Building the concept and plan for the Uganda National Early Warning System (NEWS)

Annex 1 – Stakeholder survey

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Uganda is at high risk from a range of natural and man-made disasters. There are currently significant levels of investment into early warning systems covering a range of hazards including: floods, drought, human and livestock disease and landslides. The UK Government's Department for International Development (DFID) has contributed to these early warning systems both at a national level and with a specific focus on Karamoja, a sub-region that experiences some of the highest levels of poverty and vulnerability in Uganda.

The overall goal of this work was to facilitate agreement around a framework and roadmap for the development of a "multi-hazard" National Early Warning System (NEWS) for the National Emergency Coordination and Operations Centre (NECOC) which is located in the Office of the Prime Minister (OPM).

As part of this work, an internet-based survey targeted at practitioners in Uganda working on or using the results of early warning systems was produced. The objective of the survey was to get an overview of early warning systems for weather-related hazards with respect to their success and effectiveness, as well as an understanding of the perceived barriers that need to be overcome to produce a national early warning system. The survey was distributed to 104 actors who work in the field of early warning, of these 41 replied with a 100% completion rate.

The key challenges that emerged from the survey as being pivotal to an effective National Early Warning System for Uganda were as follows:

- How can co-ordination between government, non-governmental and donor organisations be improved?
- How can existing early warning systems be made more financially and technically sustainable?
- How can early warnings be more effectively disseminated, especially to the most vulnerable communities?
- How can all stakeholders, including vulnerable communities, play a part in improving early warning systems in Uganda?
- How can early warning lead to early preventative actions?
- What should a strategy to develop a National Early Warning System look like and how will this enable a National Early Warning System to be developed over the next five to ten years in Uganda?
- How can future hazards be forecast in advance?

SECTION 1

Introduction

1.1 Background

Uganda is at high risk from a range of natural and man-made disasters. Between the years 2000 and 2009 3.6 million Ugandans were affected by natural disasters. There are currently significant levels of investment across Uganda into systems that collect and share early warning information on a range of hazards including: floods, drought, human and livestock disease and landslides. The Department for International Development (DFID) has contributed to these early warning systems both at a national level and with a specific focus on the sub-region of Karamoja, which experiences some of the highest levels of poverty and vulnerability in Uganda.

The overall goal of this work was to facilitate agreement around a framework and roadmap for the development of a "multi-hazard" National Early Warning System (NEWS) for the National Emergency Coordination and Operations Centre (NECOC) which is located in the Office of the Prime Minister (OPM).

As part of this work, an internet-based survey aimed at practitioners in Uganda working on or using the results of early warning systems was produced. The objective of the survey was to get an overview of early warning systems for weather-related hazards with respect to their success and effectiveness, as well as an understanding of the perceived barriers that need to be overcome to produce a National Early Warning System.

The online survey was open for responses between 28 January 2016 and 19 February 2016. The survey was distributed via email to 104 stakeholders with an involvement in early warning systems in Uganda. Email addresses for these stakeholders were provided by NECOC, DFID and the United Nations Development Programme (UNDP). The survey was designed so that it could be answered in less than 10 minutes.

A total of 41 responses were received with everybody completing the survey in its entirety (i.e. a 100% completion rate). Response rates for email surveys generally vary between 10% and 25% (see fluidsurveys.com), so a response rate of almost 40% is encouraging and shows that there is an interest in engaging with the development of a National Early Warning System.

Details of the survey questions are provided in Appendix A. Figures 1 and 2 provide details of the types of organisations that replied and their areas of expertise respectively.

