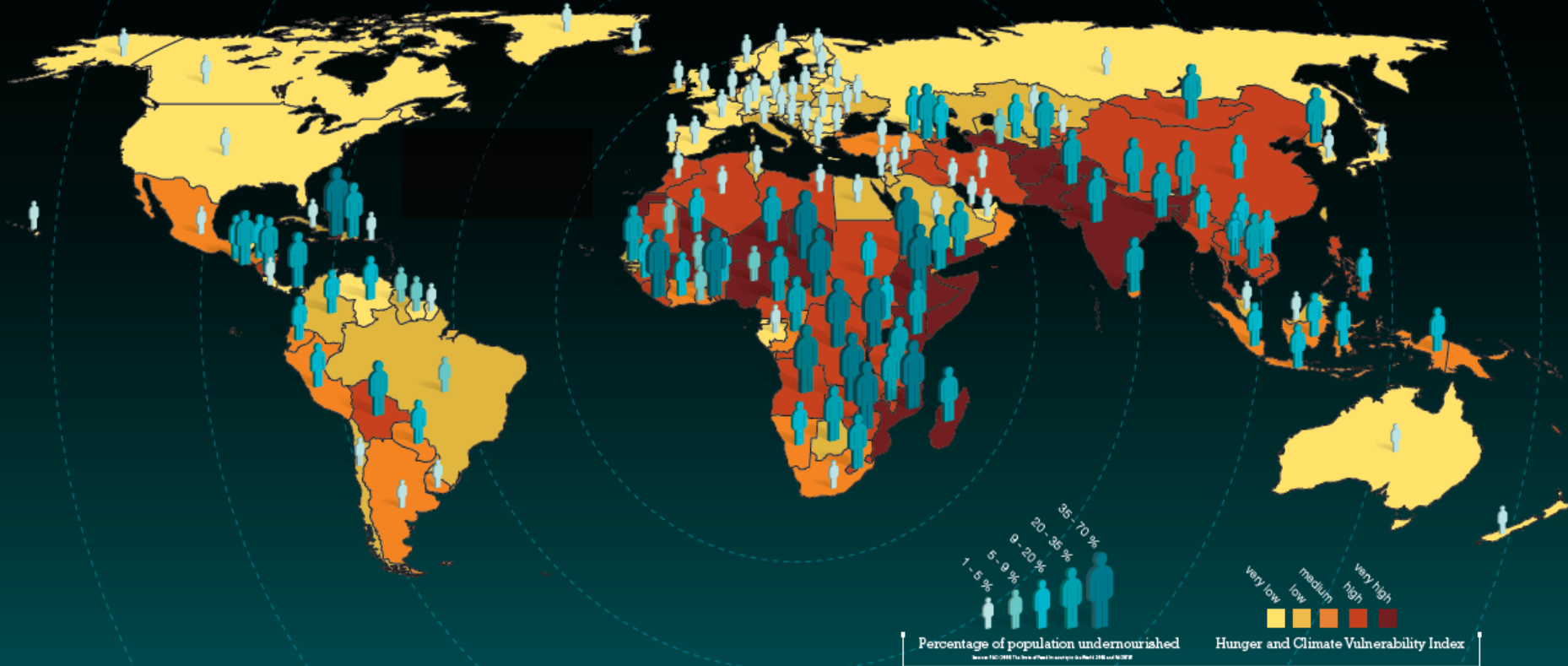


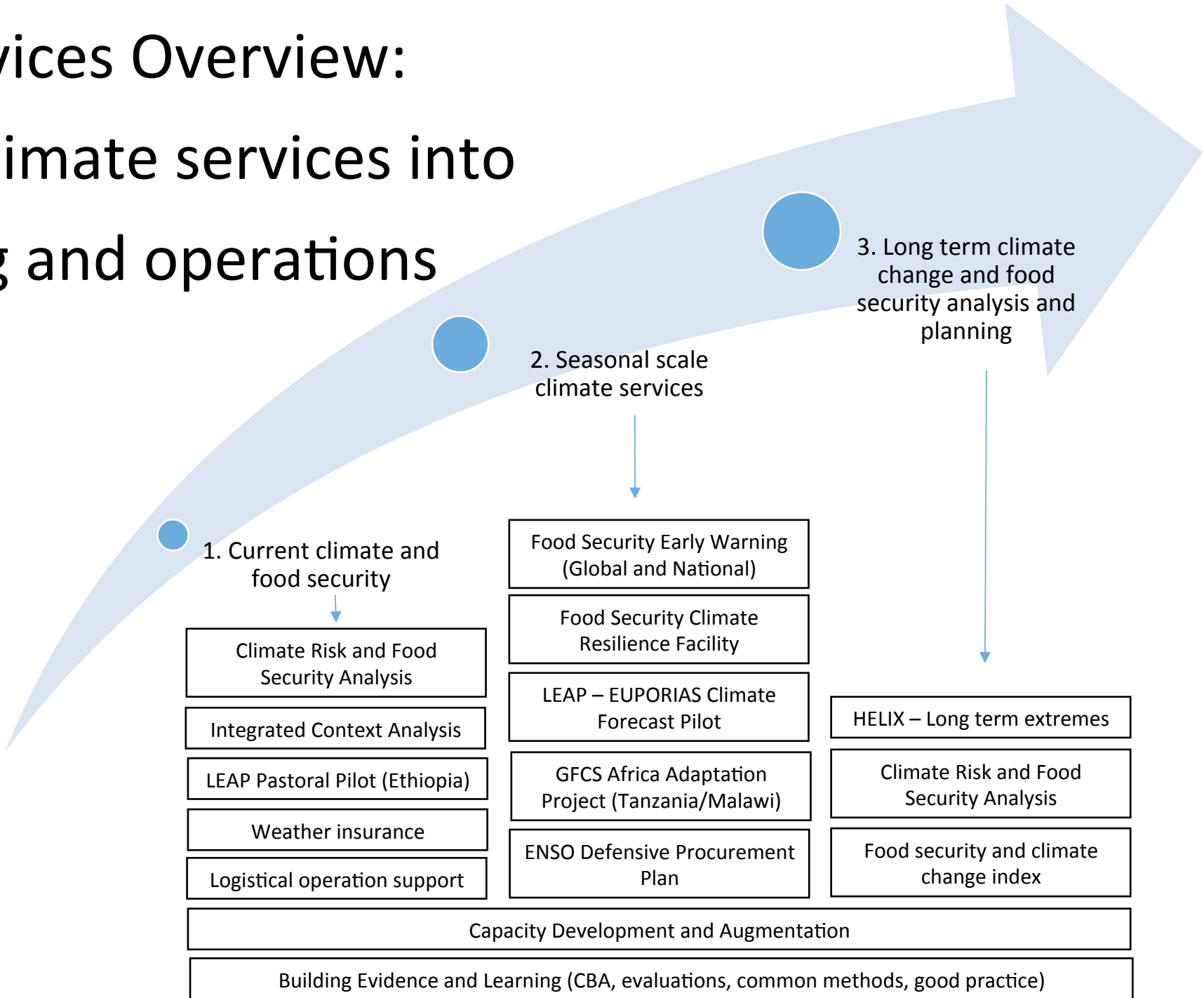
Food insecurity and climate change



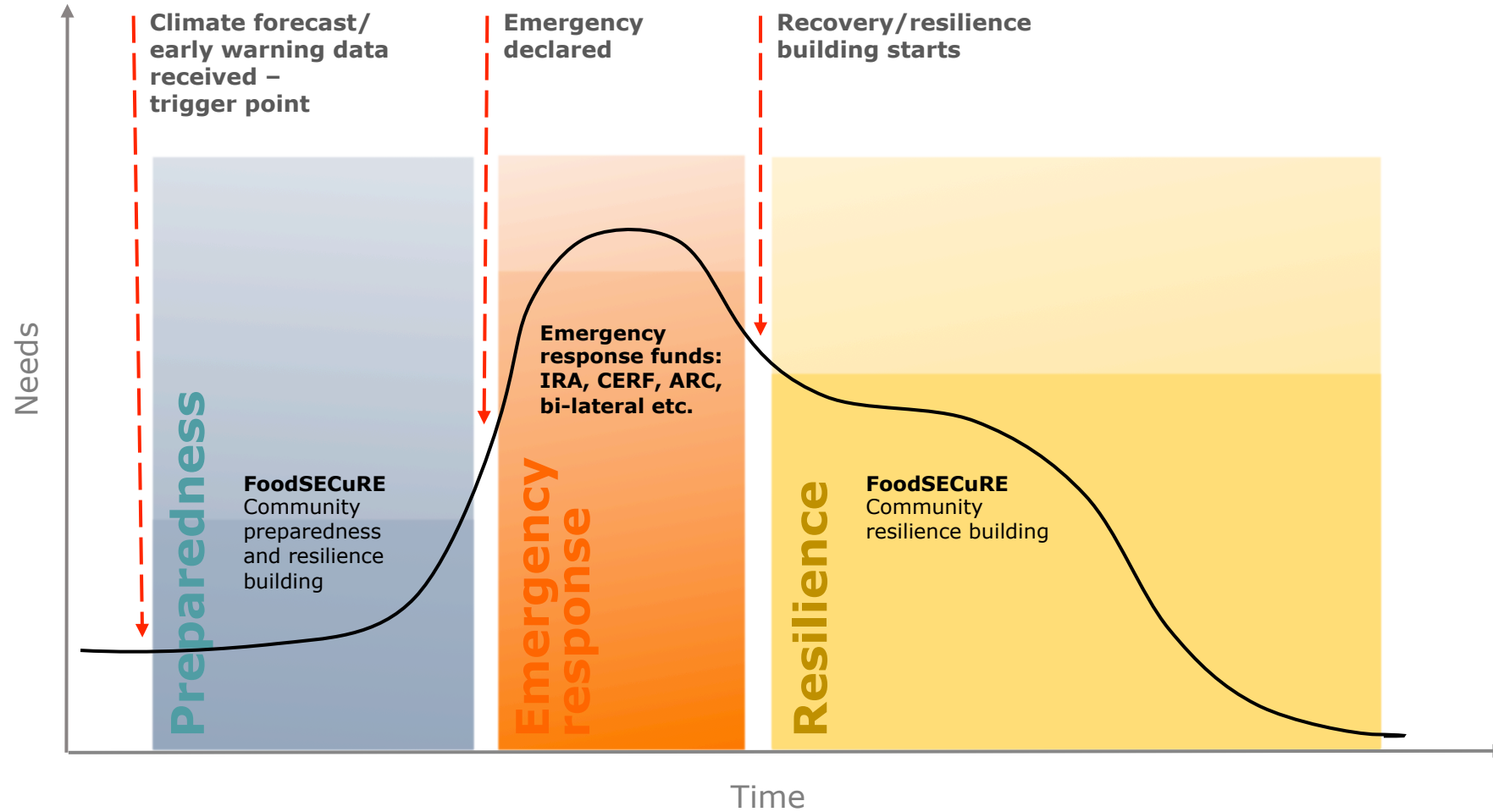
Integrating climate services into food security and disaster management operations

Richard, Choularton, Chief, Climate Resilience for Food Security, United Nations World Food Programme

