FAO’S METHODOLOGY FOR DAMAGE & LOSS ASSESSMENT IN AGRICULTURE & SENDAI INDICATOR C2

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UN FAO Statistics Division

Sendai Framework Monitoring System Training Workshop for Partners
17 - 21 September, UN Campus, Bonn
FAO is working towards:

- Rolling out the **FAO D&L Assessment Methodology** as an innovative system to monitor the AG-sector on a regular basis
- Institutionalizing a **D&L information system** to collect, process, assess and report data on damage and loss from disasters on agriculture
- Developing national capacities to monitor **Sendai Framework Indicator C2 & SDG Indicator 1.5.2**
- Providing **technical support & capacity building** to countries in the implementation of the D&L methodology and information systems
- Generating greater **evidence for policy making** in DRR and DRM in agriculture

**FAO’s D&L METHODOLOGY**

Objectives
FAO’s D&L METHODOLOGY

Figure 1. Damage and loss in agriculture as share of total damage and loss in all sectors (2006-2016)

- Disaster damage in agriculture, share of total: 16%
- Disaster loss in agriculture, share of total: 31%
- Disaster damage and loss in agriculture, share of total: 23%

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FAO’s D&L METHODOLOGY

• **Lack of agriculture-specific methodology**: Detailed assessments of economic loss and damage are regularly carried out using different methodologies; when applied to agriculture, these often fail to capture the specificities of the sector & result in imprecise or under-estimated evaluations; **need for a precise methodology to consider all agricultural subsectors and their specificities**.

• **Need for universality and comparability**: Given the lack of a universal assessment methodology, disaster impact tends to be estimated based on variations of PDNA or ECLAC methodologies, making it impossible to compare results across countries or disasters (it is difficult to determine which methodology, criteria and parameters have been used and which elements of agricultural damage and loss have been considered).

• **Gap / Need for a standardised and holistic methodology** to suit different disaster events and in different country/regional contexts and to address the prevailing knowledge gap on disaster impact on the sector and provide a useful tool for assembling and interpreting existing information about both past and future events.

• **Sendai Framework and SDG Monitoring**: Need for an adequate methodology to capture all impacts of disasters in the sector, in the context of global resilience frameworks and targets.
FAO’s D&L METHODOLOGY

Sendai Framework for Disaster Risk Reduction

2015 - 2030
D&L METHODOLOGY FOR C2
background • definitions • components
**Damage VS Loss**

**Damage** is defined as the replacement/repair cost of totally or partially destroyed physical assets and stocks in the disaster-affected area.

**Loss** refers to changes in economic flows arising from the disaster (i.e. declines in output in crops, livestock, fisheries, aquaculture and forestry).

**Production VS Assets**

Each sub-sector is divided into two main components, namely **production** and **assets**. The production component measures both damage and loss from disaster on production inputs and outputs, while the assets component measures damage on facilities, machinery, tools, and key infrastructure related to agricultural production.
<table>
<thead>
<tr>
<th>Crops</th>
<th>Livestock</th>
<th>Fisheries</th>
<th>Forestry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Damage</td>
<td>Loss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-disaster value of destroyed stored production and inputs</td>
<td>Difference between expected and actual value of crop production</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Short-run post-disaster maintenance costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replacement or repair value of destroyed assets – machinery, equipment, tools</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

FAO's D&L METHODOLOGY

Damage vs Loss – Production vs Assets
### FAO’s D&L METHODOLOGY

<table>
<thead>
<tr>
<th>Sector</th>
<th>Component 1</th>
<th>+</th>
<th>Component 2</th>
<th>+</th>
<th>Component 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2-C (Crop)</td>
<td>Crop production damage</td>
<td></td>
<td>Crop production loss</td>
<td></td>
<td>Crop assets damage</td>
</tr>
<tr>
<td>C2-FO (Forestry)</td>
<td>Forest production damage</td>
<td></td>
<td>Forest production loss</td>
<td></td>
<td>Forest asset damage</td>
</tr>
<tr>
<td>C2-L (Livestock)</td>
<td>Livestock production damage</td>
<td></td>
<td>LS production loss</td>
<td></td>
<td>LS asset damage</td>
</tr>
<tr>
<td>C2-AQ (Aquaculture)</td>
<td>AQ production damage</td>
<td></td>
<td>AQ production loss</td>
<td></td>
<td>AQ asset damage</td>
</tr>
<tr>
<td>C2-FI (Fisheries)</td>
<td>Fishery production damage</td>
<td></td>
<td>Fishery production loss</td>
<td></td>
<td>Fishery asset damage</td>
</tr>
</tbody>
</table>
The methodology for Sendai Indicator C2 (developed by FAO) measures the value of direct production damage and loss from disasters in the ag-sectors, together with the value of damaged agricultural assets.

