



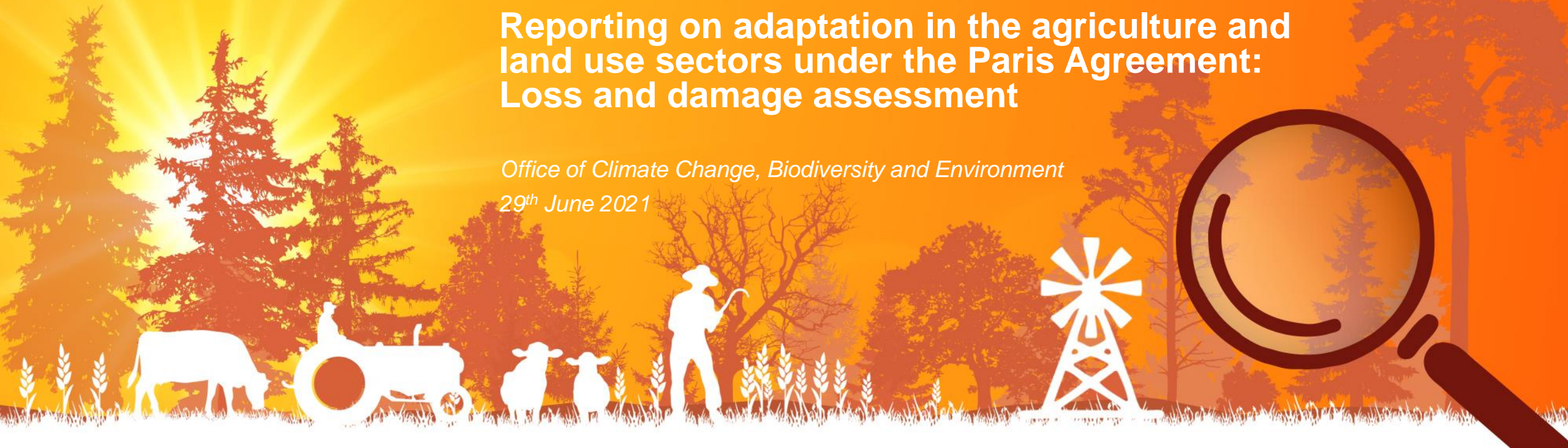
Food and Agriculture
Organization of the
United Nations

FAO and the Enhanced transparency framework

ENHANCED TRANSPARENCY FRAMEWORK WEBINAR SERIES

Reporting on adaptation in the agriculture and
land use sectors under the Paris Agreement:
Loss and damage assessment

Office of Climate Change, Biodiversity and Environment
29th June 2021



Agenda

Opening

Part I:

- An introduction to adaptation reporting and the BTR

Q&A

Part II:

- How can FAO D&L Methodology be used in the context of the ETF?
- FAO methodology: Sendai C2 Methodology for Damage and Loss Assessment in Agriculture

Q&A

Country experience

- Bangladesh: Anticipatory action to floods: impact-based forecasting to minimize loss and damages
- Mongolia: Developing and testing a framework for climate change related loss and damage

Closing





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Transparency



An introduction to adaptation reporting and the biennial transparency report

Thomas W. Dale
UNEP DTU Partnership

June 29th, 2021

Purpose of the presentation

The **purpose of this presentation** is to provide its audience with:

1. General introduction to the biennial transparency report (or "BTR")
2. An overview of the information its "adaptation section" should include (according to the guidelines provided)
3. An overview of (some) key challenges in reporting comprehensively against these guidelines

1. A general introduction to the BTR

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The biennial transparency report (BTR) is a **transparency-orientated report** that is to be produced countries every two years and submitted to the UNFCCC.

It represents a key component of the **Enhanced Transparency Framework** (ETF).

The BTR's role within this framework is to operationalise the transfer from countries to the UNFCCC relating to:

- Mitigation,
- Vulnerability and adaptation
- Loss and damage
- Support provided, and
- Support received.

1. A general introduction to the BTR

In terms of what will change once countries begin reporting through the BTR, the biggest (adaptation-related) differences are that:

- Countries will be able to **report on adaptation every two years**,
- **Countries will be able to report on loss and damage.**
- **Adaptation reporting in the BTR is intended to be more comprehensive** than that which presently occurs through national communications

2. Overview of the guidelines for the BTR's adaptation section

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Section	Section title	Theme
A	National circumstances, institutional arrangements, and legal frameworks	<u>Adaptation</u>
B	Impacts, risks and vulnerabilities	
C	Adaptation priorities and barriers	
D	Adaptation strategies, policies, plans, goals and actions [...]	
E	Progress on implementation of adaptation	
F	Monitoring and evaluation of adaptation actions and processes	
G	Info. relating to averting, minimizing, and addressing loss and damage [...]	Loss and Damage
H	Cooperation, good practices, experiences, and lessons learned	Supporting activities
I	Any other information related to climate change and adaptation [...]	Any other info.

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D	Adaptation strategies, policies, plans, goals and actions [...]	
E	Progress on implementation of adaptation	Damage Activities Info.
F	Monitoring and evaluation of a	
G	Info. relating to averting, minim	
H	Cooperation, good practices, e	
I	Any other information related	

Information should be available in previous planning documents...

E.g. national and sectoral adaptation plans and strategies (incl. NAPs)

2. Overview of the guidelines for the BTR's adaptation section

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E	Progress on implementation of adaptation	Adaptation
F	Monitoring and evaluation of adaptation actions and processes	
G	Info. relating to averting, minimizing, and addressing loss and damage [...]	Loss and Damage
H	Cooperation, good practices, e	Activities
I	Any other information related	Info.


Information should be generated by M&E systems...

2. Overview of the guidelines for the BTR's adaptation section

Section	Section title	Theme
A	...s, and legal frameworks	Adaptation
B		
C		
D	...ctions [...]	
E		
F	Monitoring and evaluation of adaptation activities and processes	
G	Info. relating to averting, minimizing, and addressing loss and damage [...]	Loss and Damage
H	Cooperation, good practices, experiences, and lessons learned	Supporting activities
I	Any other information related to climate change and adaptation [...]	Any other info.

Section G asks for information about:

- Losses and damages incurred
- Measures to manage loss and damage
- Relevant institutional arrangements




2. Overview of the guidelines for the BTR's adaptation section

Section	Section title	Theme
A	National circumstances, institutional arrangements, and legal frameworks	Adaptation
B		
C		
D	ons [...]	
E		
F	d processes	
G	Info. relating to averting, minimizing, and addressing loss and damage [...]	Loss and Damage
H	Cooperation, good practices, experiences, and lessons learned	Supporting activities
I	Any other information related to climate change and adaptation [...]	Any other info.

Section H asks for information about:

- International collaborations
- Networking events attended
- Efforts to strengthen research and systemic observation systems



2. Overview of the guidelines for the BTR's adaptation section

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I	Any other information related to climate change and adaptation [...]	Any other info.

Section I allows countries to report on any other information they deem relevant

3. Key challenges in reporting comprehensively against these guidelines

3. Challenges in reporting on adaptation results

Many countries have yet to establish systems for monitoring and evaluating the implementation and success of their key adaptation actions (i.e. national-level strategies, plans and policies).

Generally speaking, the development of M&E systems for adaptation have been hindered by:

- Generic **practical challenges** faced by countries – i.e. a lack of financial, technical, or human resources.
- The significant **methodological challenges** associated with evaluating adaptation.

While there are a wide range of inter-linked challenges to monitoring and evaluating the impacts of adaptation, key challenges include:

- The fact that there is **no universal metrics for monitoring adaptation results**
- The fact that there are **no widely agreed methodologies for assessing the effectiveness, adequacy, and sustainability** of adaptation

3. Challenges in reporting on loss and damage

The greatest challenge facing countries is a general absence of robust approaches and methodologies for evaluating loss and damage related to climate change.

While this is (in part) due to the field still being in its infancy, it is also due to the significant methodological challenges in quantifying loss and damage.

This is particularly the case for:

- **Loss and damage caused by slow-onset events** – which is difficult to evaluate due to the inherent uncertainties associated with assessing impacts over long time-horizons
- **Non-economic loss and damage** – which are difficult to evaluate due to their non-tangible nature.

As such, when loss and damage is being evaluated, it is generally limited to focussing on the direct economic impacts of extreme weather events... Often without full sectoral coverage.



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Thank you!