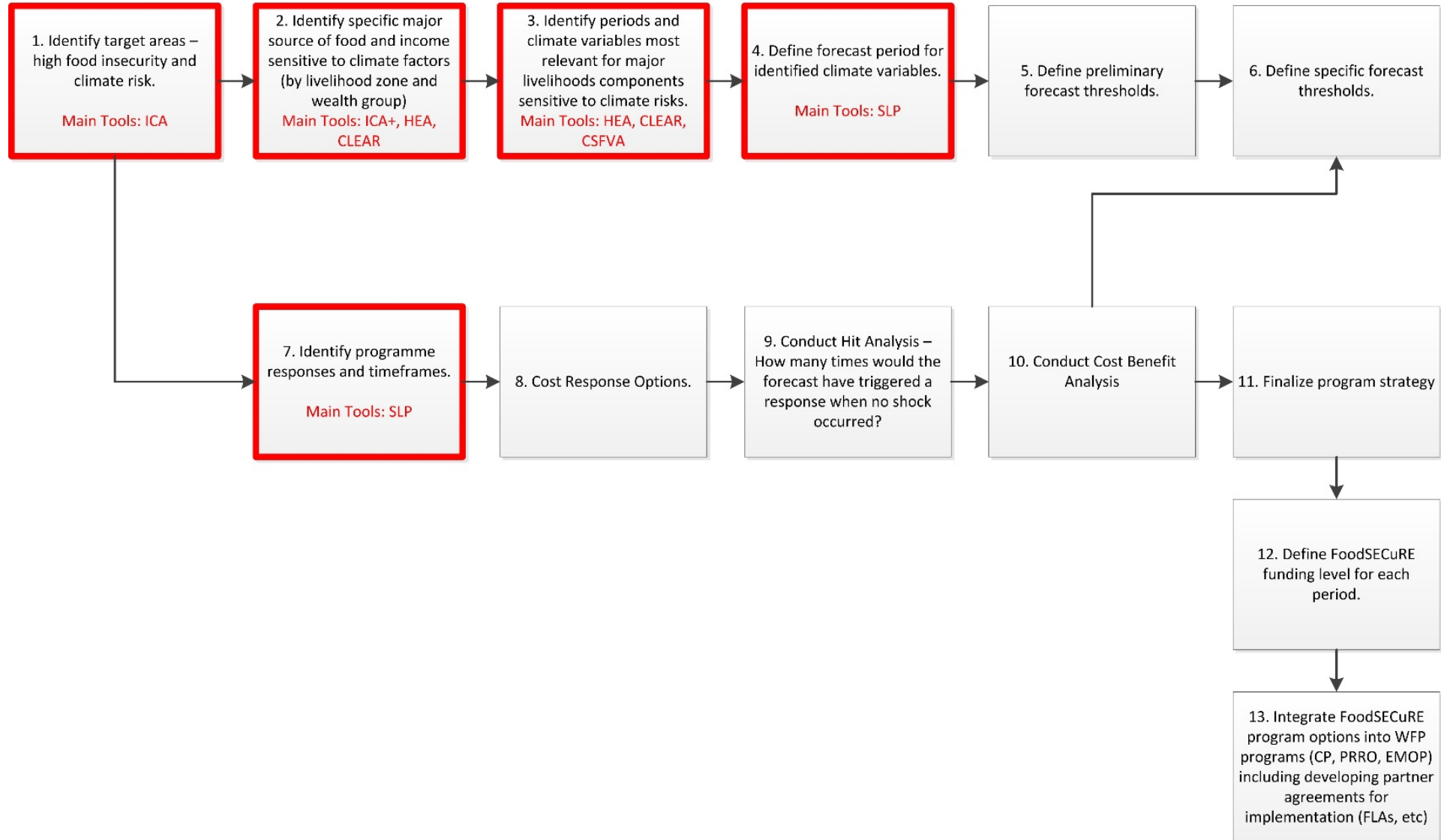
WFP Climate Services Overview: Mainstreaming climate services into analysis, planning and operations



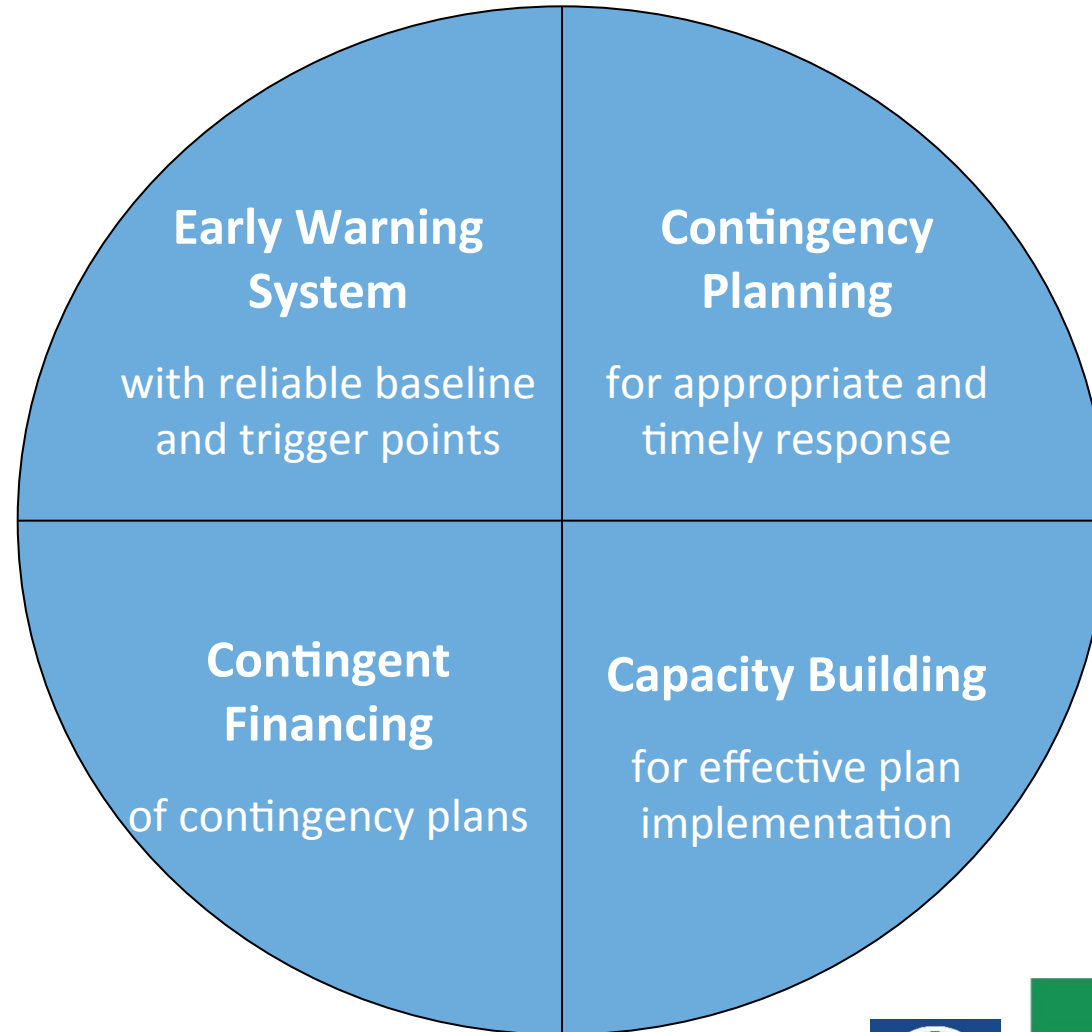
FoodSECuRE Food Security Climate Resilience Facility



