



# **International Disaster Relief and Climate Change**

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# Managing climate change: the basic concepts

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- **Mitigation:** reducing greenhouse gas emissions

(UNFCCC ultimate objective is to “prevent dangerous anthropogenic interference with the climate system”)

**HUMANITARIAN  
CONCERN**

- **Adaptation:** reducing the impacts

(“avoid the unmanageable, manage the unavoidable”)

**HUMANITARIAN  
CONCERN**

# Managing climate change: the next debates?

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- **Loss and Damage:** manage remaining impacts  
*(who pays, for what, and to whom?)*

**HUMANITARIAN CONCERN**

- **Geo-engineering:** “fix the climate”  
*(but what about unintended side-effects?)*

**HUMANITARIAN CONCERN**

# IPCC SREX



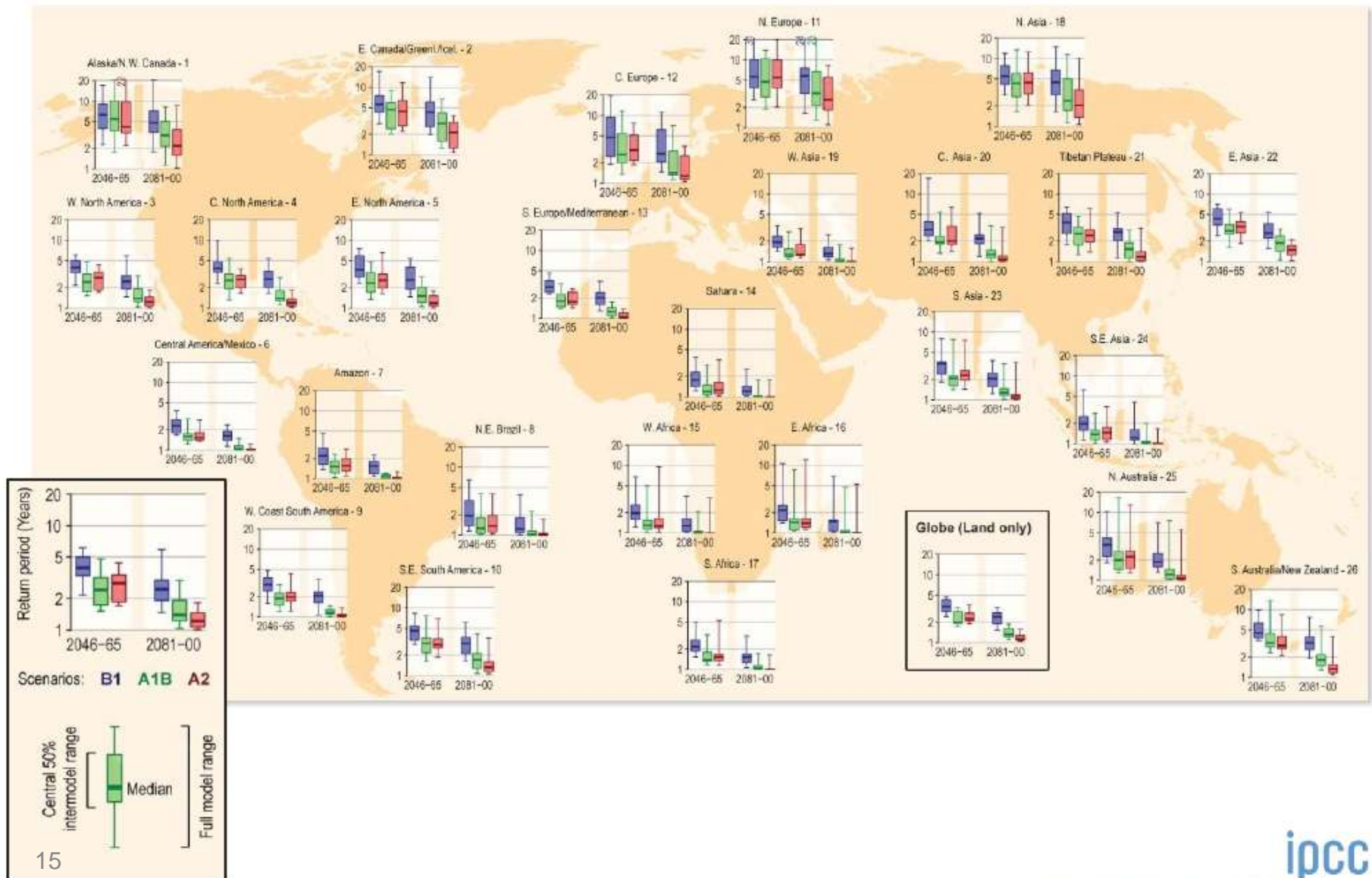
Special Report on Managing the Risks  
of Extreme Events and Disasters  
to Advance Climate Change Adaptation



