

What is it?

Recommendations for addressing the food security effects of El Nino events by adopting adaptation and mitigation activities

Why use it?

The consequences of the periodic warming of surface waters around the equator, referred to as El Nino, includes both droughts and heavy rains/flooding - leading to disruptions in agricultural production, livestock management and crop damage. This tool is designed to provide ideas for addressing these challenges.

How to use it?

As a general rule, diversification of crops and animal management will help mitigate against the effects of El Nino. However, the following are a few specific examples by thematic area to illustrate the addition of activities to strengthen resilience to possible El Nino-related impacts.

Storms/ Heavy Rains

- Connect with local weather forecasts and advisories
- Clear storm drains and field drainage and strengthen riverbanks to prevent inundation of fields
- Plant seed varieties with resistance or tolerance to heavy rains
- Ensure adequate spacing when planting crops so that each plant has more room to grow stronger root systems.
- Ensure animals have protected housing
- Vaccinate animals against rainy season diseases

Flooding

- Connect with local government early warning systems
- Conduct training on how to deal with flood disasters
- Connect with local government networks for available social protection for farmers, including insurance options or emergency food relief
- Flood-proof community water sources or provide alternative water sources for emergency situations
- Move stored grain and seed to a safe place
- Build flood barriers and strengthen riverbanks to prevent flooding of fields
- Plant flood-resistant varieties or alternative crops
- Relocate crops or change cropping patterns
- Secure animal housing or relocate animals to a safe place

Landslides

- Plant trees on hillsides to stabilize slopes
- Promote erosion control and soil protection through trees, managing natural regeneration of land, and use of cover crops
- Improve soil water retention through use of compost and tree planting
- Dig storm drains to carry away rainwater from slopes
- Secure animal housing or relocate animals to a safe place

Drought

- Connect with local government networks for available social protection for farmers, including insurance options or emergency food relief
- Conduct training with farmers on how to deal with drought

- Plant drought-resistant crop types or crop varieties such as millet, sorghum, cassava or drought-tolerant legumes
- Improve soil water retention through use of compost, fertilizers and crop rotations
- Improve soil water retention through increasing tree cover through Farmer-Managed Natural Regeneration and tree planting
- Conduct community watershed level analysis to create maps and plans for improving management of runoff at a larger scale
- Adopt conservation or lower tillage farming methods to conserve available rainwater and increase yields
- Increase amount of crop residue left on fields, reduce burning of residues and grasses, and protect fields with hedging or fencing
- Dig in-field planting pits to optimize rainwater collection
- Develop water retention pond systems or natural reservoir systems
- Construct small-scale irrigation systems, build boreholes or deepen wells
- Collect water and animal fodder in advance when possible
- Negotiate animal grazing management at a community-level before drought conditions develop and incorporate planting of fodder trees where possible
- Choose drought-tolerant/local animal breeds for management

This tool was developed and field-tested in: Burundi, Tanzania, Liberia, Zimbabwe, Nicaragua and India

Where to go from here? Tool 9: Prioritizing Activities
Tool 16: Risk Reduction (for integrating into development programs)

References:

- Venton P and Hansford R (2006) *ROOTS 9: Reducing risk of disaster in our communities*, Tearfund
- FAO (2014) *Understanding the drought impact of El Nino on the global agricultural areas*, Rome
- FAO (2016) *2015-2016 El Nino: Early action and response for agriculture, food security and nutrition; Update #5*