Also measures SDG indicator 1.5.2

Holistic representation of the agricultural sector:
- covers all subsectors
- covers all components of the FAO methodology: production loss + production damage + asset damage

**Indicator C-2** Direct agricultural loss from disasters

\[ C_2 = C_{2C} + C_{2L} + C_{2FO} + C_{2A} + C_{2FI} + C_{2La} + C_{2Lb} \]

- C-2C: Direct crop loss
- C-2L: Direct livestock loss
- C-2FO: Direct forestry loss
- C-2A: Direct aquaculture loss
- C-2FI: Direct fisheries loss
- C-2La: Direct damage to agricultural assets
- C-2Lb: Direct damage to stored inputs and outputs
The computation method proposed for indicator C-2 is used to assess the direct loss which occurs in the agricultural sector as a result of disasters and takes into consideration the specificities of each sub-sector, i.e. crops, livestock, forestry, aquaculture and fisheries.

This indicator aims to measure the direct effects of a broad range of disasters of different types, duration and severity. Moreover, it applies to disasters of various scales – from large-scale shocks to small and medium-scale events with a cumulative impact.

This indicator is calculated based on five sub-indicators:

- C-2C: Direct crop loss
- C-2L: Direct livestock loss
- C-2P0: Direct forestry loss
- C-2A: Direct aquaculture loss
- C-2FI: Direct fisheries loss

**Impact to Agriculture:** $C_1 = C-2C + C-2L + C-2P0 + C-2A + C-2FI$

Sub-indicator components:

- Production
- Productive assets

Each sub-sector is subdivided into two main sub-components, namely production and assets. The production sub-component measures loss from disaster on both production inputs and outputs, while the assets sub-component measures loss of facilities, machinery, tools, and key infrastructure related to agricultural production.

In order to capture the direct impact of disasters on agriculture, it is important to take into account both:

- Losses, that is, changes in economic flows arising directly from the disaster (i.e. reduction in output in crops, livestock, fisheries, aquaculture and forestry); and
- The replacement and/or recovery costs of totally or partially destroyed physical assets and stocks (stored inputs and production) in the disaster-affected area.

The table below describes the key elements of the methodology, including an indication of the items that should be considered in the assessment of each sub-sector, as well as the proposed calculation methods for assigning a monetary value to each component. For a detailed presentation of computation methods and sub-sector-relevant formulas, please refer to Annex 1.
**Production Damage**

- xxx tons of inputs (fertilizer, feed, forage, seeds, etc.)
- $$$ per unit of stored input
- xxx tonnes of stored production
- $$$ per ton of stored production

**Production Loss**

- xxx tons/ha of commodity – expected yield
- $$$ per ton of commodity
- xxx tons/ha of commodity – actual yield
- $$$ per ton of commodity
- Short-run post-disaster maintenance costs

**Asset Damage**

- xxx of asset (tractors, fishing gear, feeders, boats, cages, fish pens)
- $$$ per asset

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**Sample Data Requirements for calculating D&L in Crops: Best Case Scenario**

- FAO's D&L METHODOLOGY
Production Damage

Production Loss

Asset Damage

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

- Production Damage
  - XXX tons/ha of commodity – expected yield

- Production Loss
  - XXX tons/ha of commodity – actual yield
  - $$$ per ton of commodity
  - Short-run post-disaster maintenance costs

- Asset Damage
Disaggregation by crop / livestock type is key.
D&L METHODOLOGY
formulas • calculation • SFM
C2-C (Crop sector impact) = Crop production damage + Crop production loss + Crop assets loss (complete and partial)

- **Production damage - annual crops**
  - 1) Pre-disaster value of destroyed stored annual crops and inputs
  
  \[ PD (\text{Crops}) = \Delta Q \text{ inputs, stored} \cdot P_{t-1} + \Delta Q \text{ outputs, stored} \cdot P_{t-1} \]

- **Production loss - annual crops**
  - 1) Difference between expected and actual value of crop production in non-fully damaged harvested area
  - 2) Pre-disaster value of destroyed crops in fully-damaged areas (non-harvested)
  - 3) Short-run post-disaster maintenance costs
  
  \[ PL (\text{Crops}) = P_{t-1} \cdot \Delta Y \cdot HA + P_{t-1} \cdot Y \cdot \Delta HA + P_{\text{short-run}} \]

- **Asset damage**
  - 1) Pre-disaster value of partially or fully destroyed assets
  
  \[ AD (\text{Crops}) = Pt-1 \cdot \Delta Q \text{ (asset)} \]
**C2 in the SFM**

**GLOBAL TARGETS:** Reporting

**Target C**

**STATUS:** Not started

Reduce direct disaster economic loss in relation to gross domestic product (GDP) by 2030.