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Similarities between adaptation-relevant reporting instruments

Type of information	BTR	Nat. Com. (NAI)	Ad. Com
National development, circumstances, and frameworks			
Adaptation-related national circumstances	Green	Green	Green
Assessment of impacts and vulnerability			
Research on vulnerabilities and adaptation	Green	Green	Red
Observed and expected impacts, risks, trends and hazards	Green	Red	Green
Vulnerability to adverse effects of climate change	Green	Green	Green
Loss and damage			
Information on loss and damage	Green	Red	Red
Planned adaptation efforts			
Adaptation actions	Green	Green	Green
Adaptation actions and/or economic diversification plans and mitigation co-benefits	Green	Red	Green
Stakeholder involvement	Green	Red	Red
Implementation and progress on adaptation efforts			
Implementation of adaptation	Green	Green	Green
Steps to integrate climate change into development, policies and actions/related capacity building	Green	Green	Red
Gender-responsiveness; integration of gender, science; traditional, indigenous and/or local knowledge	Green	Red	Green
Effectiveness and sustainability of adaptation	Green	Red	Red
Barriers, challenges and gaps related to implementation	Green	Green	Green
Monitoring and evaluation			
Monitoring and evaluation	Green	Green	Green
Needs and supports			
Implementation/support needs of developing countries	Red	Red	Green
Assistance/support provided to developing countries	Red	Red	Green
How support meets adaptation needs	Green	Green	Red
Other information			
Cooperation, good practices and lessons learned	Green	Red	Green
Contribution of adaptation to international frameworks	Red	Red	Green
Any other information	Green	Red	Green

Information is requested in guidelines ■
Information is **not** requested in guidelines ■

Source: adapted from Adaptation Committee (2019)



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FAO AND THE ENHANCED TRANSPARENCY FRAMEWORK

The use of FAO Sendai C2 Methodology for Damage and Loss Assessment in Agriculture in the context of ETF

Webinar: Reporting on adaptation in the agriculture and land use sectors under the Paris Agreement: Loss and damage assessment
29th June 2021

**Elisa Distefano, FAO GEF CBIT AFOLU Program
Environment and CC adaptation Specialist**



FAO Sendai C2 Methodology for D&L Assessment in Agriculture

- Can be used to monitor progress towards reducing the **direct economic impact of disasters** on agriculture (SFDRR and SDG agenda).
- It can also be used to report on Element G of the MPG: **Information related to averting, minimizing and addressing L&D associated with CC impacts** (extreme weather events and slow onset events)



Element G a): Observed and potential CC impacts

Aspects of the ETF which the L&D can address

- Assess direct agricultural D&L attributed to climate related disasters
- Ensure consistency across countries, regions and disasters for all agricultural subsectors

Specific Outputs

- Results from the analysis and evaluation of the impact of climate related disasters on the agriculture sector
- A globally standardized definition of how D&L are measured for each agricultural subsector



Element G b): Activities related to L&D reduction

Aspects of the ETF which the L&D can address

- Strengthen national institutions for monitoring and collecting climate related disaster data in agriculture
- Interpret existing information to inform risk-related policy and planning

Specific Outputs

- Establishment of L&D information systems (collecting data at the national and subnational level, managing databases, calculating disaster D&L data, disseminating results to policy makers, investors and practitioners)



FAO AND THE ENHANCED TRANSPARENCY FRAMEWORK

Thank you

Contact: elisa.distefano@fao.org





FAO'S METHODOLOGY FOR DAMAGE & LOSS ASSESSMENT IN AGRICULTURE

**Wirya Khim, DRR Lead, Programme and Results Team
Office of Emergencies and Resilience, FAO**

*Webinar: Reporting on adaptation in the agriculture and land use sectors
under the Paris Agreement: Loss and damage assessment*

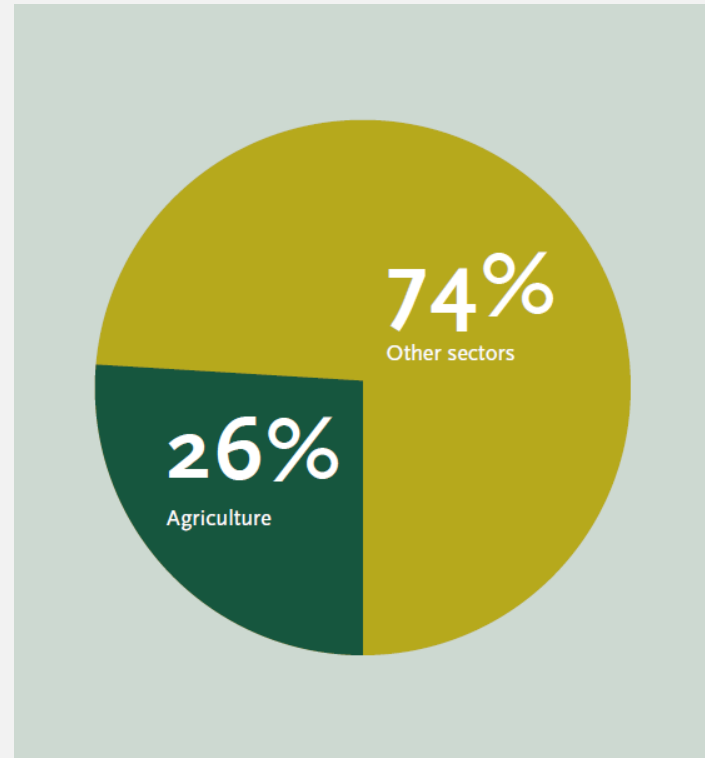
29 June 2021



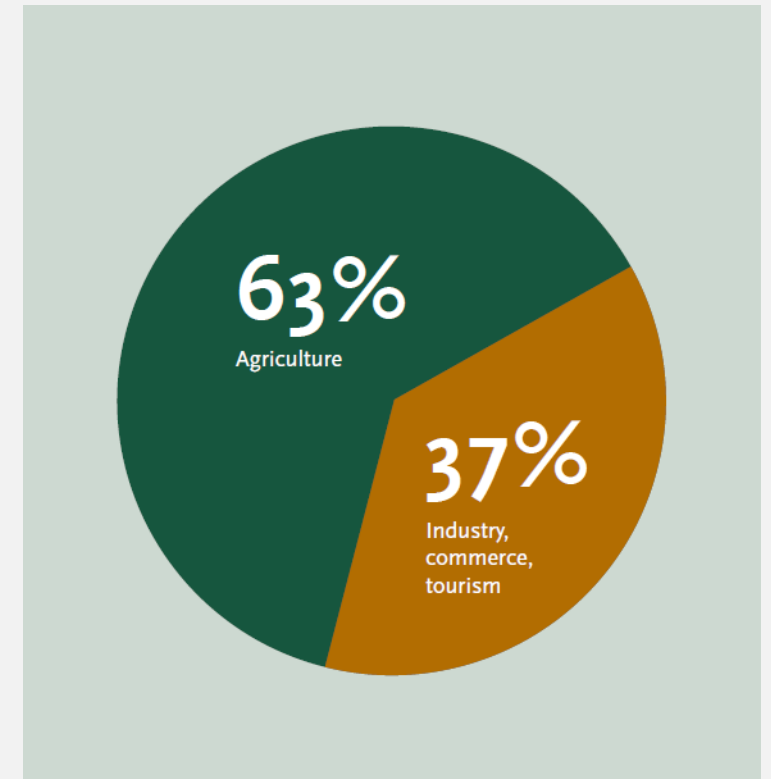
2021 The impact of disasters and crises on agriculture and food security



Damage and loss in agriculture as share of total damage and loss in all sectors, 2008–2018



Damage and loss in agriculture as share of total damage and loss relative to Industry, tourism and commerce, 2008–2018



Download at:

<http://www.fao.org/3/cb3673en/cb3673en.pdf>








Sendai Framework C2 Indicator and
SDG Indicator 1.5.2

Sendai Framework
for Disaster Risk Reduction
2015 - 2030

 SUSTAINABLE DEVELOPMENT GOALS



Impact to Agriculture: C2
= $C2(C) + C2(L) + C2(FO) + C2(AQ) + C2(FI)$

-  C2(C): Damage and Loss to crops
-  C2(L): Damage and Loss to livestock
-  C2(FO): Damage and Loss to forestry
-  C2(AQ): Damage and Loss to aquaculture
-  C2(FI): Damage and Loss to fisheries

- covers all agriculture subsectors and three components production loss + production damage + asset damage



D&L

Key features of the FAO Damage and Loss Methodology

The three components of the D&L methodology

Damage

Loss

Production

PD

PL

Value of destroyed stored inputs and production outputs (e.g. stored harvest, standing crops/trees, dead livestock)

Difference between expected and actual value of production (e.g. loss of fish capture when boats can't go to sea). Value of destroyed standing crops. Post-disaster maintenance costs.

Assets

AD

Cost to replace or repair damaged or destroyed assets (e.g. equipment, cost to clean up damaged forest).