Figure 1 Types of organisations responding to the questionnaire

Others (farmers' organisation) 1

United Nations organisation 6

Bi-lateral donor 1

Private sector 2

Research/academic 3

13 Government organisations

15 Non-Governmental Organisations (NGOs)
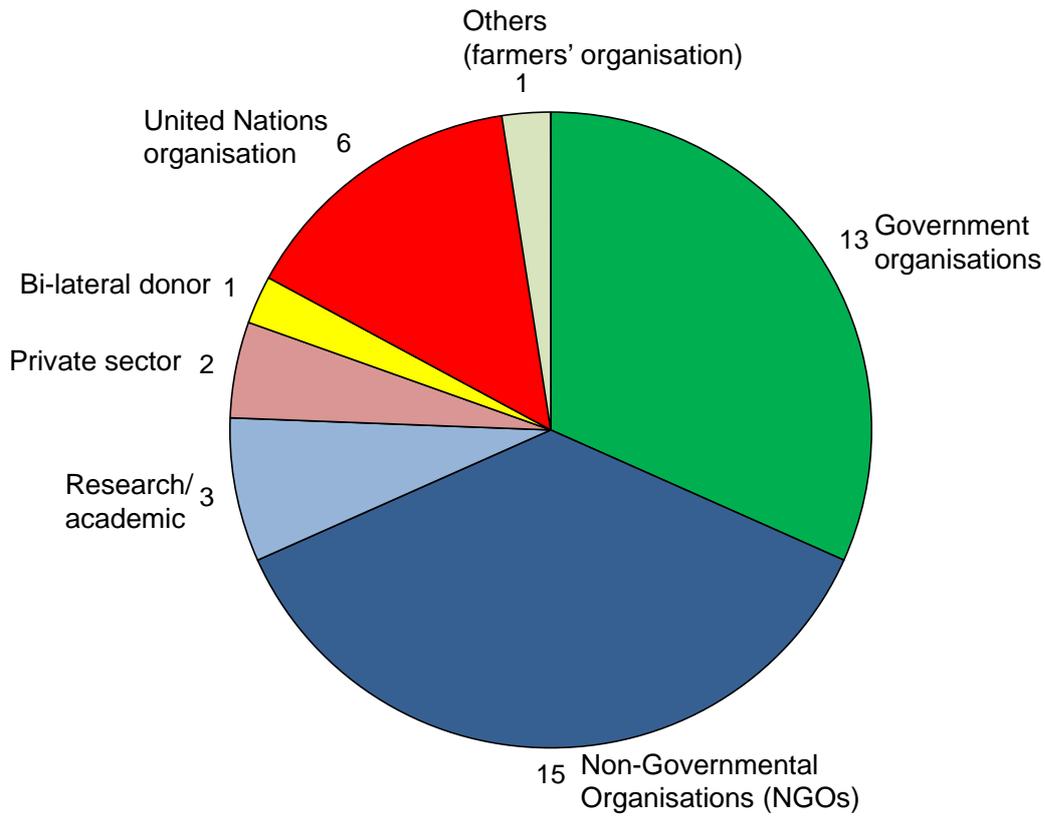
Figure 2 Areas of expertise of the respondents