**C-1** Direct economic loss attributed to disasters

<table>
<thead>
<tr>
<th>Year</th>
<th>Monetary Value (LCU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
</tr>
</tbody>
</table>

**C-2** Direct agricultural loss attributed to disasters

- **Data entry options**
  - [ ] Enter money value & hectares manually
  - [ ] Enter hectares manually & monetary value to be calculated
  - [ ] Both values to be imported from National Disaster Loss Database

**C-3** Direct economic loss to all other damage/destroyed productive assets attributed

**C-4** Direct economic loss in the housing sector attributed to disasters

**GLOBAL REPORTING**
**C2 in the SFM**

**C2-C (Crop sector) =**

*Crop production damage +*

*Crop production loss +*

*Crop assets loss*

---

**C-2C** Loss of crops damaged or destroyed attributed to disasters

### Loss of crops

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MONETARY VALUE (LCU)</th>
<th>HECTARES</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>DAMAGED</td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Disaggregation (optional)**

- Agricultural Crops
- Hazards
- Geography
C2 in the SFM

C2-C (Crop sector) = 

- Crop production damage +
- Crop production loss +
- Crop assets loss

…with Disaggregation

### C-2C

Loss of crops damaged or destroyed attributed to disasters

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MONETARY VALUE (LCU)</th>
<th>HECTARES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
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</tr>
</tbody>
</table>

**Disaggregation (optional)**

#### Agricultural Crops

<table>
<thead>
<tr>
<th>#</th>
<th>AGRICULTURAL CROPS</th>
<th>YEAR</th>
<th>MONETARY VALUE (LCU)</th>
<th>HECTARES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TOTAL</td>
</tr>
<tr>
<td>1</td>
<td>Maize</td>
<td>2017</td>
<td></td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Soybeans</td>
<td>2017</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Rice, paddy</td>
<td>2017</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**C2-L (Livestock impact) = Livestock production damage + production loss + asset loss (complete and partial)**

- **Production damage**
  - 1) Pre-disaster value of stored inputs (feeds, fodder and forage) and stored livestock products destroyed by the disaster; 2) Pre-disaster net value of dead livestock (fish) (minus any obtained revenue from dead livestock sold)

\[
PD = \Delta Q \text{ inputs, stored} \cdot P_{t-1} + \Delta Q \text{ outputs, stored} \cdot P_{t-1} + (\Delta Q \cdot W) \cdot (P - \alpha \cdot P)
\]

- **Production loss**
  - 1) Difference between expected and actual value of production (of livestock and fish products) in disaster year; 2) Discounted present value of lost future production (until full recovery); 3) Short-run post-disaster maintenance costs

\[
PL = Q \cdot Pt-1 \cdot \Delta Y + P_{t-1} \cdot Y_{future} / (1+i)^n + P_{\text{short-run (lump-sum)}}
\]

- **Asset damage**
  - 1) Pre-disaster value of partially or fully destroyed assets

\[
AD = Pt-1 \cdot \Delta Q(\text{asset})
\]

**Any obtained revenue from dead livestock sold should be subtracted**
C2 in the SFM

C2-C (Livestock impact) =

Livestock production damage +

Livestock production loss +

Livestock assets loss

C-2L Loss of livestock lost attributed to disasters

Loss of livestock

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MONETARY VALUE (LCU)</th>
<th>ANIMALS AFFECTED</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>AFFECTED</td>
</tr>
<tr>
<td>2017</td>
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<td></td>
<td></td>
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<tr>
<td>2016</td>
<td></td>
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</tbody>
</table>

Disaggregation (optional)

Livestock

<table>
<thead>
<tr>
<th>#</th>
<th>LIVESTOCK</th>
<th>YEAR</th>
<th>MONETARY VALUE (LCU)</th>
<th>ANIMALS AFFECTED</th>
<th>UNIT PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TOTAL</td>
<td>DAMAGED</td>
</tr>
<tr>
<td>1</td>
<td>Cattle</td>
<td>2017</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>2016</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2</td>
<td>Buffaloes</td>
<td>2017</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>2017</td>
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</tr>
</tbody>
</table>
C2-FO (Forestry impact) = Forestry production damage + production loss + asset loss (complete and partial)