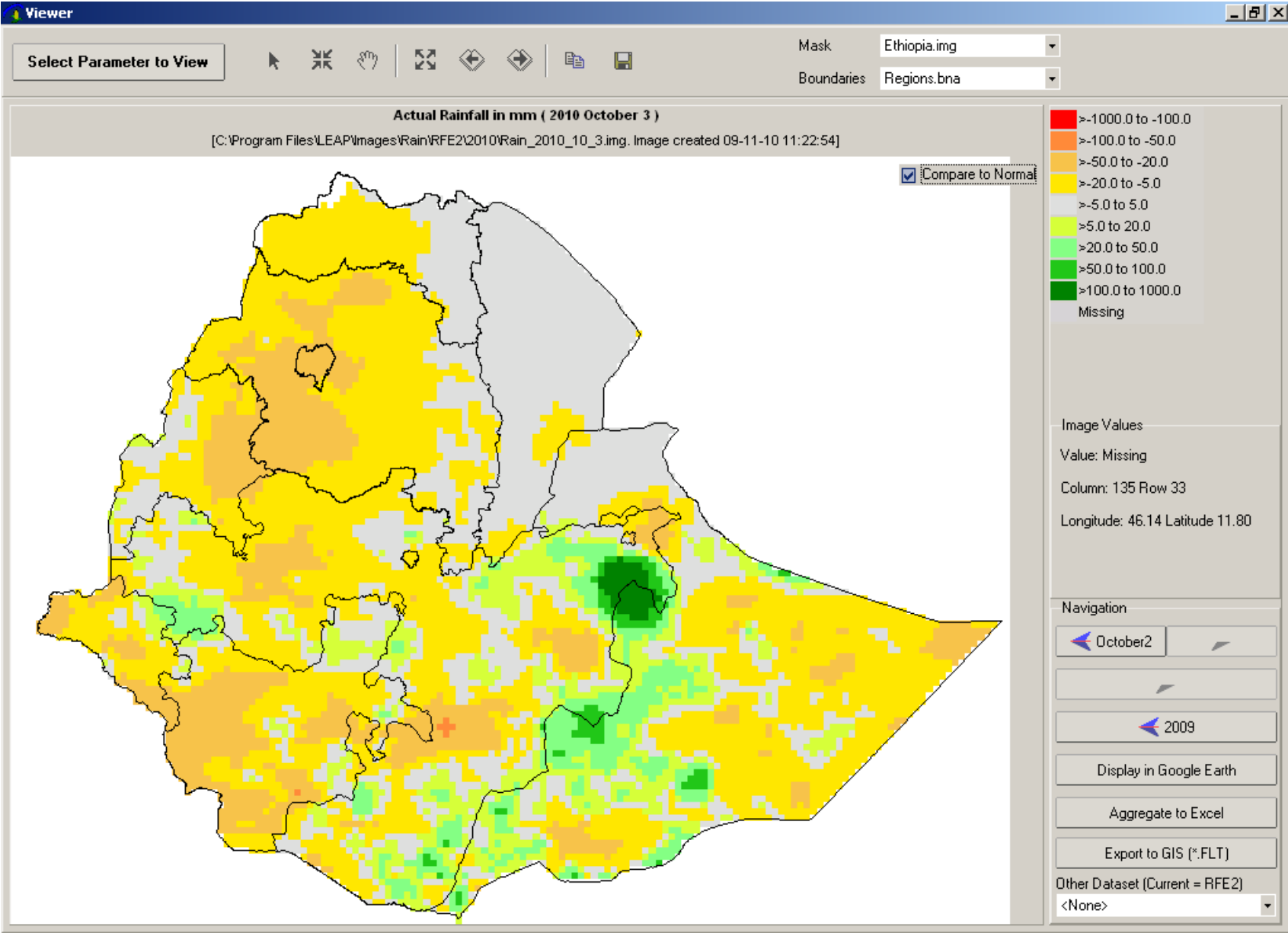
FoodSECuRE Food Security Climate Resilience Facility