C2-C (Crop) =	<i>Crop production damage</i>	+	<i>Crop production loss</i>	+	<i>Crop asset damage</i>
C2-FO (Forestry) =	<i>Forest production damage</i>	+	<i>Forest production loss</i>	+	<i>Forest asset damage</i>
C2-L (Livestock) =	<i>Livestock production damage</i>	+	<i>LS production loss</i>	+	<i>LS asset damage</i>
C2-AQ (Aquaculture) =	<i>AQ production damage</i>	+	<i>AQ production loss</i>	+	<i>AQ asset damage</i>
C2-FI (Fisheries) =	<i>Fishery production damage</i>	+	<i>Fishery production loss</i>	+	<i>Fishery asset damage</i>




C2-C (Crop sector impact) = Annual crop production damage + Perennial crop production damage + Annual crop production loss + Perennial crop production loss + Crop assets damage (complete and partial)




Production damage

- Pre-disaster value of destroyed **inputs**
 $\Delta Q_{\text{inputs, annual, stored}} \cdot P_{t-1} + \Delta Q_{\text{inputs, perennial, stored}} \cdot P_{t-1}$
- Pre-disaster value of destroyed **stored crops** (annual and perennial)
 $\Delta Q_{\text{outputs, annual, stored}} \cdot P_{t-1} + \Delta Q_{\text{outputs, perennial, stored}} \cdot P_{t-1}$
- Replacement value of **fully damaged perennial trees**
 $\Delta HA \cdot H_{(\text{tree})}/\text{ha} \cdot P_{t-1} \Delta Q$

$$PD = \Delta Q_{\text{inputs, annual, stored}} \cdot P_{t-1} + \Delta Q_{\text{outputs, annual, stored}} \cdot P_{t-1} + \Delta Q_{\text{inputs, perennial, stored}} \cdot P_{t-1} + \Delta Q_{\text{outputs, perennial, stored}} \cdot P_{t-1} + \Delta HA \cdot H_{(\text{tree})}/\text{ha} \cdot P_{t-1}$$


Production loss

- Difference between expected and actual value of crop production in **non-fully damaged harvested area**
 $P_{t-1} \cdot \Delta Y/\text{ha} \cdot HA$
- Pre-disaster value of destroyed crops in **fully-damaged areas (non-harvested)**;
 $P_{t-1} \cdot Y/\text{ha} \cdot \Delta HA$
- Short-run **post-disaster maintenance costs**
 $P_{\text{short-run}}$

$$PL (\text{Crops}) = P_{t-1} \cdot \Delta Y/\text{ha} \cdot HA + P_{t-1} \cdot Y/\text{ha} \cdot \Delta HA + P_{\text{short-run}}$$


Asset Damage

- I) Pre-disaster value of partially or fully destroyed **assets**

$$AD = P_{t-1} \cdot \Delta Q_{(\text{asset})}$$

Production Damage

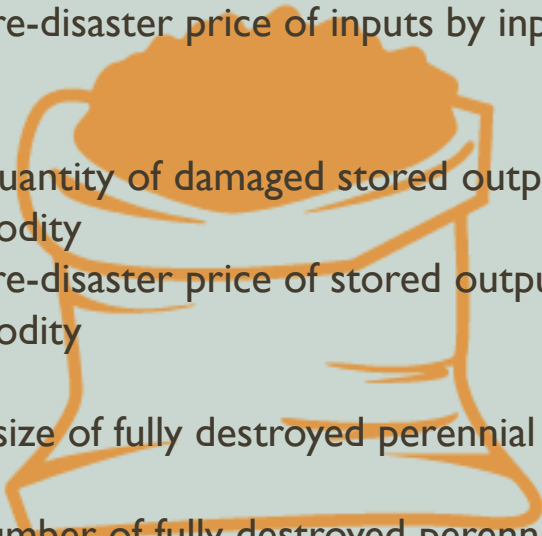
xxx Quantity of inputs lost by input type
\$\$\$ Pre-disaster price of inputs by input type

xxx Quantity of damaged stored output by commodity
\$\$\$ Pre-disaster price of stored output by commodity

m²m² size of fully destroyed perennial crops

123 number of fully destroyed perennial crops

\$\$\$ replacement cost of fully destroyed trees



Production Loss

xxx Expected yield by commodity
xxx Actual yield by commodity

m²m² size of fully destroyed crops
m²m² size of partially destroyed crops

\$\$\$ Pre-disaster price by commodity

\$\$\$ Short-run post-disaster maintenance cost



Asset Damage

xxx of asset destroyed by asset type

\$\$\$ pre-disaster price by asset type



Production Damage



Production Loss

xxx Expected yield by commodity

xxx Actual yield by community

m²m² size of fully destroyed crops

m²m² size of partially destroyed crops

\$\$\$ Pre-disaster price by commodity

Short-run post-disaster
maintenance costs

Asset Damage



Sample Data Requirements for calculating D&L in Crops: Minimum Data Scenario



- An E-Learning course “Using FAO Methodology to compute damage and loss:” is available at <https://elearning.fao.org/course/view.php?id=644>
- Free, open and available online



- Greater progress and capacity development support are needed to improve national D&L information system to collect and report data on disaster related loss in agriculture.
- Further support is needed at country level, including reaching out to and facilitating data collection and monitoring at subnational levels, once the national systems are functioning and also to meet the global commitments.
- Generating greater **evidence for policy making** in DRR/M and climate change action in agriculture



THANK YOU

Contact: FAO-DRR@fao.org



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Anticipatory Action to Bangladesh's Floods

Impact based forecasting to minimize loss
and damages



Background

- The Sendai Framework and Paris Agreement is fundamental to the vision of Bangladesh's Standing Orders (2019) and National Plan for Disaster Management (2021-25)
 - Explicitly laying foundation for Forecast based Financing/Action (FbF/A)
- OCHA's Anticipatory Action Framework is based on flood forecast model with a return period of 5 years for Jamuna basin
 - Two-staged trigger system approx. 10 and 5 days before prior to the peak



Bangladesh is one of the largest delta in the world and in case of most severe floods, 60% or more land area of the country is affected.

Conceptual Framework

Step 1

Risk Analysis - Expand risk database

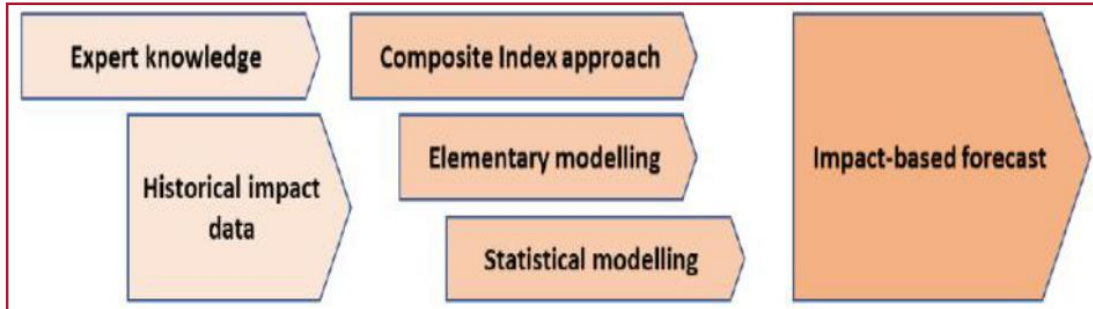
Step 2

Inventory of forecasts

Step 3

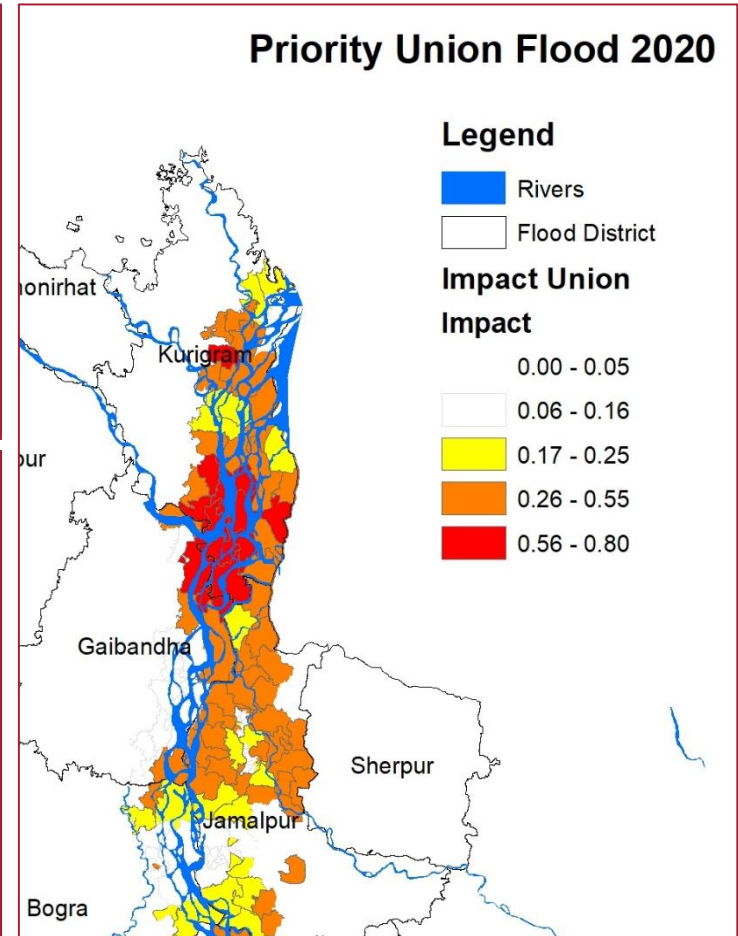
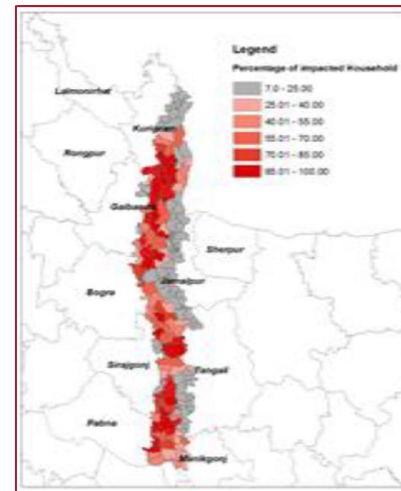
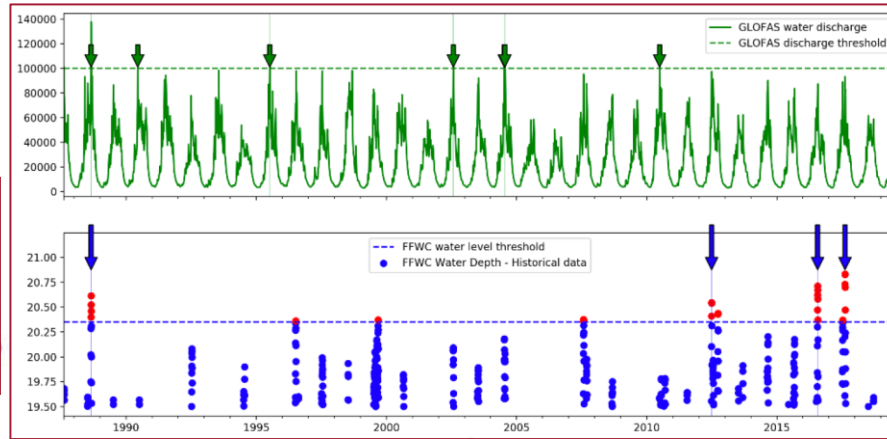
Define hazard magnitudes