Others (e.g. communications, climate) 5

Environment 2

10 Agriculture

1 Business/industry

2 Water

1 Health

Humanitarian affairs and disaster risk management 20

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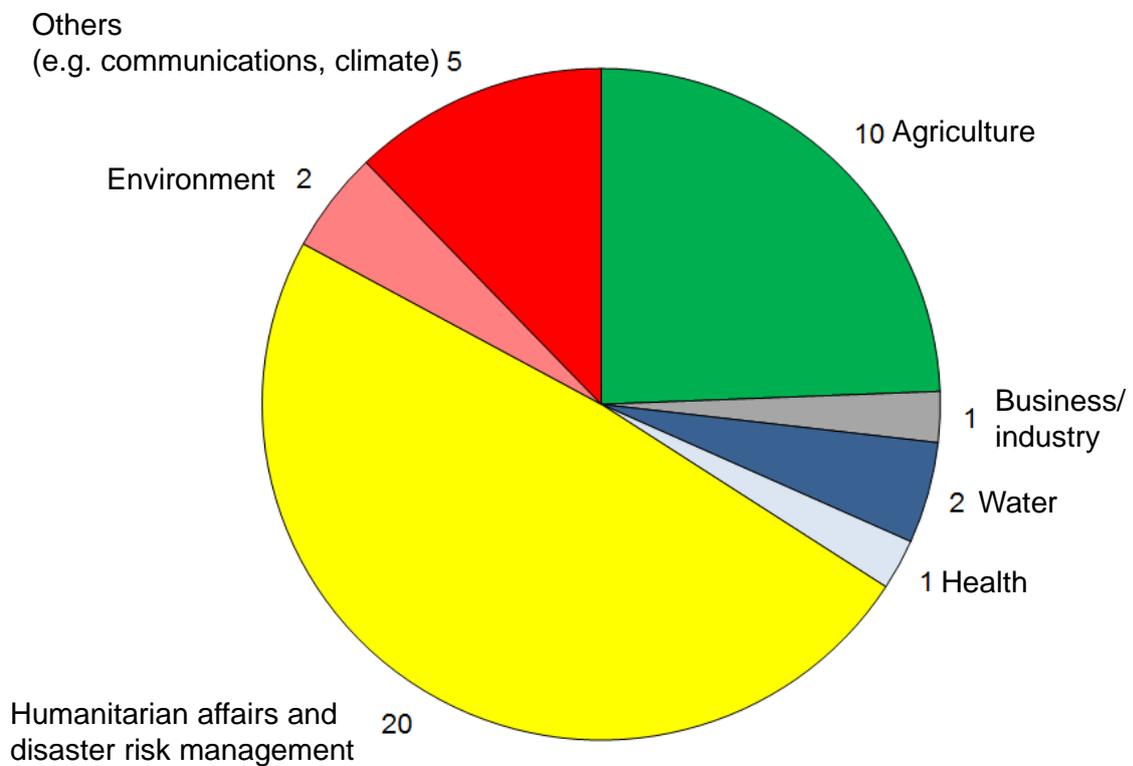
SECTION 2

Survey responses

2.1 Introduction

This section provides an overview of the survey responses. The following are covered:

- Most relevant hazards
- Examples of successful early warning systems in Uganda
- Barriers to establishing a multi-hazard National Early Warning System
- The effectiveness of the dissemination of early warnings

2.2 Most relevant hazards

Respondents were asked which hazards were most relevant to them and their organisations. Figure 3 shows the top four hazards identified by respondents as being: droughts; floods; diseases; and landslides. In the "other" category storms and conflict were mentioned by two respondents.

Figure 3 Most relevant hazards
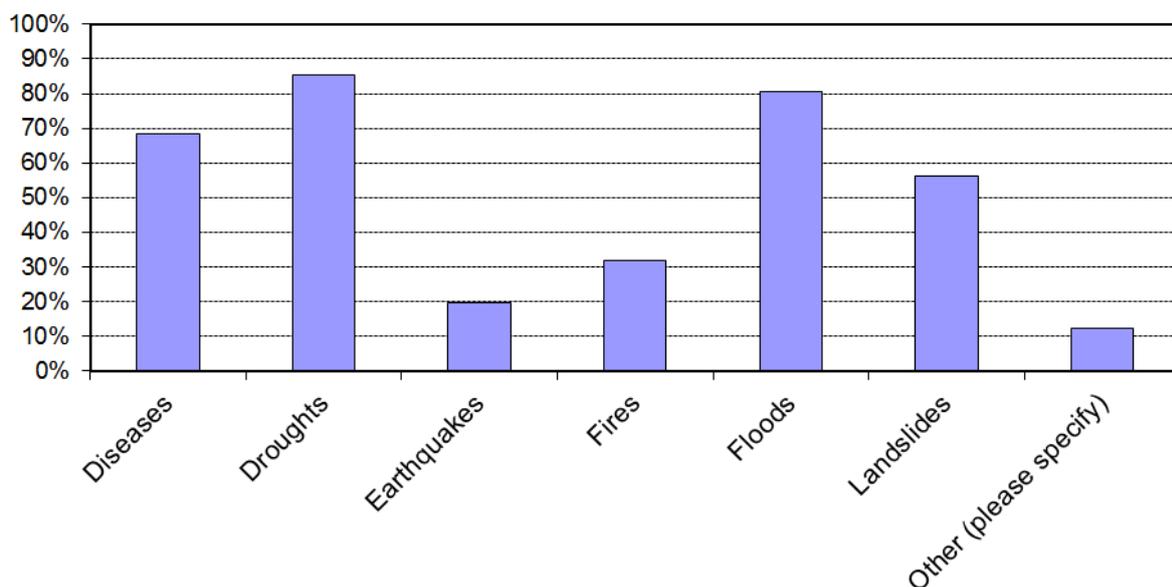
2.3 Examples of successful early warning systems in Uganda