Ethiopia's Disaster Risk Management Framework

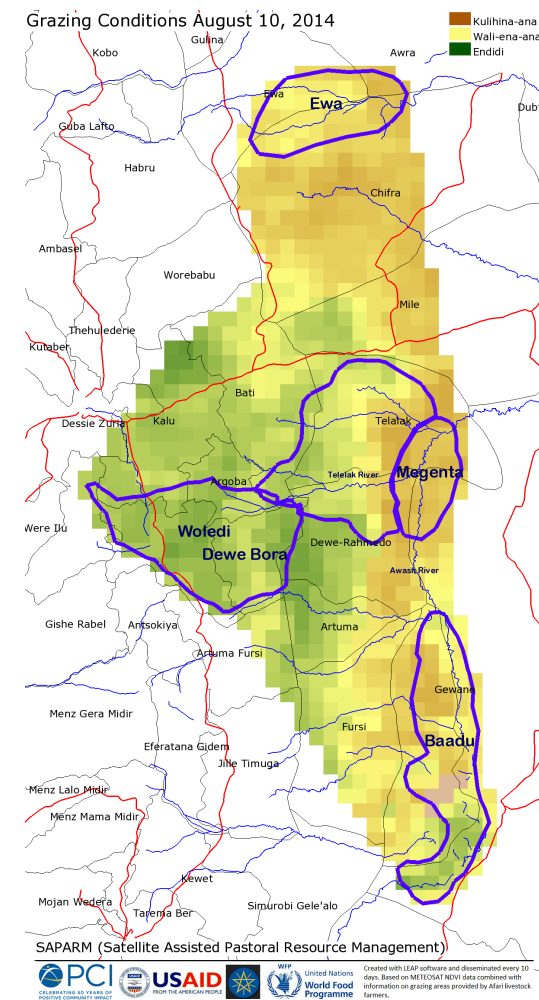


LEAP Early Warning System



Ethiopia: Pastoral Climate Services Pilot

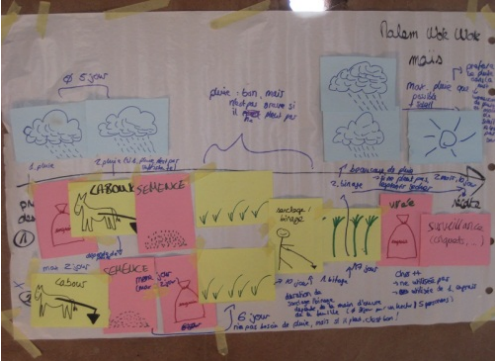
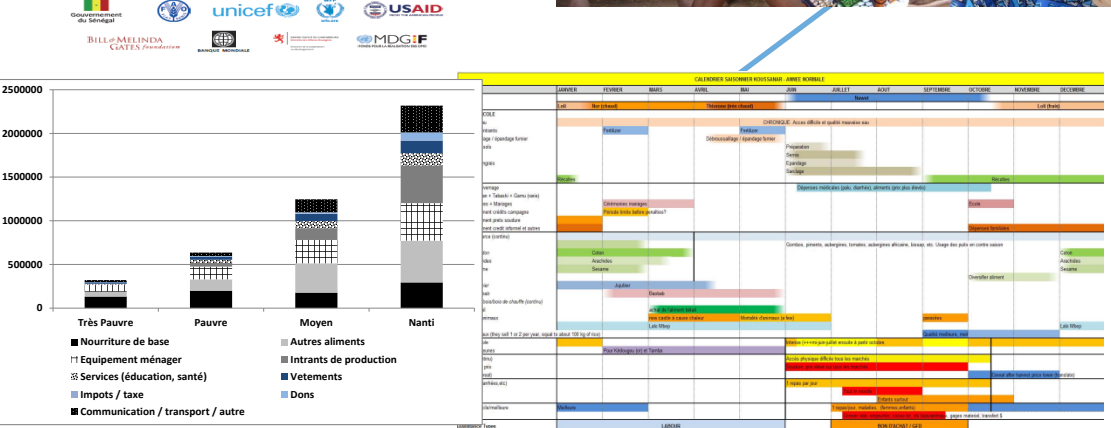
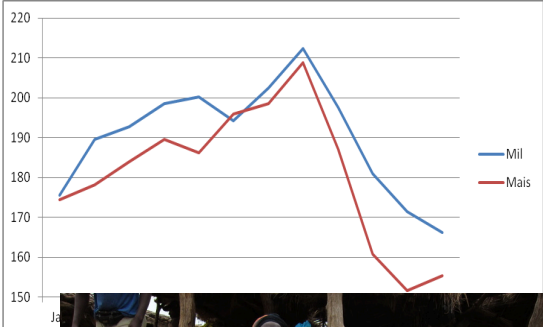
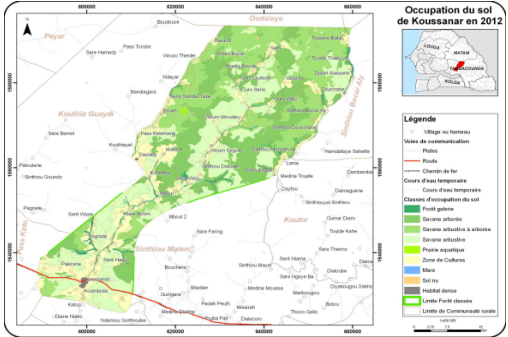
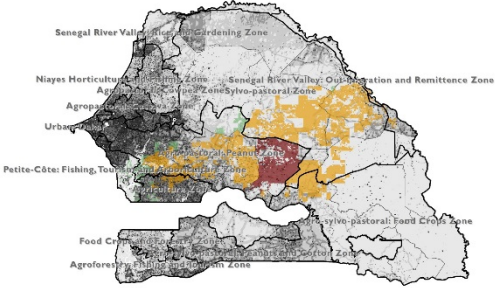
- NDVI provided to pastoral communities overlaid on community grazing areas
- Pastoralists use it to decide where to send scouts and animals.
- Herd mortality rates dropped by almost half (47%)
- Over \$8 million USD less in losses compared to previous years



Climate services in program design & adaption planning

- Mali
- Senegal
- Nepal
- Ethiopia
- Sri Lanka
- Cambodia
- Philippines
- Kyrgyzstan
- South Sudan
- Uganda
- Sudan

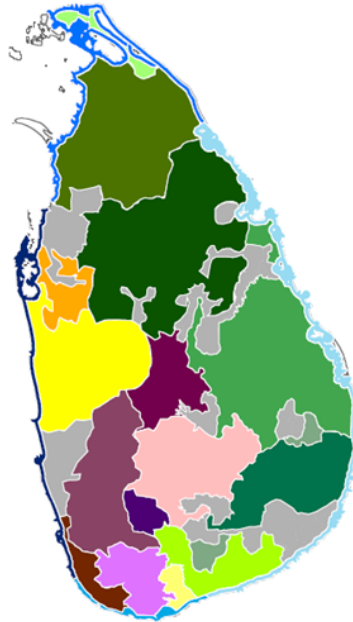
- Middle East Regional
- Asia Regional
- East Africa Regional
- Andes Regional



CLEAR: livelihoods and resilience analysis in Sri Lanka

LIVELIHOOD ZONES MAP

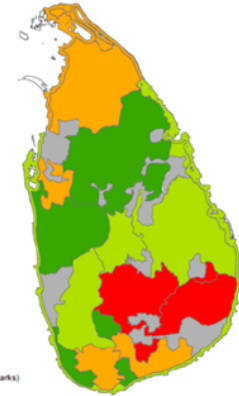
- Livelihood zone
- Jaffna mixed agriculture
 - Eastern irrigated farming & livestock
 - Gem mining
 - Northwestern livestock & paddy
 - Coconut and agriculture triangle
 - Mixed farming and cinnamon
 - Northern mixed agriculture & palmyra plantation
 - Mahaweli mixed farming & livestock
 - Southern rainfed paddy farming & OFC
 - Small scale agriculture with dense fruit farming
 - Small scale tea plantation
 - Southern coconut & mixed agriculture
 - Sugarcane
 - Small scale tea & minor export cropping
 - Mixed perennial plantation (tea & rubber)
 - Upcountry tea estates
 - Southern coastal tourism and fishing
 - Eastern fishing
 - Northern shore fishing
 - Western fishing
 - Not mapped (urban or national parks)



RELATIVE FOOD SECURITY

Higher food insecurity in tea estates, rainfed paddy zone, and northern areas.

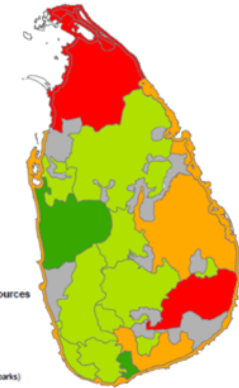
- Relative food security
- Chronically food insecure
 - Seasonally food insecure
 - Food insecure in a bad year
 - Generally food secure
 - Not mapped (urban or national parks)



CLIMATE-SENSITIVITY OF INCOME

Incomes are generally quite climate-sensitive, especially in northern areas, and along the eastern parts of the country.

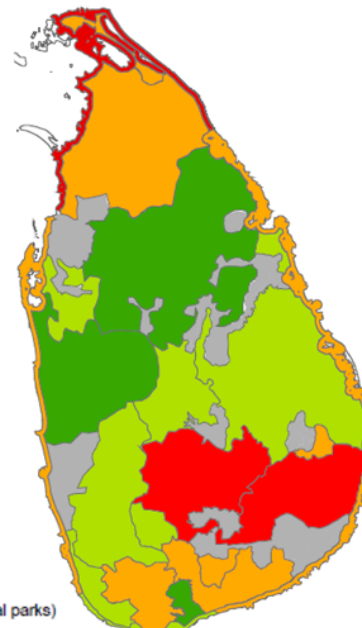
- Climate-sensitivity of income sources
- Highly sensitive income
 - Moderate climate-sensitivity
 - Low climate-sensitivity
 - Non-sensitive income
 - Not mapped (urban or national parks)



OVERALL RESILIENCE

Resilience, based on the overall food security situation, livelihood diversity, and climate-sensitivity of incomes.