Step 4



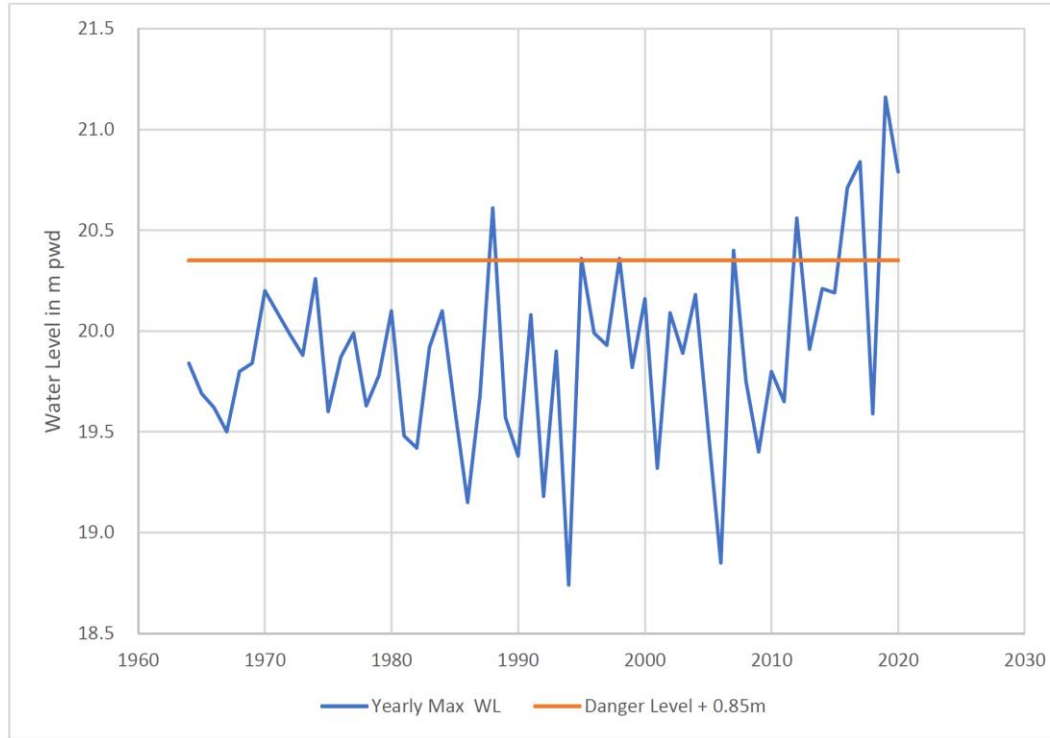
Step 5

Generate impact-based forecasting intervention map

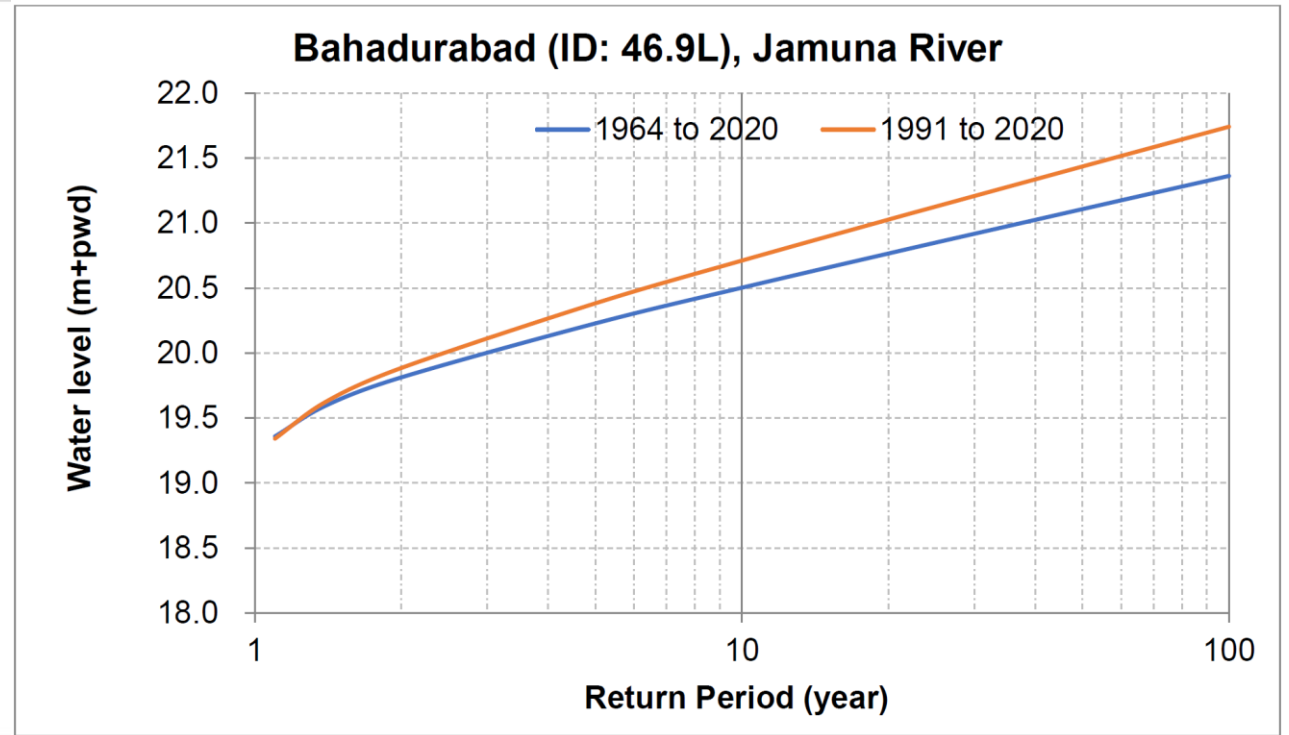


Trigger Analysis (Bahadurabad)

Annual Max Water Level at Bahadurabad (BWDB)