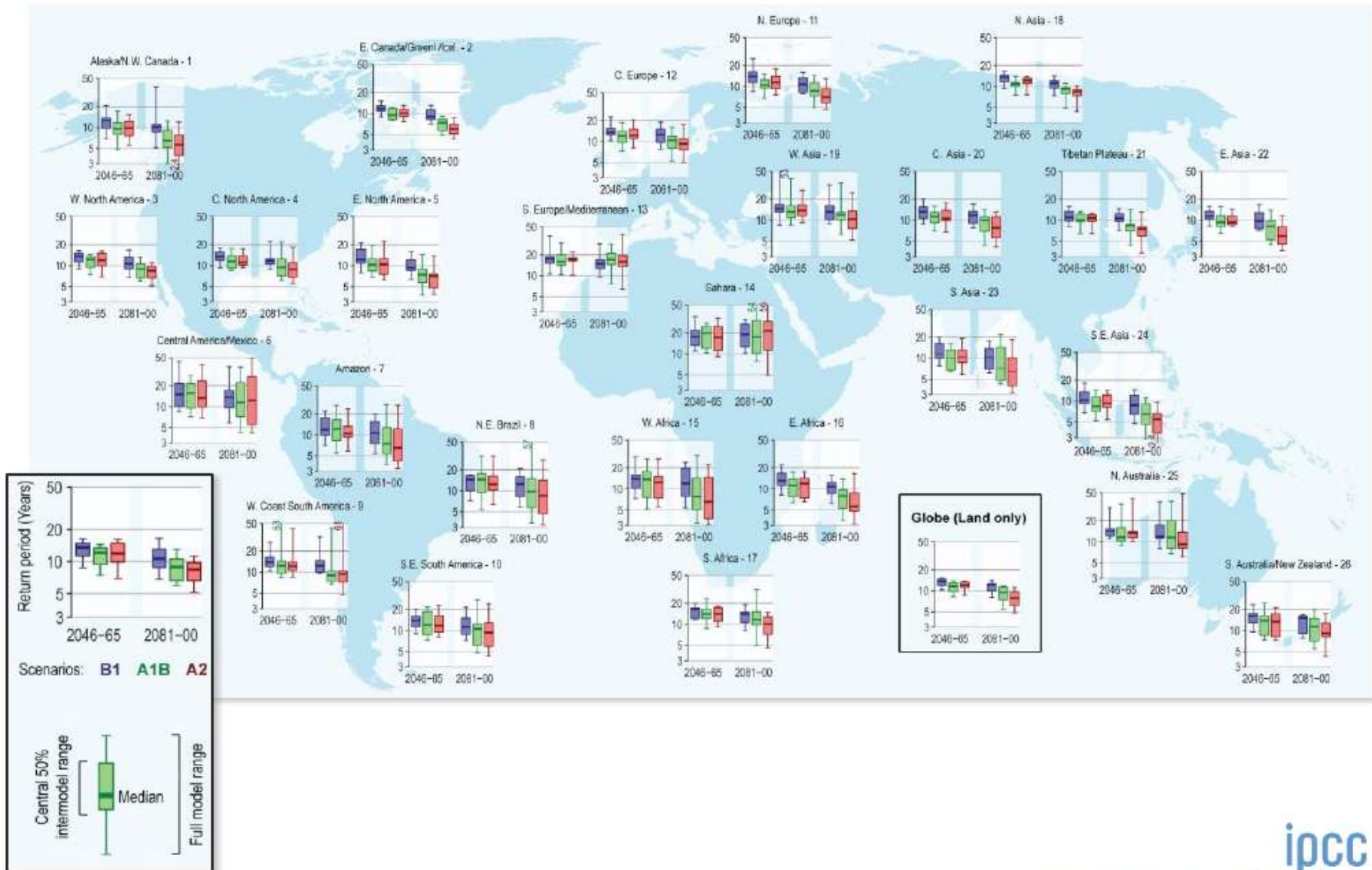
# A changing climate leads to changes in extreme weather and climate events