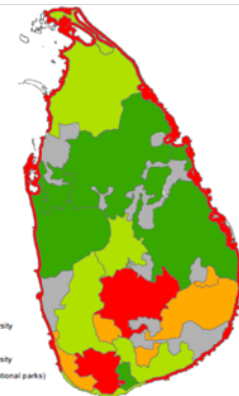
- Poor resilience
- Low resilience
- Moderate resilience
- Higher resilience
- Not mapped (urban or national parks)



LIVELIHOOD DIVERSITY

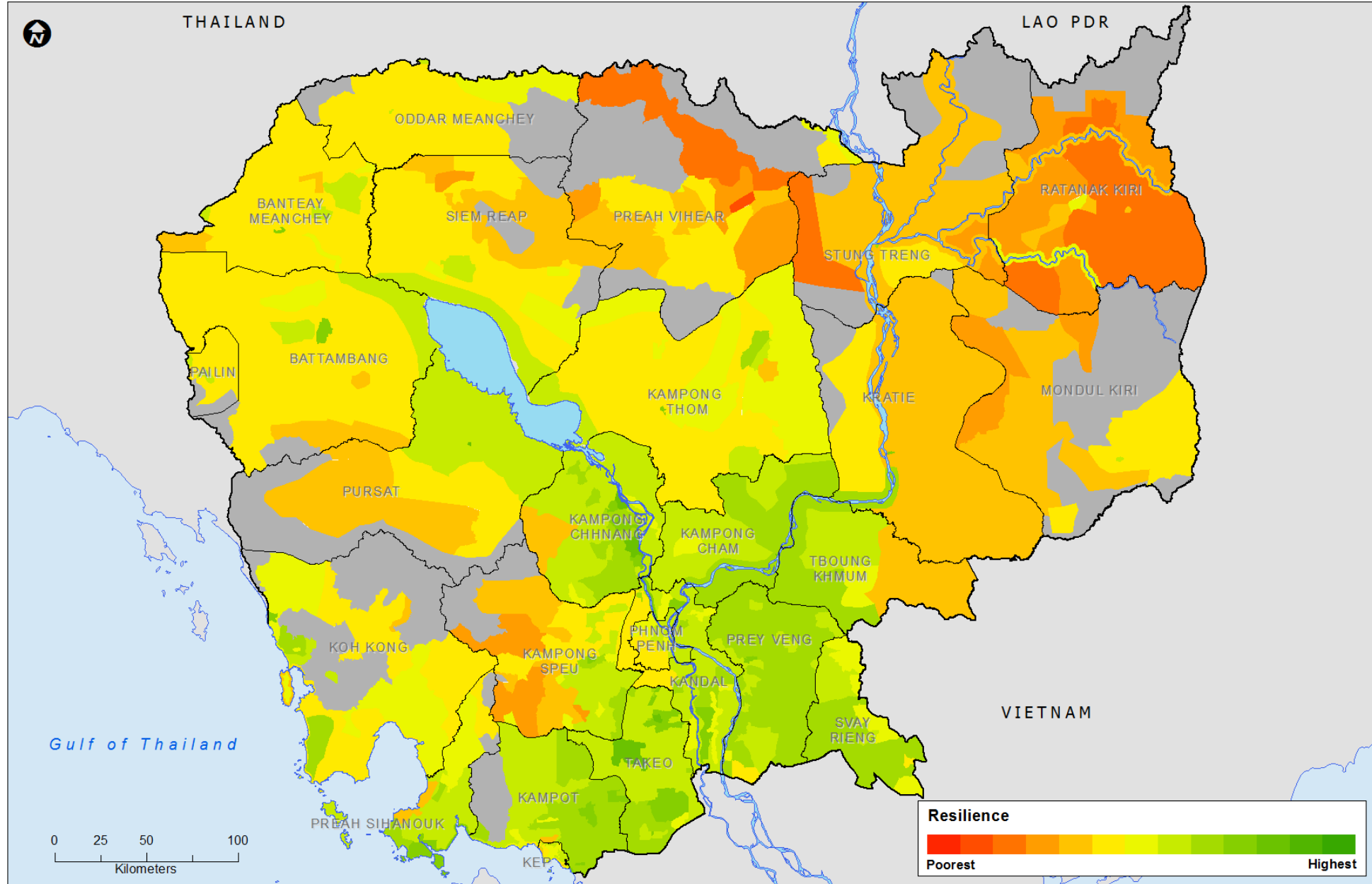
Diversity of livelihood activities: the poorest people in tea estates and coastal areas do not have diversified livelihoods

- Livelihood diversity
- Low livelihood diversity
 - Moderate livelihood diversity
 - High livelihood diversity
 - Very high livelihood diversity
 - Not mapped (urban or national parks)