Gumbel Dist. for Annual Max Water Level at Bahadurabad

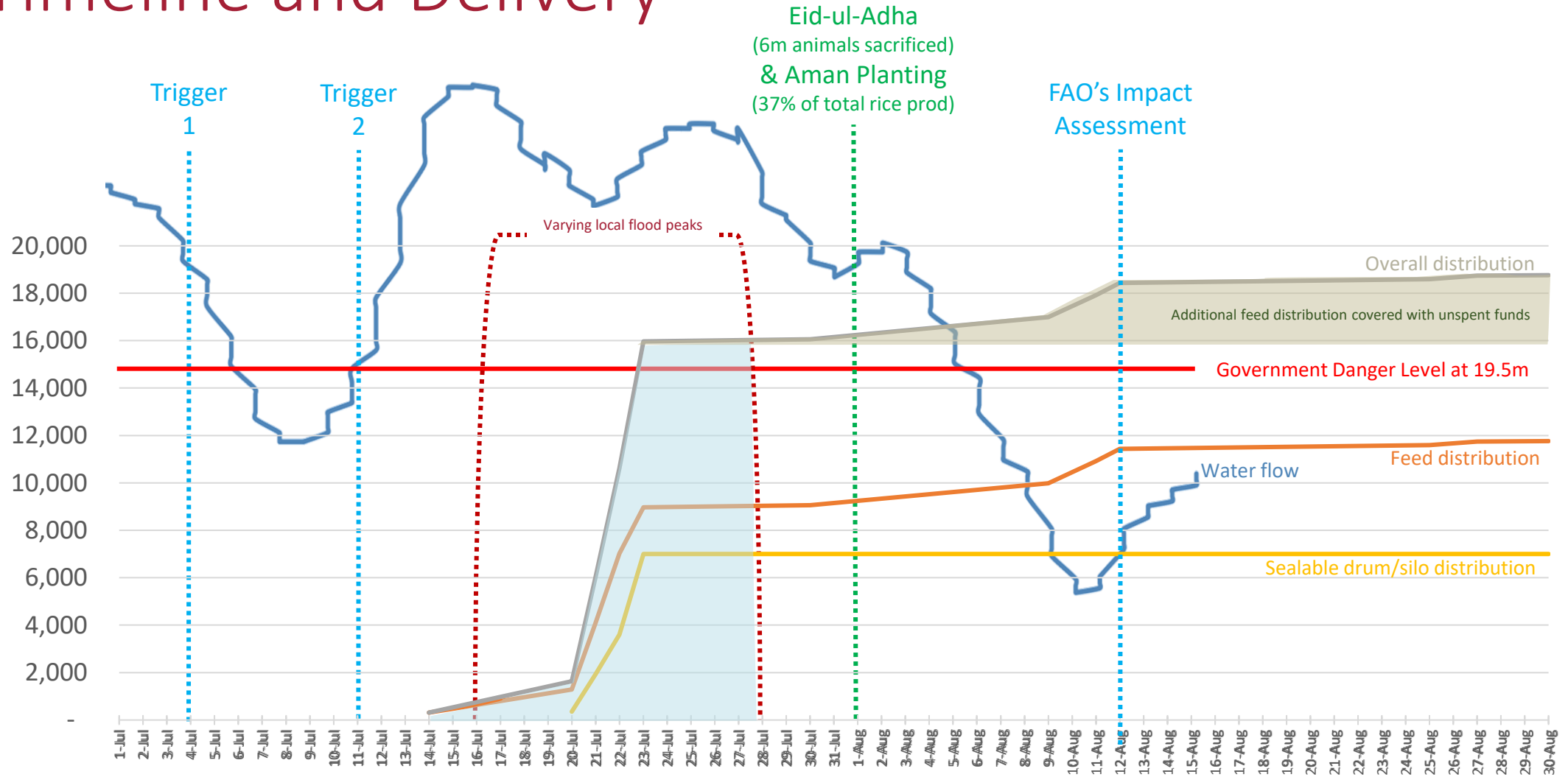


Trigger 1

Trigger 2

Flood Peak

Timeline and Delivery



FAO's action

Assisted 18,761 low income agriculture dependent (small farmer/herder) households with poor housing, limited productive asset and access to services, PLW, children, elderly, headed by women from flood prone areas

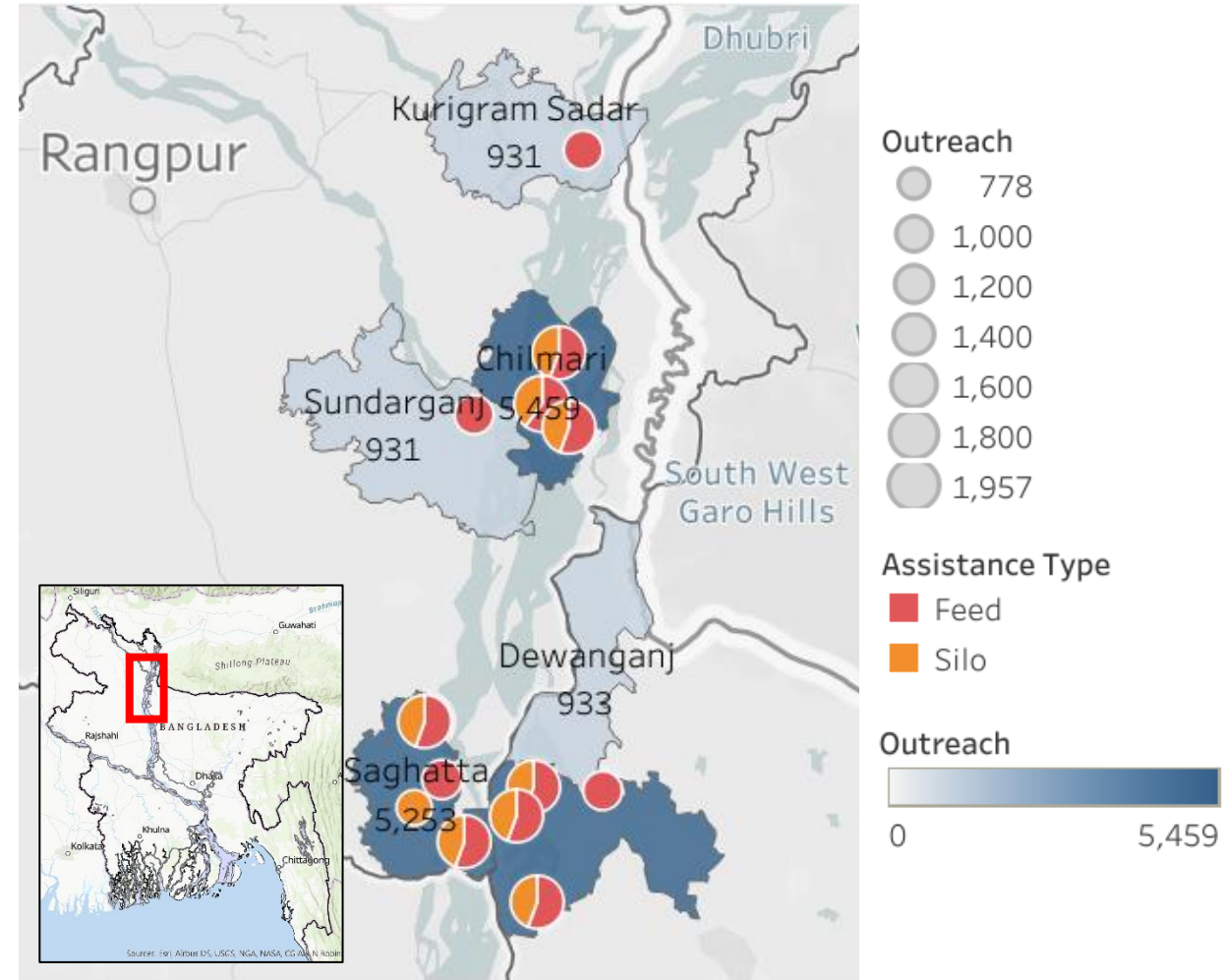
Anticipatory Actions:



Sealable drums (1 drum x 66 litre = \$11) to store crop seeds, farming tools, food, clean water (7,000 HHs) with DAE



Animal feed (3 bags x 25 kg = \$24) to keep livestock healthy and alive (11,761 HHs) with DLS



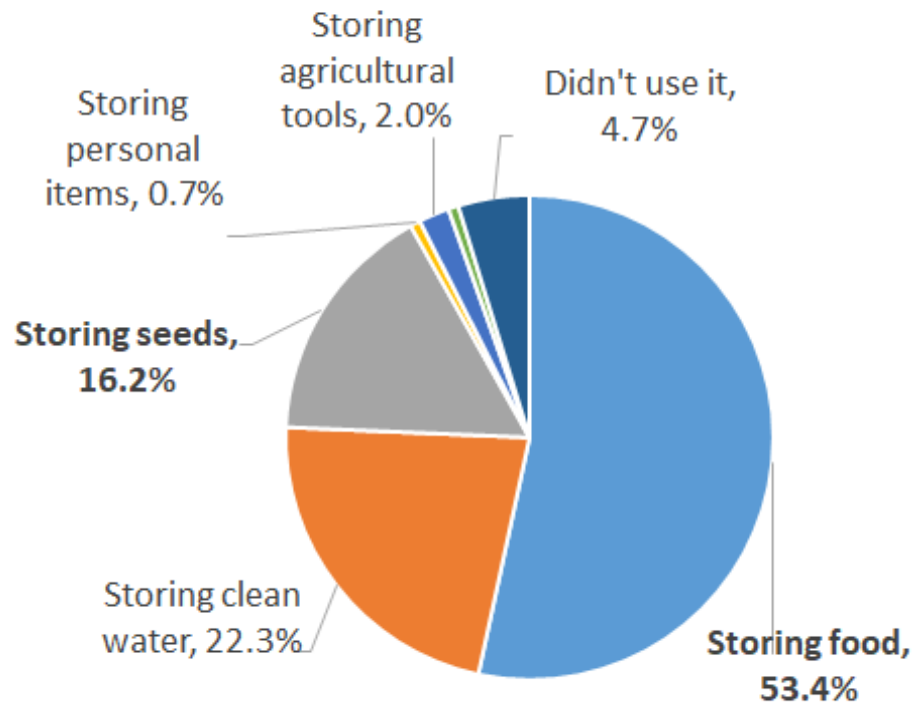
Design of Impact Analysis

- **Empirical analysis based on household level primary data focusing to measure direct benefits gained by beneficiaries by comparing to control group at one static point of time (post-disaster)**
- **797 household-level interviews**
 - **384 beneficiaries** - Criteria for inclusion: assistance received only from FAO.
 - **413 non-beneficiaries** - Criteria for inclusion
 - 1) did not receive similar assistance
 - 2) comply with socioeconomic eligibility criteria of AA project
 - 3) households located near to beneficiaries.
- Collection of **human interest stories**

