



Food and Agriculture
Organization of the
United Nations

Multiple Benefits , No Regrets

Leaving no one behind through DRR in
Agriculture



THE CRITICAL ROLE OF AGRICULTURE FOR DRR

A photograph showing two men wading through a flooded agricultural field. The water is murky and reaches up to their thighs. They are both wearing long-sleeved shirts and trousers. The man on the left is wearing a blue shirt and dark trousers, while the man on the right is wearing a reddish-brown shirt and dark trousers. They appear to be working in the field, possibly planting or tending to crops. The background shows a line of trees under a clear sky.

- Currently **2.5 billion people** worldwide depend on agriculture for their livelihoods. The majority of them are vulnerable **smallholders** who are often **left behind**.
- People dependent on agriculture are not only victims of disasters but also **integral to addressing risks**.
- Agriculture plays a critical role in ensuring that affected people **maintain access to food and livelihoods** during and after disasters.

THE IMPACT OF NATURAL HAZARD-INDUCED DISASTERS ON AGRICULTURE

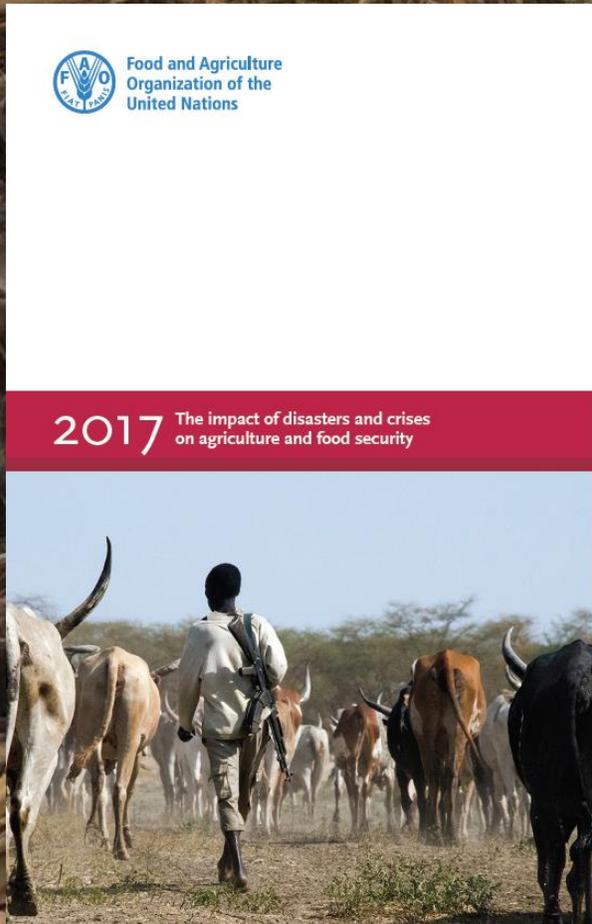
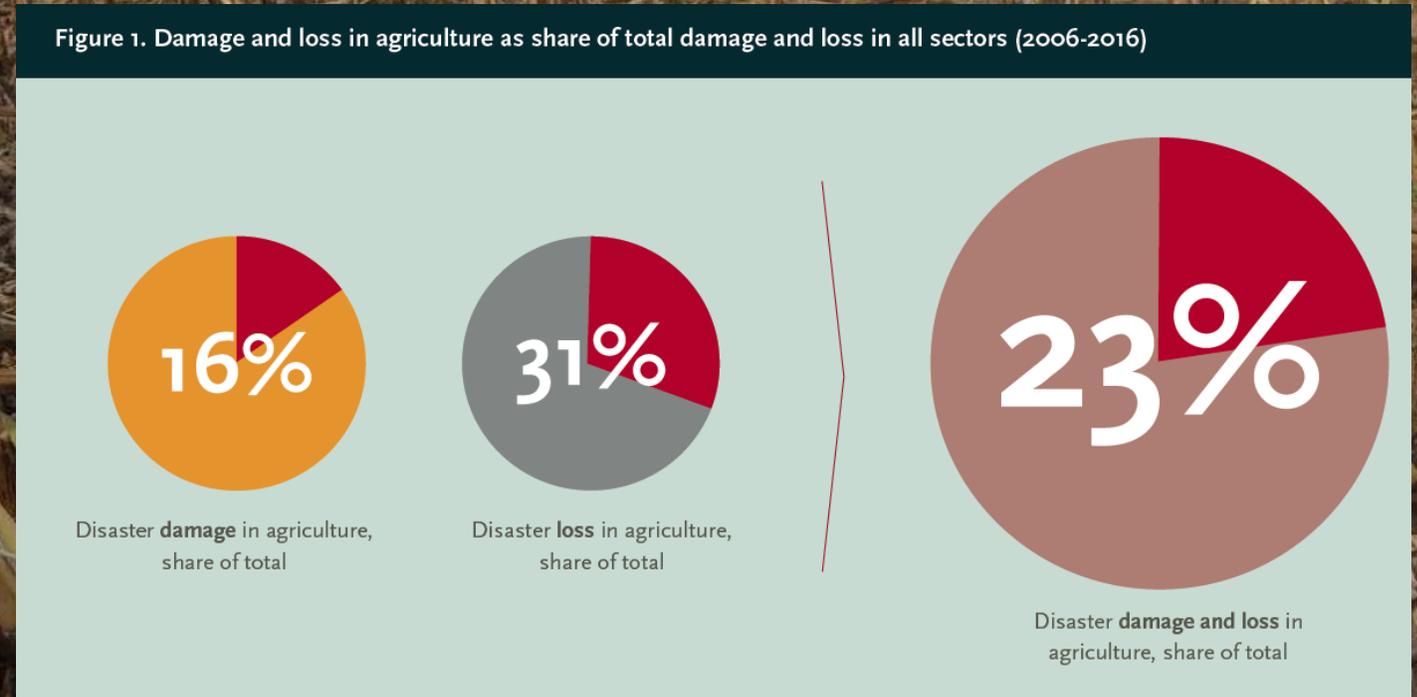
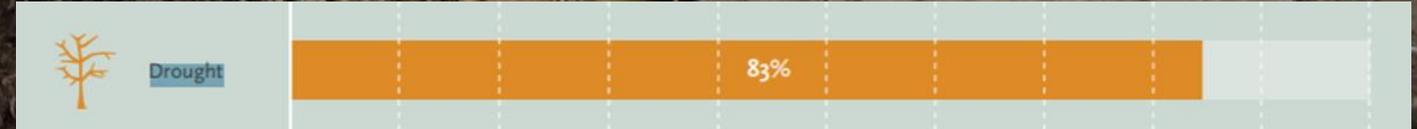