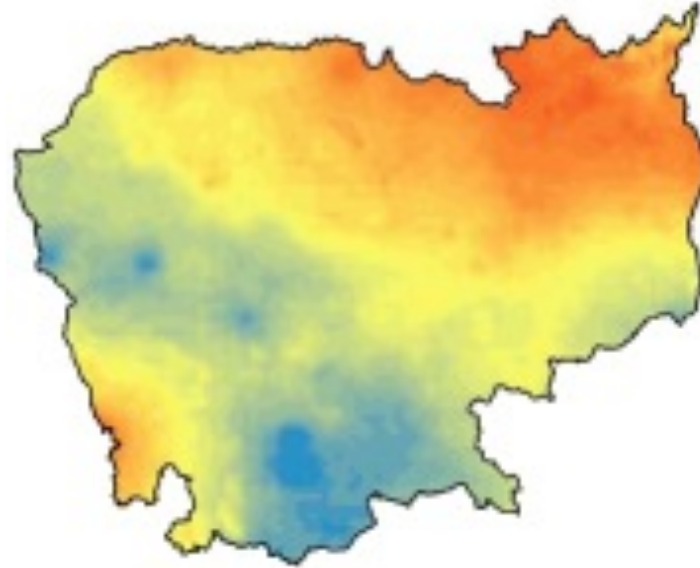
Livelihood Resilience in Cambodia

CLEAR:
resilience analysis in
Cambodia

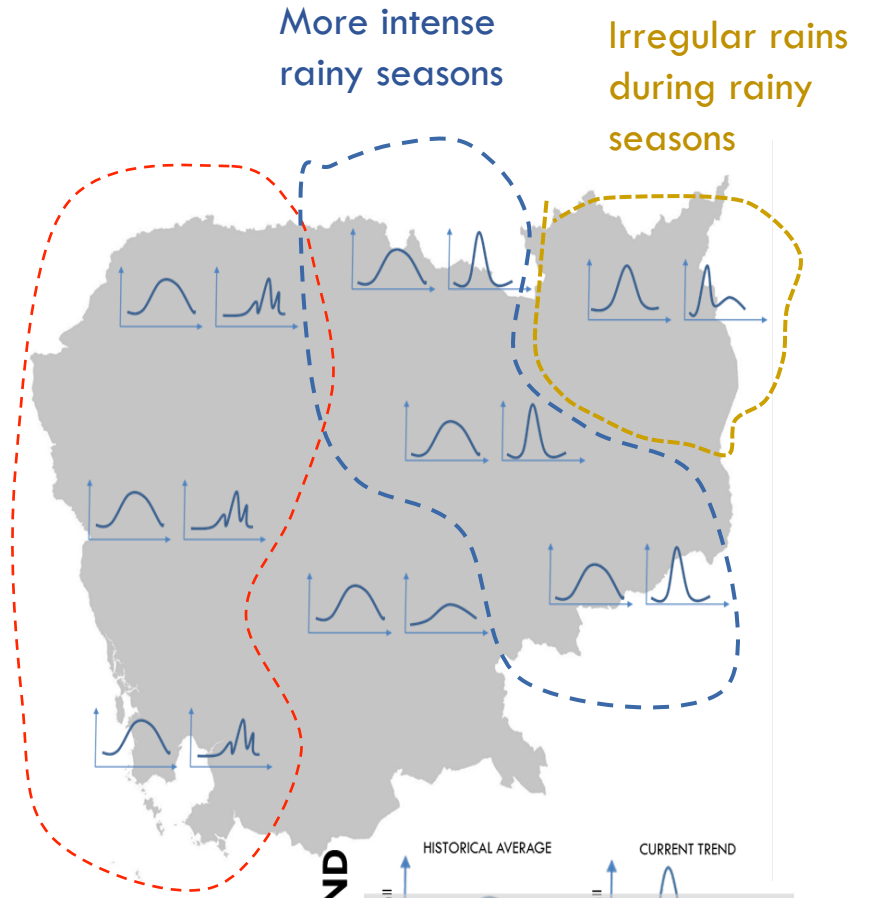
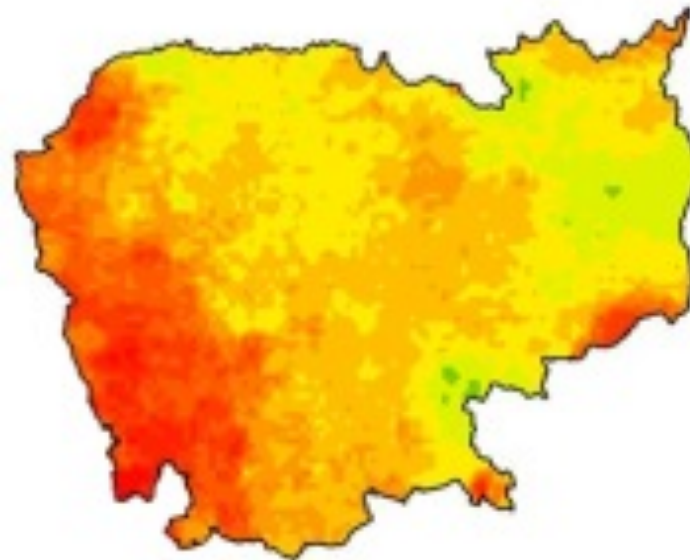