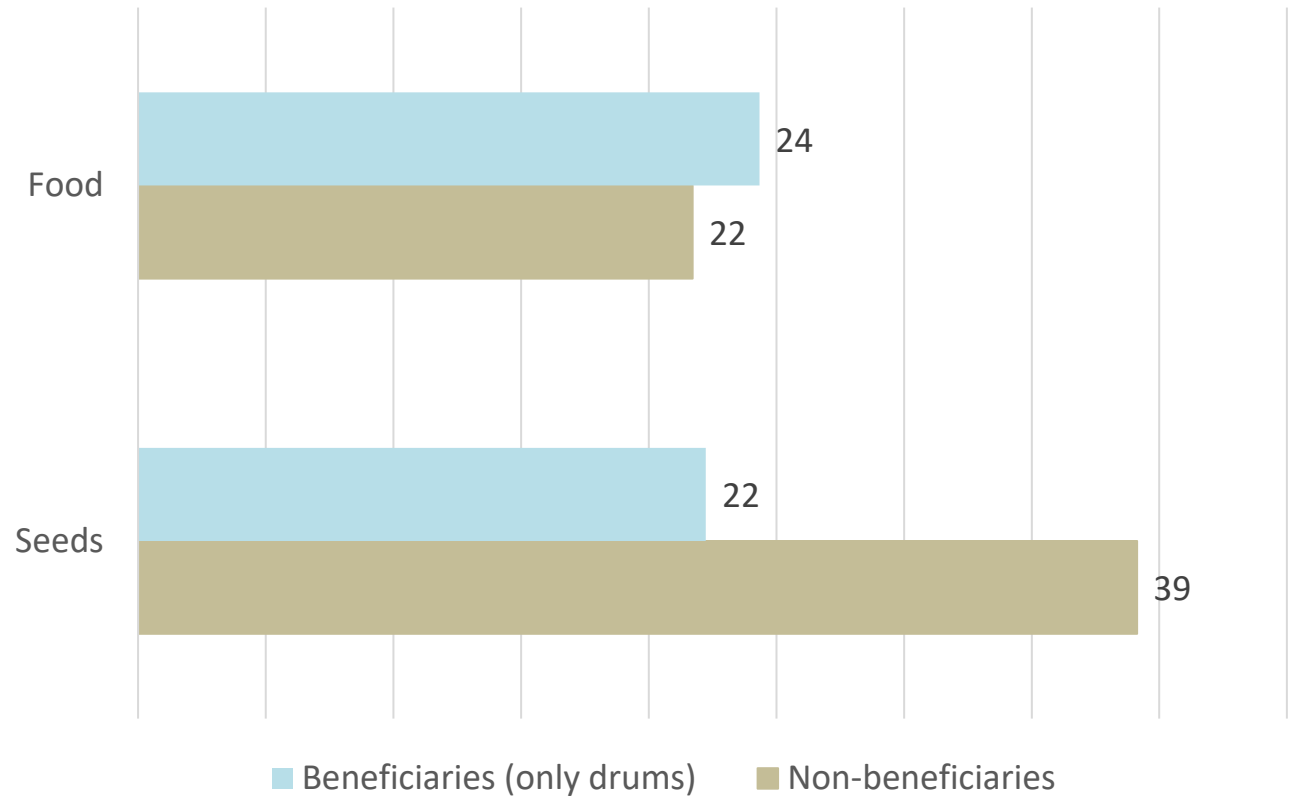


Avoided damage to productive assets and food – Sealable drums

Use of sealable drums

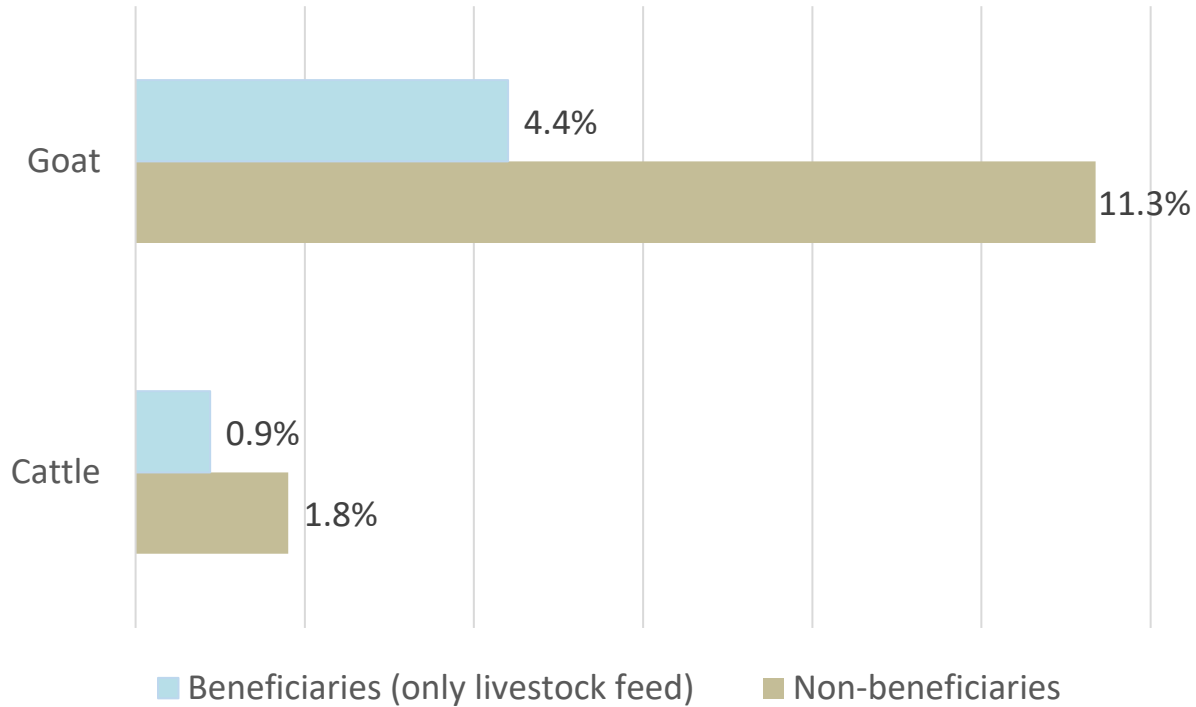


Average kg of stored crop seeds and food destroyed by floods

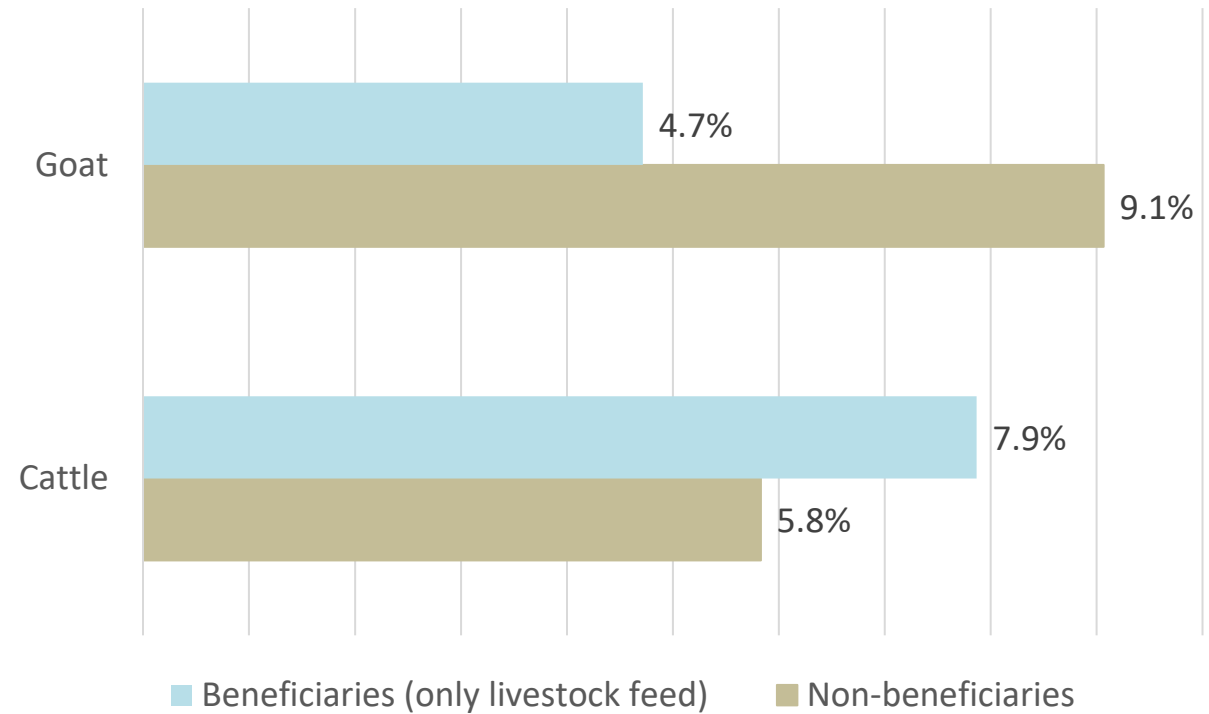


Avoided impact on livestock – Animal feed

Average livestock mortality rate caused by floods



Average % of animals in deteriorated conditions due to floods





beneficiaries were more able to keep their animals alive thanks to the feed provided



none of the beneficiaries reported distress sale of goats while non-beneficiaries sold 0.39 goats per household on average to cope with the impact of floods

beneficiaries of livestock feed spent less than half of the money from new loans on purchasing animals compared to non-beneficiaries