Respondents were asked to identify one successful early warning system in Uganda and up to three reasons why the warning system was successful. Ten respondents mentioned

weather forecasts, both short duration and seasonal ones. Reasons given for the success of seasonal forecasts were:

- They cover the entire country
- They allow abnormal rainfall patterns to be predicted
- They involve the engagement of multiple stakeholders
- They can be disseminated via a range of different media
- They have long lead times
- They enable interventionist disaster reduction measures at various levels
- They can be used to notify farmers when to buy seeds

Seven respondents stated that the Drought Early Warning System (DEWS), which operates in the drought affected Karamoja sub-region of Uganda, was also successful for the following reasons:

- Government involvement
- Strong support from donors and other stakeholders
- Utilisation of technology and community-based dissemination
- Strong community involvement
- The use of mobile communication with simple alerts
- Systematic data collection for both the hazard and vulnerability indicators
- The thresholds and indicators of each phase of disaster are context specific

Other successful early warning systems mentioned included:

- NECOC disaster risk monitoring
- Famine Early Warning Systems Network (FEWSNET)
- Health early warning system
- Conflict early warning (CEWARN)
- Community-based systems (although no specific examples were given)
- The Spurring a Transformation for Agriculture through Remote Sensing (STARS) project in Karamoja (see http://geog.umd.edu/projectprofile/3058)

Other respondents stated that:

- "*An effective, people centred early warning system doesn't exist*"
- "*Frameworks [exist] but they are unworkable during times of crisis because of lack funding*"

2.4 Main barriers to establishing a multi-hazard National Early Warning System

The respondents were asked to classify the main barriers to establishing a multi-hazard National Early Warning System. The respondents were given a number of choices to rank between 5 = smallest barrier to 1 = largest barrier. The results are shown in Figure 4. From the responses received the barriers to establishing a multi-hazard National Early Warning System in Uganda were ranked in terms of importance as follows:

1. Lack of co-ordination
2. Lack of funding

3.   Lack of political will and co-operation
4.   Lack of technical information
5.   Other

Other barriers given by respondents included:

- Lack of capacity
- Lack of community involvement
- Corruption

Figure 4 Main barriers to establishing a multi-hazard National Early Warning System

1 = Largest barrier   5 = Smallest barrier

2.5 Aspects of existing early warning systems

The respondents were asked their views with respect to existing early warning systems (EWSs) in Uganda. The following questions were posed:

- Are existing EWSs technically sustainable?
- Do existing EWSs take into consideration indigenous early warning systems?
- Do existing EWSs encourage the participation of the public and non-governmental organisations?
- Do existing EWSs facilitate effective co-ordination between multiple government stakeholders?
- Do existing EWSs emphasise preventative actions rather than responses?
- Do existing EWSs address the most important issues of local communities?
- Do existing EWSs communicate clear warnings and actions to different groups of stakeholders?
- Are existing EWSs financially sustainable?

The respondents were given the following options to respond:

- No — This is not represented at all
- Occasionally — In some aspects this is included, but it is ad hoc and does not really influence practice
- Often — In many ways this is genuinely supported and results in some practical reductions in the impacts of hazards
- Completely — This is systematically incorporated in policy and planning of current

  EWSs and is clearly helping to establish a culture of hazard prevention

The results of the questions are summarised in Figure 5.