CLEAR:
climate scenarios

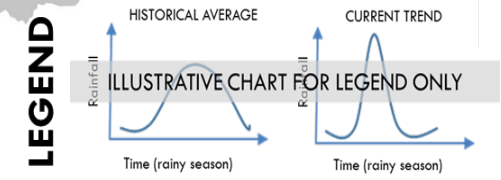
Changes in uniformity of rainfall



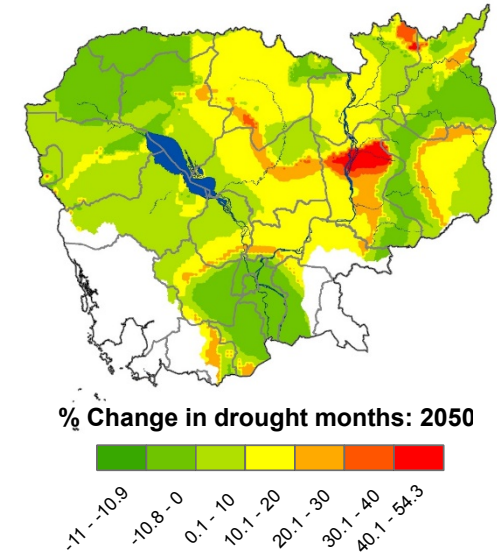
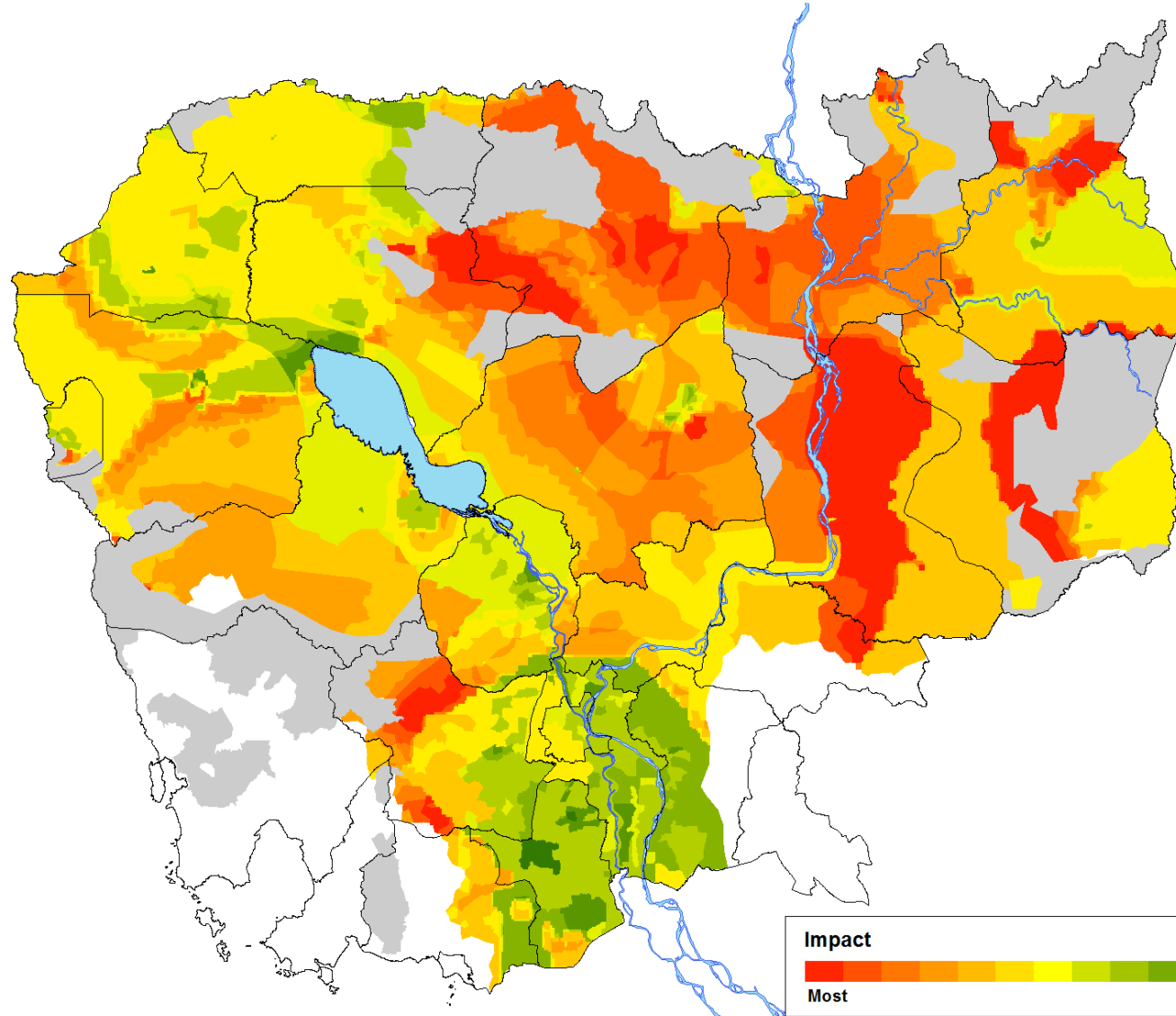
Changes in onset of rainy season



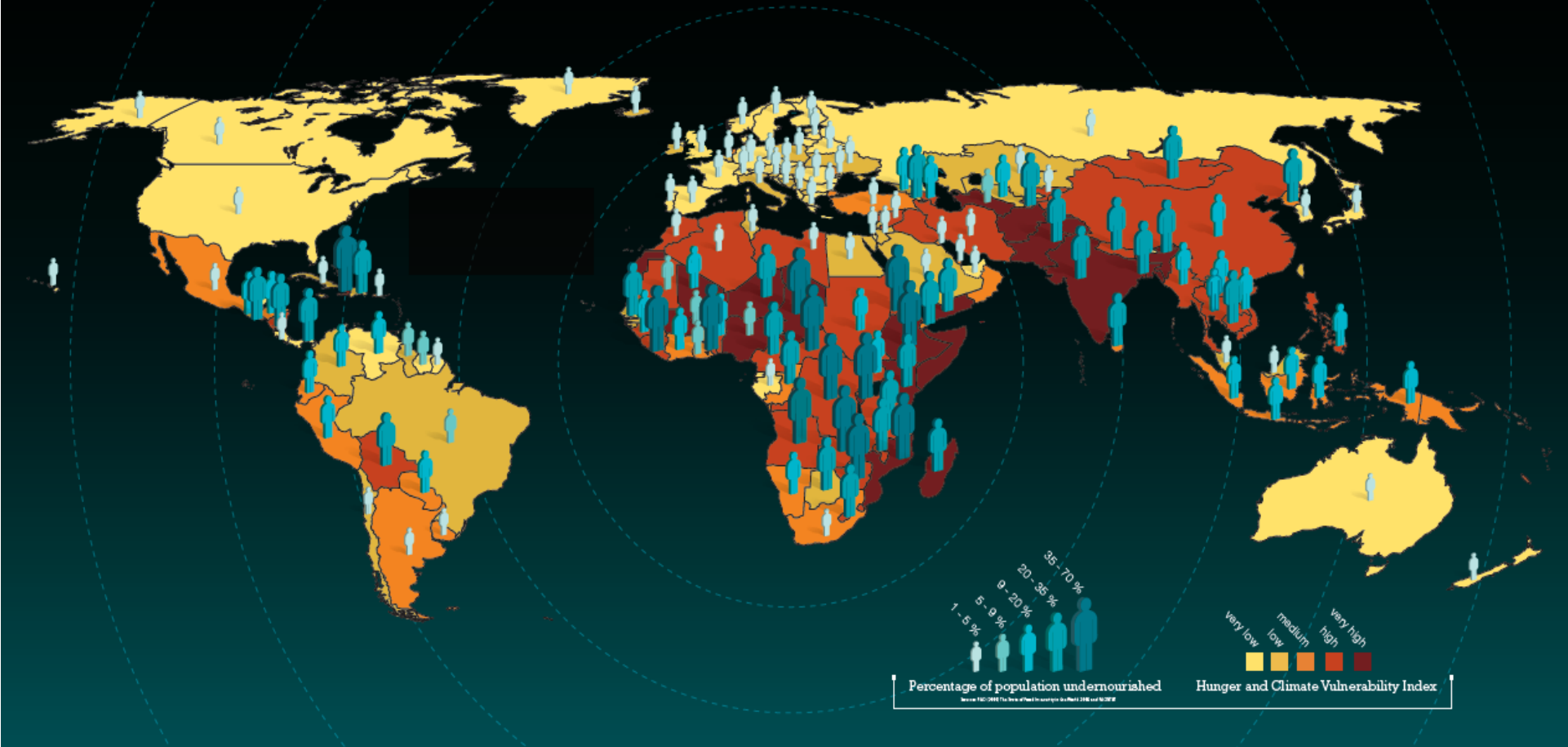
Longer dry season / more irregular rains during wet season



CLEAR:
Livelihood zones likely to experience highest impact from increased drought risks



Food insecurity and climate change



Climate risk is a significant challenge for food security – it is projected that by 2050, 10-20% more people could be at risk of hunger due to climate risks