Impact assessment

USD 1 → USD 0.80

for every USD 1 FAO spent on livelihood interventions, households had a return of USD 0.80



households who received drums saved more seeds and were better able to plant during the *boro* rice season, which directly follows the monsoon season

Interviews



“Without the feed our cows would have died. Now they are healthy and producing milk. Their market value increased from 20 000 BDT to approximately 40 000 BDT”

Ms. Morjina Begum, Gaibandha, Shaghata

“The drum helped a lot. We kept nut seeds inside it during flood, so we could save them. When water goes down, we will be able to sow. In future floods, I will continue using the drum for storing my seeds”.

Ms. Laily Begum, Kurigram, Chilmari



Learning points and Way Forward

1. FAO was able to apply its previous anticipatory action experience in slow-onset disasters to a **new context where a hazard unfolds much faster**
2. **Fine tuning trigger model** (GLOFAS vs FFWC forecast) and minimizing error (exceeds 30 cm for 5 days lead time)
3. **Flexible financing options and pre-positioning to further enhance agility**
4. **Layered and coordinated action by responding agencies** (e.g. complementary assistance combining cash and NFIs, common HH profiling in advance, EW messaging for AA'21)
5. **Sensitizing technical government agencies** on the process and integration with social protection and resilience programming





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Saving livelihoods saves lives



LAUNCH OF THE ENHANCED TRANSPARENCY FRAMEWORK (ETF) WEBINAR SERIES
*REPORTING ON ADAPTATION IN THE AGRICULTURE AND LAND USE SECTORS
UNDER THE PARIS AGREEMENT*

CBIT-AFOLU PROGRAMME

Country experience on developing and testing a framework for
climate change related loss and damage, Mongolia
29 June 2021



A.Enkh-Amagaln
Center for Policy Research, CPR
www.cpr.mn

Background of the agricultural sector

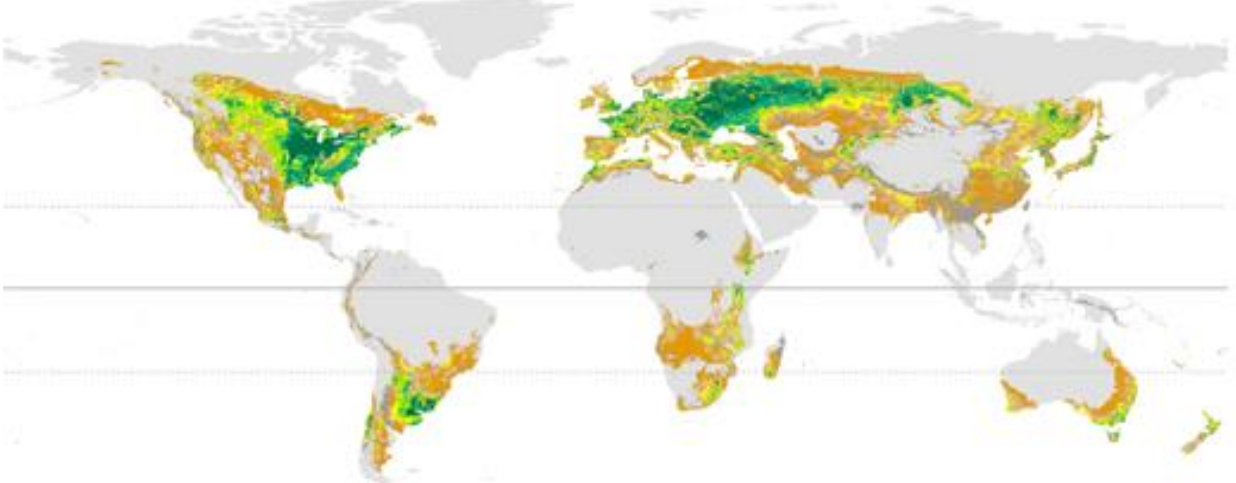
- Mongolia is 18th largest country in the world with average altitude 1580 m, average monthly temperature dropping to -25 °C in winter months November to March
- With 1.565 million km, population of 3.2 m Mongolia is the most sparsely populated country.
- Rural sector, overwhelmingly pastoral:
- 12% of GDP, & 30% employment
- Livestock herding is major economic activity & social safety net for poor Mongolians

Major characteristics of the Mongolian extensive livestock industry:

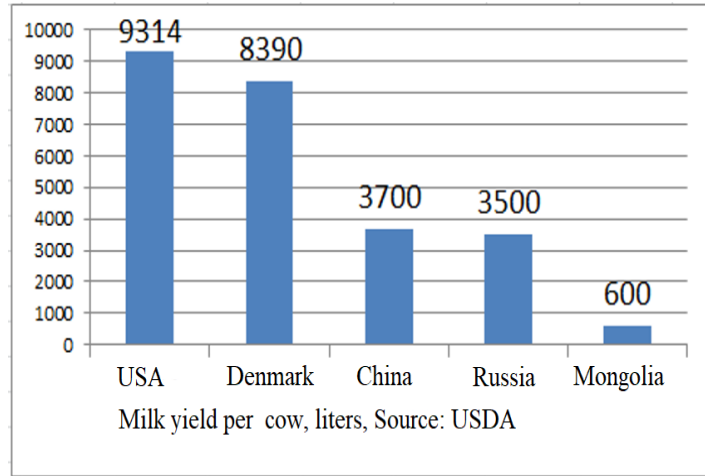
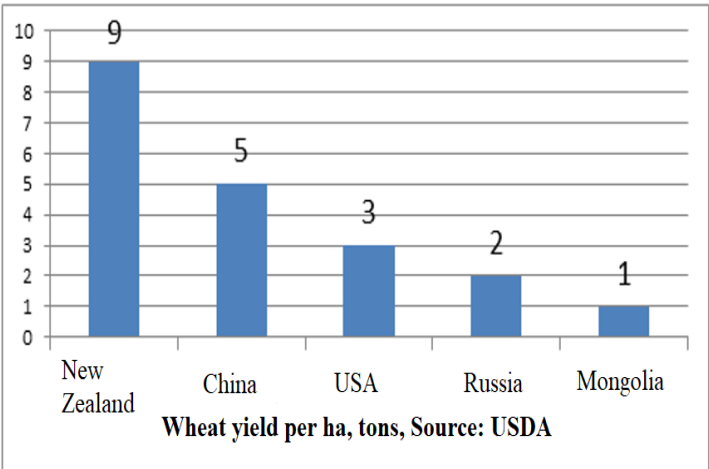
- Absolute dependence on a harsh and highly variable natural environment
- Resulting low and basically constant yield per animal over time
- Livestock gets over 95% of their feed from natural pastures, utilizing year around.