# Climate models project more frequent hot days throughout the 21st century


























# Climate models project more heavy rain events in many areas throughout the 21st century



**Table 2: Projected changes in temperature and precipitation extremes, including dryness, in Africa**

**Table 2 shows projected changes in temperature and precipitation extremes, including dryness, in Africa. The projections are for the period 2071-2100 (compared with 1961-1990) or 2080-2100 (compared with 1980-2000) and are based on GCM and RCM<sup>11</sup> outputs run under the A2/A1B emissions scenario.**

Region and Sub-region	Trends in maximum temperature (the frequency of warm and cold days) <sup>12</sup>	Trends in minimum temperature (the frequency of warm and cold nights) <sup>13</sup>	Trends in heat waves/warm spells <sup>14</sup>	Trends in heavy precipitation (rain, snow) <sup>15</sup>	Trends in dryness and drought <sup>16</sup>
<b>West Africa</b>	 Likely increase in warm days (decrease in cold days)	 Likely increase in warm nights (decrease in cold nights)	 Likely more frequent and/or longer heat waves and warm spells	 Slight or no change in heavy precipitation indicators in most areas   Low model agreement in northern areas	 Inconsistent signal
<b>East Africa</b>	 Likely increase in warm days (decrease in cold days)	 Likely increase in warm nights (decrease in cold nights)	 Likely more frequent and/or longer heat waves and warm spells	 Likely increase in heavy precipitation indicators	 Decreasing dryness in large areas
<b>Southern Africa</b>	 Likely increase in warm days (decrease in cold days)	 Likely increase in warm nights (decrease in cold nights)	 Likely more frequent and/or longer heat waves & warm spells	 Lack of agreement in signal for region as a whole   Some evidence of increase in heavy precipitation in southeast regions	 Increase in dryness, except eastern part   Consistent increase in area of drought
<b>Sahara</b>	 Likely increase in warm days (decrease in cold days)	 Likely increase in warm nights (decrease in cold nights)	 Likely more frequent and/or longer heat waves and warm spells	 Low agreement or no signal	 Inconsistent signal of change

Increasing exposure of people and assets has been the major cause of changes in disaster losses



Pakistan floods, 2010  
6 million left homeless

Effective risk management uses a mix of approaches, but with a stronger focus on anticipation and resilience



# Implications for humanitarian organizations

- Be ready for **more response**
  - Stronger focus on **anticipation**
    - Invest in building **resilience**