Figure 5 Respondents' perceptions of existing early warning systems in Uganda
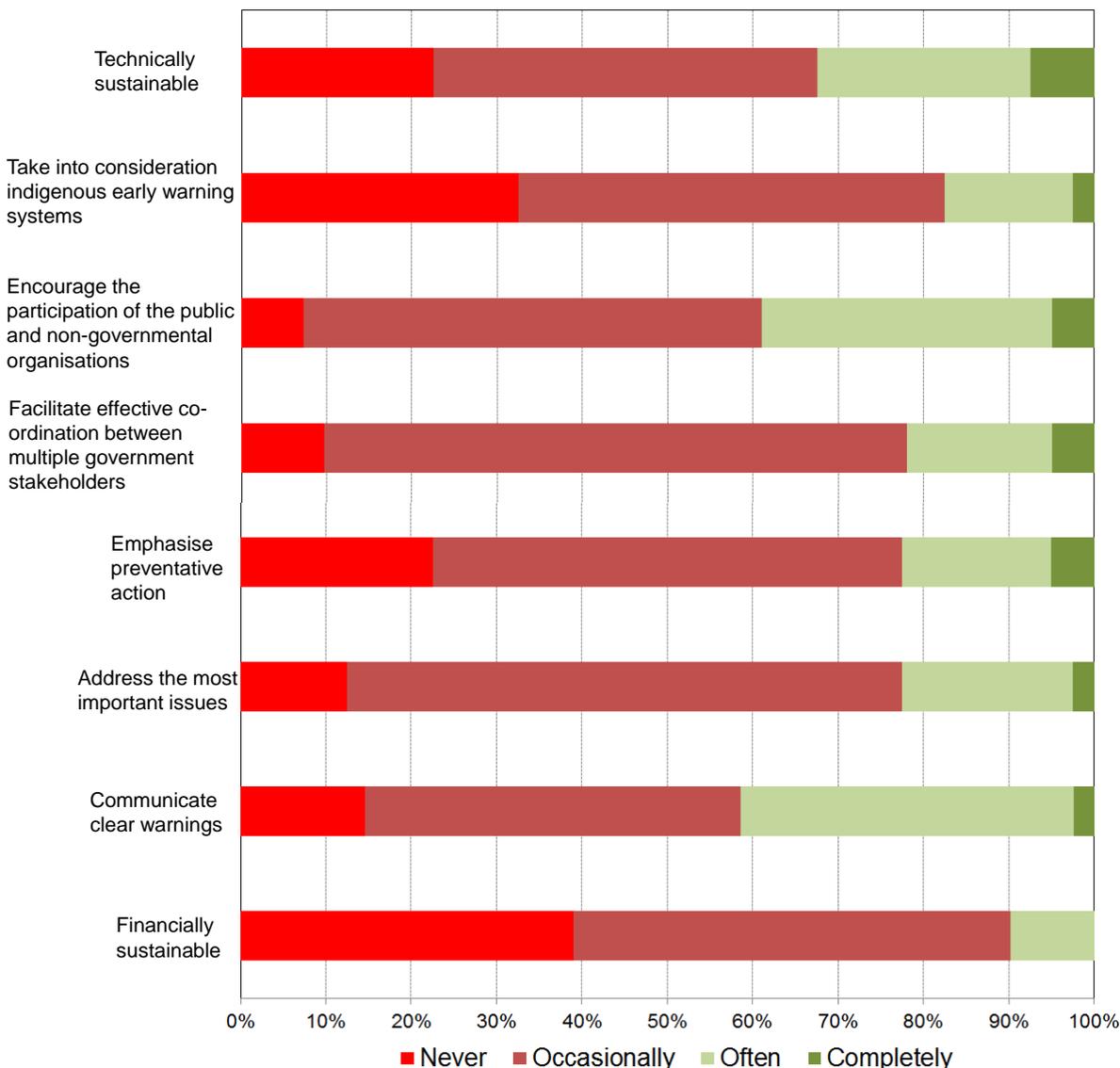
Over 90% of respondents thought that existing early warning systems were either not or only occasionally financially sustainable and 80% of respondents felt that they never or only occasionally take into consideration indigenous early warning systems. Coordination would also appear to be an issue with 78% of respondents stating that existing early warning

systems never or only occasionally facilitate effective co-ordination between multiple government stakeholders. There is also a perception that early warning systems do not completely address the most important issues of local communities or emphasise preventative actions by the recipients of the warnings. It was felt my some respondents that early warning systems were primarily aimed at Government or other organisations operating at a national scale or regional scale (e.g. local government or donors).