Agro-ecological conditions & resulting productivity

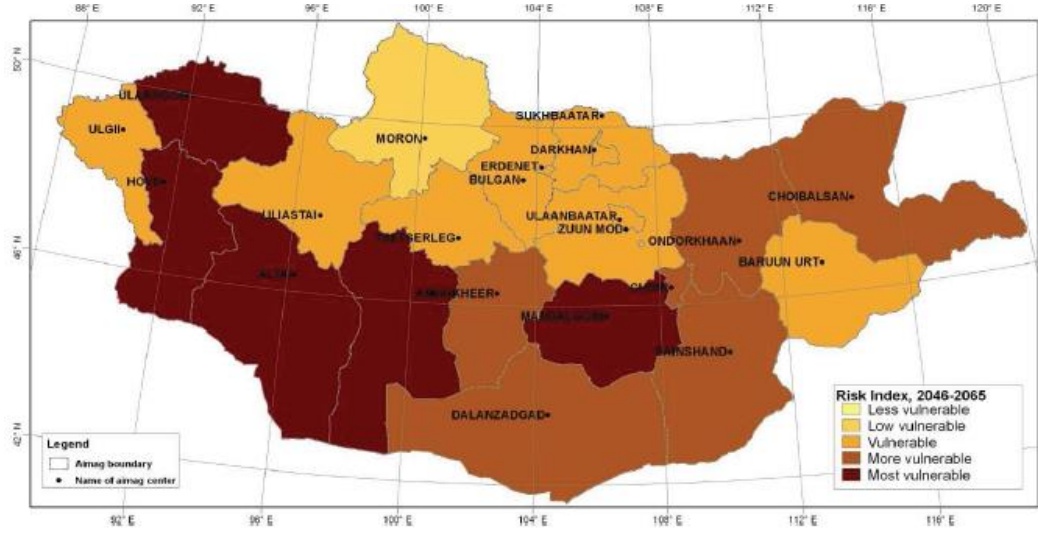
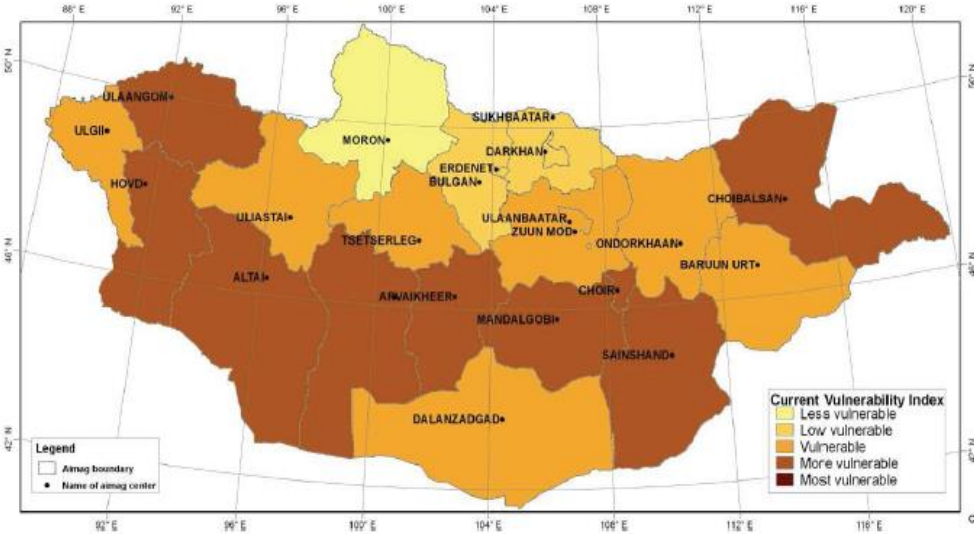


Source: FAO, GAEZ



How climate change affects agriculture

- Mongolia is one of countries hit hardest by climate change: temperature increased by 2.07C from 1940 to 2013, 3 times higher than the world average
- Climate change Increases frequency and severity of adverse weather events seriously impacts agricultural performance given poor coping capacity of agricultural smallholders.



Climate change vulnerability index, the current and 2050 scenario

Source: METD, Environmental state report, 2019

D&L estimate

First attempt- FAO LoA “Strengthening Disaster Damage and Loss (D&L) Information -Management in Agriculture” in 2019 supervised by Ms. Hang Thi Thanh Pham

- Historical agriculture D&L database 2005-2018 in line with FAO Methodology
- Review and diagnosis of the national agriculture D&L information management and reporting systems and recommendations
- Recommendations for the setting up of agriculture D&L information management system
- Recommendations for integrating agriculture D&L data into national Sendai Framework monitoring/reporting and for continued sharing of agriculture D&L data with NDMA.

Major risks accounted for:

Livestock

1. Drought-dzud (major winter disaster –combination of snow and extreme temperature making animals unable to graze and starve to death)
2. Trans-boundary disease
3. Livestock theft –not climate change related
4. Storm and wind

Crop:

1. Drought
2. Hail
3. Snow

Agriculture D&L estimate

Agriculture D&L broken down by disaster risks, MNT billion

Years	Total	Drought-dzud	TBD	Livestock theft	Hail	Snowfall (crop)	Fire	Lightning	Storms	Cold rain
2005	27.69	19.04	2.89	4.44	0.78	-	0.02	0.05	0.47	-
2006	20.09	11.6	2.48	4.85	1.1	-	0.01	0	0.05	-
2007	24.96	17.43	3.24	3.97	0.23	-	0.01	0	0.08	-
2008	79.32	68.44	5.05	-	1.85	-	0.02	0.48	3.48	-
2009	81.56	62.35	6.09	4.53	4.55	2.83	0	0.01	1.2	-
2010	615.05	596.69	10.56	5.92	1.63	-	0.02	-	0.23	-
2011	38.29	24.89	4.44	4.74	1.48	-	0.04	0	2.7	-
2012	28.09	18	5.16	4.83	0.1	-	-	-	-	-
2013	99.7	73.49	12.95	7.39	4.97	-	0.07	0.13	0.7	-
2014	41.08	16.26	11.11	10.8	2.27	-	0.03	0.02	0.59	-
2015	65.78	40.53	6.52	9.62	2.46	-	0.06	0.02	5.26	1.31
2016	150.4	116.5	6.38	10.65	16.71	-	0.01	0.02	0.13	-
2017	97.82	74.72	11.88	9.92	1.21	-	0.01	0	0.08	-
2018	320.84	283.33	11.32	18.72	3.65	2.11	0	0.01	1.7	-
Total	1690.67	1423.27	100.07	100.38	42.99	4.94	0.3	0.74	16.67	1.31
%	100	84.18	5.92	5.94	2.54	0.29	0.02	0.04	0.99	0.08

Source: CPR estimate based on NSO, MOFALI and NEMA data

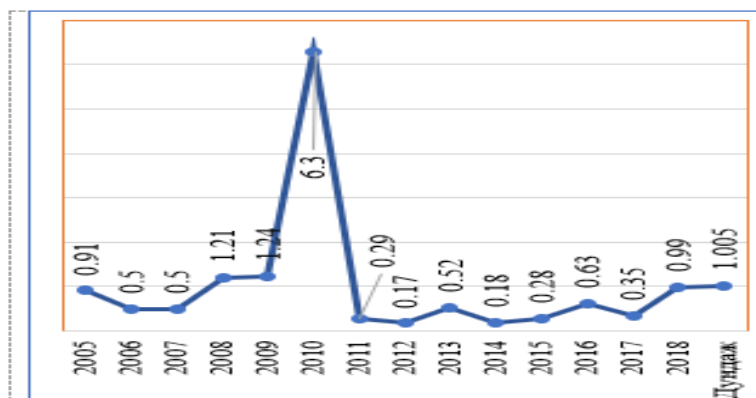


Figure 1 Share of Livestock D&L in GDP, %

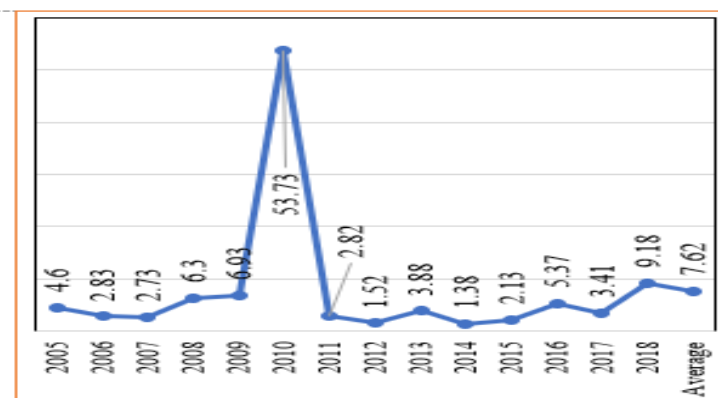


Figure 2 Share of Livestock D&L in Gross Agricultural Output, %

Source: CPR estimates based on data of MOFLA, NSO and NEMA

Key lessons learnt

- Key barrier to preparing and using adequate D&L estimates is the lack of clarities regarding roles and functions and coordination on agriculture D&L estimates among involved agencies like the Ministry of Food, Agriculture and Light Industry (MOFALI), National Emergency Management Authority (NEMA), National Statistics Office (NSO)
- As a result, no long-term historical data were aggregated, and subsequent D&L assessment was undertaken to inform relevant stakeholders including Sendai Framework
- Capacities and commitment of relevant organizations are low
- There is serious lack of data to estimate losses, while damage data are generally available. For example, no official data collected on livestock and crop losses resulting from dzud and drought

Recommendations

- MOFALI and NSO need work together to make sure that loss data required by the provided template be collected annually by soums and integrated at the aimag and national levels. This will make the required agriculture disaster damage and loss (D&L) information management system operational on a sustainable basis and Mongolia will be confident to inform the Sendai Framework with a full-set of data
- The project provided templates and methodologies to estimate D&L need to be incorporated into regular job descriptions and output contracts of relevant divisions and officials in charge of livestock and crop disaster risks in MOFALI
- MOFAL, NSO and NEMA agree on the tasks and roles to play in operationalizing and institutionalizing D&L
- Central government bodies work together to provide with training and other capacity building activities for their local branches on D&L
- In cooperation with donors /namely FAO/ and relevant central government body, MOFALI conduct annually a nationwide survey on productive parameters of all species of livestock throughout their productive cycle to generate reliable baseline data for D&L assessment
- Upgrade MOFALI's human and technical capacity to handle data and other information to enable successfully cooperate harmonically with other agencies: NSO, NEMA, METD
- Forestry loss data be collected and monitored by the Ministry of Environment and Tourism, where the key data and support information are stored.



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