**Production damage**
- 1) Pre-disaster value of destroyed stored outputs and inputs; 2) Replacement value of fully damaged trees

\[ PD = \Delta Q_{\text{inputs, stored}} \cdot P_{t-1} + \Delta Q_{\text{outputs, stored}} \cdot P_{t-1} + \Delta HA \cdot H_{\text{(tree)}} \cdot P_{t-1} \]

**Production loss**
- 1) Difference between expected and actual value of production in non-fully damaged harvested area; 2) Pre-disaster value of fully destroyed forest products; 3) Discounted present value of lost future production (until full recovery)

\[ PL = P_{t-1} \cdot \Delta Y \cdot HA + P_{t-1} \cdot Y \cdot \Delta HA + P_{t-1} \cdot Y_{\text{future}} / (1+i)^n \]

**Asset damage**
- 1) Pre-disaster value of partially or fully destroyed assets

\[ AD = P_{t-1} \cdot \Delta Q_{\text{(asset)}} \]
C2-C (Forestry impact) =

- Forest production damage +
- Forest production loss +
- Forest assets loss

**C-2Fo** Loss of forests affected/destroyed by disasters

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MONETARY VALUE (LCU)</th>
<th>HECTARES</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>DAMAGED</td>
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<tr>
<td>2017</td>
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<td></td>
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<tr>
<td>2016</td>
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</tr>
</tbody>
</table>

**Disaggregation (optional)**

- Forestry
- Hazards
- Geography
C2-AQ (Aquaculture impact) = Aquaculture production damage + production loss + asset loss (complete and partial)

- **Production damage**
  - 1) Pre-disaster value of stored inputs and stored aquaculture products destroyed by the disaster
  
  \[ PD = \Delta Q_{inputs, stored} \cdot P_{t-1} + \Delta Q_{outputs, stored} \cdot P_{t-1} \]

- **Production loss**
  - 1) Difference between expected and actual value of aquaculture production in non-fully damaged aquaculture areas; 2) Pre-disaster value of aquaculture production lost in fully-damaged aquaculture areas; 3) Discounted present value of lost future production (until full recovery); 4) Short-run post-disaster maintenance costs
  
  \[ PD = \text{AREA} \cdot P_{t-1} \cdot \Delta Y + \Delta \text{AREA} \cdot P_{t-1} \cdot Y + P_{\text{short-run}} \]

- **Asset damage**
  - 1) Pre-disaster value of partially or fully destroyed assets (cages, cold stores, feeders)
  
  \[ AD = P_{t-1} \cdot \Delta Q_{(asset)} \]
C2 in the SFM

C2-C (Livestock impact) =

Livestock production damage +

Livestock production loss +

Livestock assets loss

C-2a Loss of aquaculture production area affected

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MONETARY VALUE (LCU)</th>
<th>HECTARES</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>DAMAGED</td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Disaggregation (optional)

- Aquaculture
- Hazards
- Geography
C2-FI (Fisheries impact) = Fisheries production damage + production loss + asset loss (complete and partial)

- **Production damage**
  - Pre-disaster value of stored inputs and stored capture destroyed by the disaster
  
  \[
  PD = \Delta Q_{\text{inputs, stored}} \cdot P_{t-1} + \Delta Q_{\text{outputs, stored}} \cdot P_{t-1}
  \]

- **Production loss**
  - Difference between expected and actual value of fisheries capture in disaster year
  
  \[
  PD = \text{AREA} \cdot P_{t-1} \cdot \Delta Y
  \]

- **Asset damage**
  - Pre-disaster value of assets used for fisheries partially or fully destroyed by disaster (vessels, fishing boats, tools, equipment, cold storage, etc.)
  
  \[
  AD = P_{t-1} \cdot \Delta Q(\text{asset})
  \]
C2 in the SFM

C2-C (Livestock impact) = Livestock production damage + Livestock production loss + Livestock assets loss

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MONETARY VALUE (LCU)</th>
<th>VESSELS/ASSETS</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>DAMAGED</td>
</tr>
<tr>
<td>2017</td>
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<tr>
<td>2016</td>
<td></td>
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</tr>
</tbody>
</table>

Disaggregation (optional)

- Fisheries
- Hazards
- Geography
C2 (all sectors) =

Crop / Livestock / Forest / Aquaculture / Fishery PRODUCTION DAMAGE +

Production loss +

Assets loss
C2 in the SFM

C2 (all sectors) =

Production damage +

Production loss +

Crop / Livestock / Forest / Aquaculture / Fishery

ASSET DAMAGE

C-2LA Loss of agricultural assets area affected

Loss of agricultural assets

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MONETARY VALUE (LCU)</th>
<th>ASSETS</th>
<th>SOURCE</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>DAMAGED</td>
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<tr>
<td>2017</td>
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<td></td>
<td></td>
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<tr>
<td>2016</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Disaggregation (optional)

Agricultural Assets

Hazards

Geography
C2 DISAGGREGATION in the SFM

### Disaggregation metadata: Livestock

The information only needs to be entered once and is used to calculate the loss of live (Target C-2L).

