiveness of DRM/DRR within less developed countries?

Thank the person you are interviewing for their time and ask whether the respondent has any questions for you.





FOR THE NOTETAKER AND INTERVIEWER

After the interview, in this area, please enter any other interesting information about the interview. For example, do you think the group was being open? Were they holding anything back?