As well as not being financially sustainable, early warning systems are not perceived to be particularly technically sustainable or to encourage the participation of the public and non-governmental organisations. On a more positive note, 41% of respondents believe that early warning systems often or always communicate clear warnings and actions to different groups of stakeholders.

2.6 Effectiveness of early warnings

Respondents were asked two questions related to the effectiveness of early warning systems, which are shown in Figure 6. The threat of hazards does not appear to be particularly well communicated to vulnerable communities and often does not appear to lead to local actions that reduce the impacts.

Figure 6 The effectiveness of early warning systems
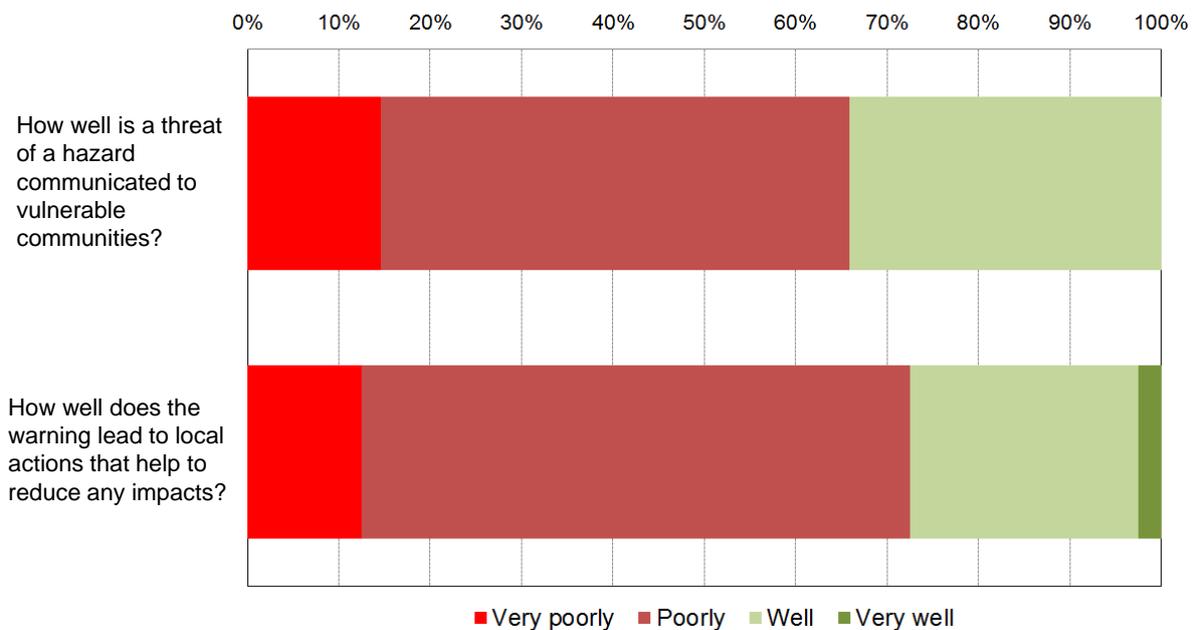
2.7 Other comments

As part of the survey participants were asked for any additional comments. With respect to the creation of a National Early Warning System (NEWS) the following comments were received:

- "*Current expectations from NEWS are unrealistic: technical and scientific limitations need acknowledgment, early warning systems are as good as the response capability*".

- "*Merging of untested, incomplete and partial systems into NEWS will compound uncertainties, make results unreliable and coordination extremely difficult. Confusion over reliability and completeness of warnings may lead to wasted time and money*".
- "*A centralized warning system with one gatekeeper may lead to manufactured crisis (social and political objectives) or ignored hazards/disasters. The system's inputs, methods and results must remain transparent and open to expert scrutiny*".
- "*Before the final merger, each piece of existing early warning system need to be perfected in its current condition. The merger should be only a technical fix or link allowing the systems to operate autonomously. Concerned government agencies can still exercise the mandate of warning dissemination and response coordination*".
- "*The design of an EWS needs to clearly set out the activities, outputs, products and communication channels that will link national and local scales. If this is not well thought out then the EWS will fail. Promoting the sharing of data and information between institutions on a regular basis, especially within government will help a great deal*".
- "*The country needs a national multi-hazard early warning system with central coordination mechanism and involving all stakeholders*".
- "*There is need to first develop the National Early Warning Strategy for the country. This will form the blue print to effectively develop an integrated NEWS*".