<table>
<thead>
<tr>
<th>LIVESTOCK</th>
<th>AVERAGE SIZE</th>
<th>ELEMENT UNIT</th>
<th>UNITS</th>
<th>NO. WORKERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffaloes</td>
<td>1</td>
<td>Animal</td>
<td>Units</td>
<td>0.05</td>
</tr>
<tr>
<td>Cattle</td>
<td>1</td>
<td>Animal</td>
<td>Units</td>
<td>0.05</td>
</tr>
<tr>
<td>Chickens</td>
<td>1</td>
<td>Animal</td>
<td>Units</td>
<td>0.02</td>
</tr>
<tr>
<td>Horses</td>
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<td>Animal</td>
<td>Units</td>
<td>0.05</td>
</tr>
<tr>
<td>Pigs</td>
<td>1</td>
<td>Animal</td>
<td>Units</td>
<td>0.05</td>
</tr>
</tbody>
</table>

[ADD MORE]

[SELECT LIVESTOCK] [DONE]
D&L METHODOLOGY
application • trainings
Assessment methodology developed by ECLAC in 1970s

Adapted for use by WB as DaLA

PDNA - common integrated approach that combines context, effects, impacts and recovery strategy (2008)

FAO's deepening of sectoral perspective - providing a compatible and complementary base for PDNA in agriculture
FAO’s D&L METHODOLOGY

**Context Analysis**
- Pre-Disaster context-baseline of social, economic, cultural, financial, political status

**Disaster Effect**
- Infrastructure and assets
- Production of goods and services
- Governance processes
- Increased risks

**Disaster Impact**
- Economic
- Human/social

**Recovery Needs**
- Includes BBB
- Includes DRR

**Recovery Strategy**

FAO D&L Methodology
**PDNA**

Focus on emergency response

- Provides quantification of impacts and effects after big disasters
- Focus both direct and indirect impacts
- Defines recovery and reconstruction needs of different sectors and population groups
- Identify the financial requirements for recovery and reconstruction
- Establish mechanisms of recovery planning
- Focus on recovery + DRR through Building Back Better (BBB)
- Mobilize the relevant financial, technical and human resources for recovery different sectors

**FAO’s D&L METHODOLOGY**

Focus on ag sector development and resilience

- Provides regular monitoring of agricultural sector damage and loss
- Targets ALL events that affect the agricultural sector, including silent and localized “disasters”
- Focus on direct impacts
- Provides a structure for a national information system on D&L (regular data collection, database upkeep, analysis and reporting)
- Provides baseline data
- Serves as evidence base for policy
- Serves to generate investment resources in ag resilience
Normal Condition:
D&L Methodology / regular data collection / database & D&L information systems

FAO’s D&L METHODOLOGY

DISASTER

Effect on governance and social processes

Effect on availability and access to goods and service

Effect on Livelihood
Case Study Trials – Philippines and Ethiopia

FAO’s D&L METHODOLOGY

Areas of food shortages

- Famine
- Emergency
- Crisis
- Refugees

10.7 million people in need of humanitarian assistance
25% of Somalia’s 7.5 million people are displaced

Food insecure populations:
- Ethiopia 4.56 million
- Somalia 3.7 million
- Kenya 2.4 million

Source: OCHA, Fews Net
Chile:
Following a D&L Assessment Training in 2017, the Ministry of Agriculture is currently piloting the D&L information system in the country.

Dominica:
Following Hurricane Maria, a combined training on PDNA + FAO D&L Methodology was conducted and a diagnostic report was produced on the insitutionalisation of a D&L information system.
Colombia & Peru:

A training was conducted on the institutional aspects of D&L assessment; a roadmap was produced by Government stakeholders and a pilot will be trialled in selected regions in both countries.
POTENTIAL SENDAI REPORTING FLOW IN A COUNTRY: MINISTRIES OF AGRICULTURE CAN HAVE A DIRECT REPORTING ROLE IN THE REPORTING SYSTEM!
THANK YOU