Figure 1. Damage and loss in agriculture as share of total damage and loss in all sectors (2006-2016)



Impacts of drought hit agriculture the most



MULTIPLE BENEFITS, NO REGRETS



Food and Agriculture
Organization of the
United Nations

Disaster risk reduction at farm level: Multiple benefits, no regrets

Results from cost-benefit analyses
conducted in a multi-country study, 2016-2018



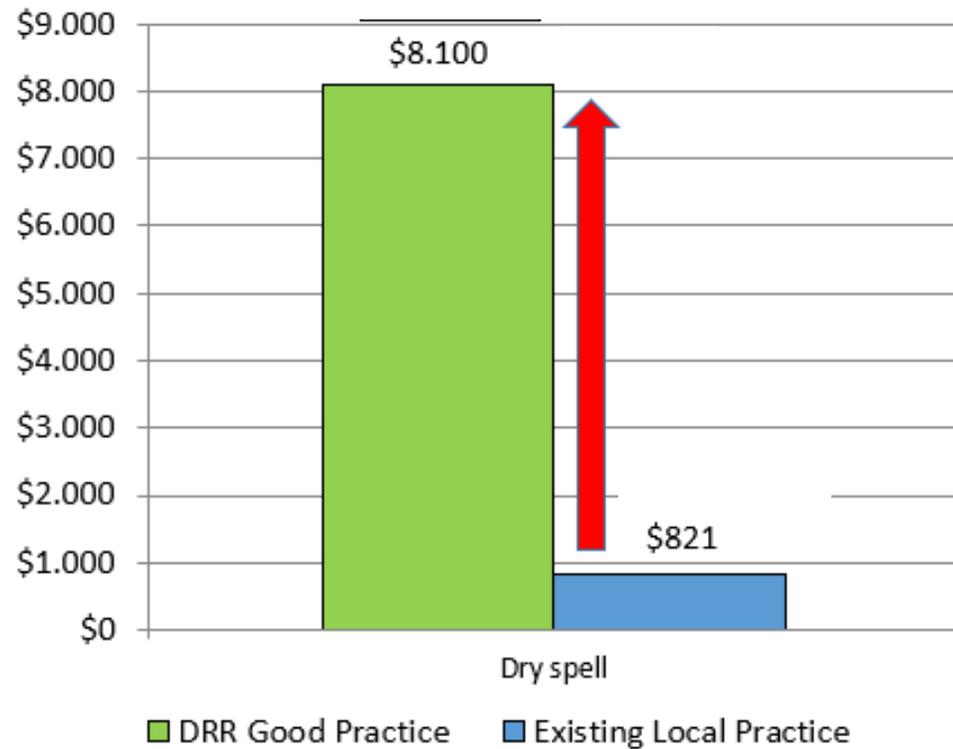
Agriculture offers cost-effective, sustainable solutions to reduce disaster risks and enhance resilience.

When farmers apply DRR practices, their returns are 2.2 x higher

UGANDA

Banana cultivation with mulching, contour trenches, organic composting and improved varieties

Cumulative net present value per acre over 11 years



PHILIPPINES

Upscaling of multi-stress tolerant Green Super Rice varieties in Bicol region

Difference in returns from rice production,
GSR upscaling vs previous practice scenario

	Low hazard frequency	Medium hazard frequency	High hazard frequency
Dry season	+ 25.1%	+ 26.7%	+ 71.2%
Rainy season	+ 29.5%	+ 28.6%	+ 41.6%

- Potential avoided disaster losses between an estimated USD 33 and USD 129 million per season
- GSR dissemination now incorporated by government into national rice commodity flagship programme, for upscaling.

FAO EARLY WARNING EARLY ACTION



The system consolidates existing vulnerability, forecast and agriculture-specific information to allow effective early warnings



Phased thresholds are established to trigger anticipatory actions



Early actions are disaster risk management interventions that protect and build on development efforts

EVIDENCE ON THE EFFECTIVENESS OF ACTING EARLY

For every USD 1 spent on interventions, households had a return of:

KENYA

3.5

RISK
Drought 2016/17

TRIGGERS
Below average rainfall forecast; unusual livestock movements.

EARLY ACTIONS
Livestock feed; drugs and vaccines.

MONGOLIA

7.1

RISK
'Dzud' 2017/18

TRIGGERS
Below average cereal production; heavy snowfall & extreme cold temperature forecast.

EARLY ACTIONS
Destocking; livestock feed; meat distribution in poor urban households

MADAGASCAR

2.5

RISK
Drought 2017/18

TRIGGERS
Consecutive poor harvests, below-average rainfall forecast, IPC projections.

EARLY ACTIONS
Short-cycle seeds, water equipment, micro-irrigation systems, crop diversification.

SUDAN

6.7

RISK
Drought 2017/18

TRIGGERS
Below-average rainfall forecast, unusual livestock movements, decrease in livestock prices.

EARLY ACTIONS
Livestock feed; drugs and vaccines.

LEAVING NO ONE BEHIND – SCALING UP DRR

- Disaster risk reduction good practices in agriculture are highly **context- and location-specific**. They must offer added value in **both hazard and non-hazard situations**.
- Prevention measures in agriculture are most in context of **high- to medium-frequency events – with limited or medium intensity**. These hazards do often not trigger higher level response while having strong impact on the most vulnerable. In those events the risk of leaving victims behind is huge.
- **Farm-level DRR** should be widely promoted and implemented at much larger scales. It **lies at the heart of sustainable development**, offering multiple opportunities for vulnerable families. We need to systematically enhance these good practices by including them into national/local DRR strategies and sectoral development strategies.