Coordination and funding were also raised by many respondents, with many indicating that funding for a National Early Warning System has to be "*anchored into the government planning and budget process, so that it becomes one thematic area of focus that facilitates planning and implementation of any investment, in any sector*".

The funding constraints outlined above were also echoed by another respondent who stated that "*NECOC was established by financial support from donors (UNDP), the ongoing legislation and Act on Disaster Risk Management is being supported by a donor (UNDP). This process of having an EWS is donor funded, DFID. Where is government in all these processes, how long shall government be on the receiving end? Are we not just going to have frameworks/ policies that are in place but not addressing vulnerability of at risk communities. What is the point of having a EWS framework that has no budget to facilitate early action and response?*".

The point was also made that early warning systems need to move from reacting to disasters to predicting them in advance. Many of the major hazards affecting Uganda are climate-related which means that the use of accurate climate forecasts is important. However, it was felt by some that the Uganda National Meteorological Authority (UNMA) "*is not adequately facilitated. Equipment is lacking including observation station networks coverage as well as radar and other logistics*".

3.1 Conclusions and summary of findings

The stakeholders listed their top four most relevant hazards in the following order: droughts; floods; diseases; and landslides. Weather forecasts were seen by about 25% respondents to be the most successful early warning systems in Uganda because: they engage a range of stakeholders; are disseminated via a range of different media; and can enable interventions.

The Drought Early Warning System (DEWS), which operates in Karamoja, was also perceived to be successful by around 17% of respondents because of its: strong support from donors and other stakeholders; strong connection with communities; and use of simple alerts. However, there were some stakeholders who felt that no effective early warning system currently exists in Uganda.

The main barriers to producing a national early warning system were ranked in order of importance as: lack of co-ordination; lack of funding; lack of political will and co-operation; and lack of technical information.

Less than 5% of respondents stated that early warning systems worked "very well" in engendering local actions that help to reduce the impacts of hazards. The threat of hazards does not appear to be particularly well communicated to vulnerable communities and often does not appear to lead to local actions that reduce the impacts.

Some respondents raised the point that the responsibility for existing early warning systems needs to remain within their relevant Government Ministries, because this is where the expertise lies for a particular hazard (e.g. the expertise on livestock disease resides with the Ministry of Agriculture, Animal Industries and Food).

Key challenges that emerged as being pivotal to an effective national early warning system for Uganda were as follows:

- How can co-ordination between government, non-governmental and donor organisations be improved?
- How can existing early warning systems be made more financially and technically sustainable?
- How can early warnings be more effectively disseminated, especially to the most vulnerable communities?
- How can all stakeholders, including vulnerable communities, play a part in improving early warning systems in Uganda?
- How can early warning lead to early preventative actions?
- What should a strategy to develop a National Early Warning System look like and how will this enable a National Early Warning System to be developed over the next five to ten years in Uganda?

- How can future hazards be forecast in advance? Currently most early warning systems in Uganda are reliant on looking to the past rather than using forecasts to estimate future risks to people and their livelihoods.

Uganda early warning systems survey

National multi-hazard early warning for Uganda

Investments in Early Warning Systems (EWSs) are recognised as a critical component under the Sendai Framework for Disaster Risk Reduction 2015 - 2030. To this end the Government of Uganda is refocusing its disaster risk management strategy to proactive preparedness and prevention. The development of a National Early Warning System (NEWS) is an important element of this strategy.

There are currently significant levels of investment across Uganda into systems that collect and share early warning information. These cover a wide range of hazards including: floods, drought, human and livestock disease, landslides and food prices.

The National Emergency Co-ordination and Operations Centre (NECOC) wishes to establish a framework for collaboration with existing early warning systems at district and national levels to harmonise data collection, as well as reporting and analysis. To help facilitate this the UK Government's Department for International Development has employed Darren Lumbroso of HR Wallingford to act as an honest broker to assist with facilitating a framework and roadmap for the development of a National Early Warning System covering multiple hazards, under the Office of the Deputy Prime Minister.

This questionnaire has been sent to relevant stakeholders throughout Uganda who work in the field of early warnings. All personal details of this survey will remain anonymous; however, it would be useful if you could fill in your contact details so that we can contact you for your views later in this process.

The survey should take you less than five minutes.

1. If you wish to be contacted in the future please provide the following details (please note this is not obligatory)

Name	
Title	
Organisation	
Email address	
Telephone number	

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* 2. What type of organisation do you work for?

- ○ Government
- ○ Non-governmental organisation
- ○ Research/academic
- ○ Private sector
- ○ Bi-lateral donor
- ○ Development bank
- ○ United Nations
- ○ Other (please specify)

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* 3. What is your main area of expertise?

- ○ Agriculture
- ○ Business/Industry
- ○ Environment
- ○ Health
- ○ Humanitarian affairs and disaster risk management
- ○ Transport
- ○ Water
- ○ Other (please specify)

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* 4. Which hazard(s) are most relevant to you and your organisation?

- ☐ Diseases
- ☐ Droughts
- ☐ Earthquakes
- ☐ Fires
- ☐ Floods
- ☐ Landslides
- ☐ Other (please specify)

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5. Can you provide one example of a successful early warning system in Uganda and up to three reasons why it is successful?

Name of early warning system _____

Reason 1 _____

Reason 2 _____

Reason 3 _____

* 6. What are the barriers to establishing a National Early Warning System (NEWS) for Uganda covering multiple hazards? Rank the barriers below in order of importance from 1 = Largest barrier 5 = Smallest barrier.

⁚⁚	⇕	Lack of funding
⁚⁚	⇕	Lack of technical information
⁚⁚	⇕	Lack of political will and co-operation
⁚⁚	⇕	Lack of co-ordination
⁚⁚	⇕	Other barriers (please specify in the box provided under question 7)

7. Other barriers

_____

* 8. The National Emergency Co-ordination and Operations Centre (NECOC) wishes to establish a framework and a way forward for the development of a National Early Warning System covering multiple hazards. A key to developing this is the integration of the outputs of existing early warning systems with NECOC.

This set of questions relates to existing early warnings systems (EWSs) that are currently operational in Uganda.

	NO: This is not represented at all	OCCASIONALLY: In some aspects this is included, but it is ad hoc and does not really influence practice	OFTEN: In many ways this is genuinely supported and results in some practical reductions in the impacts of hazards	COMPLETELY: This is systematically incorporated in policy and planning of current EWSs and is clearly helping to establish a culture of hazard prevention
Do existing EWSs facilitate effective co-ordination between multiple government stakeholders?	○	○	○	○
Do existing EWSs encourage the participation of the public and non-governmental organisations?	○	○	○	○
Do existing EWSs take into consideration indigenous early warning systems?	○	○	○	○
Are existing EWSs technically sustainable?	○	○	○	○
Are exsiting EWSs financially sustainable?	○	○	○	○
Do existing EWSs communicate clear warnings and actions to different groups of stakeholders?	○	○	○	○
Do existing EWSs address the most important issues of local communities?	○	○	○	○
Do existing EWSs emphasise preventative actions rather than responses?	○	○	○	○

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* 9. This question deals with the effectiveness of the dissemination of early warnings in Uganda

	VERY POORLY: Almost nothing happens	POORLY: Only very few examples can be found and it is not possible to say if these indicate what would happen in the future	WELL: Many examples exist and there is confidence that this will continue and improve	VERY WELL: The systems and processes are well established and highly regarded
How well is a threat of a hazard communicated to vulnerable communities?	○	○	○	○
How well does this lead to local actions that help to reduce any impacts?	○	○	○	○

10. Please feel free to add any additional comments and to list any early warning systems you think are relevant to this work in the box below.

[text box]

Done

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