# Early warning, early action

## Bridging time scales

**Climate change**  
Rising risks, trends,  
more surprises

*More specific information*



**Seasonal forecasts**  
Level of risk in coming months

*More time to reduce risk*



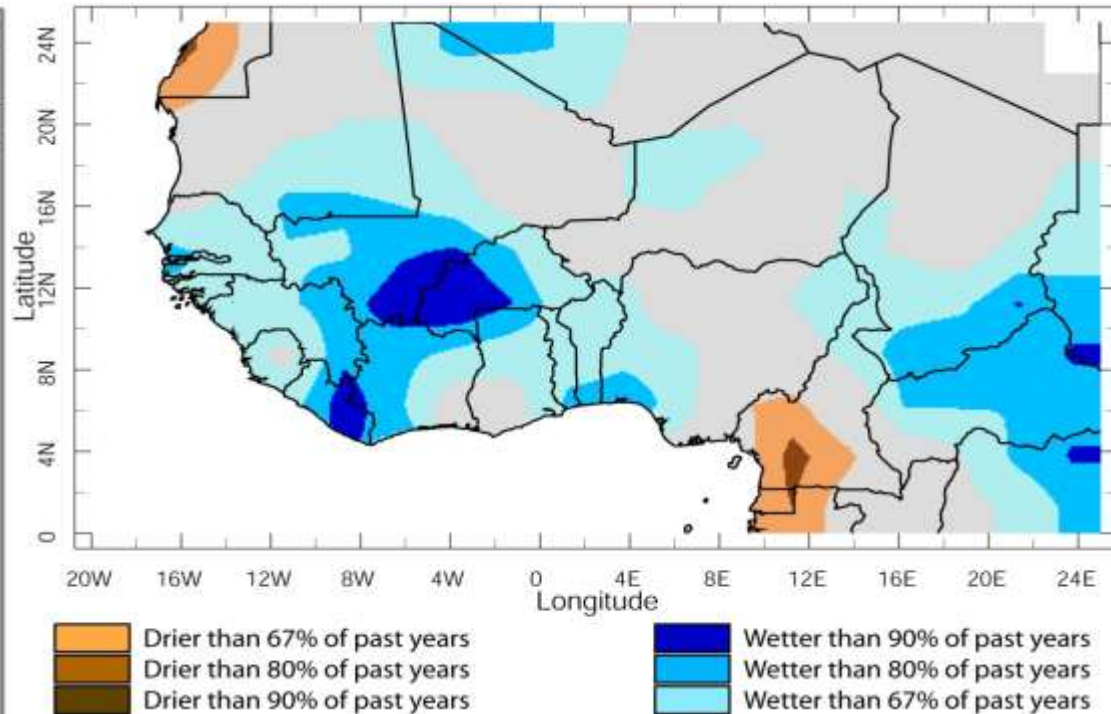
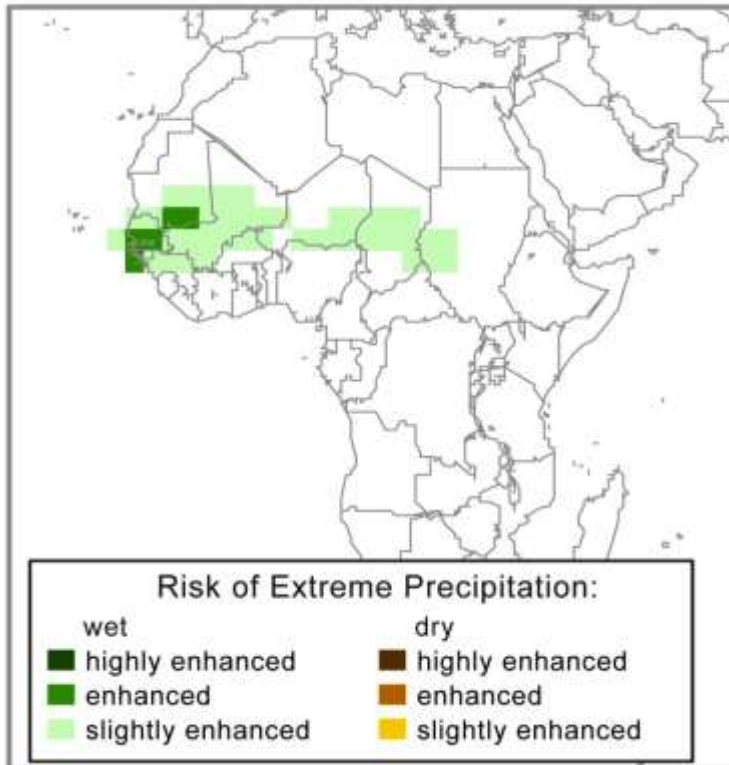
**“Regular” forecasts**  
Impending hazard

# IFRC West Africa 2008

## Seasonal preparedness appeal

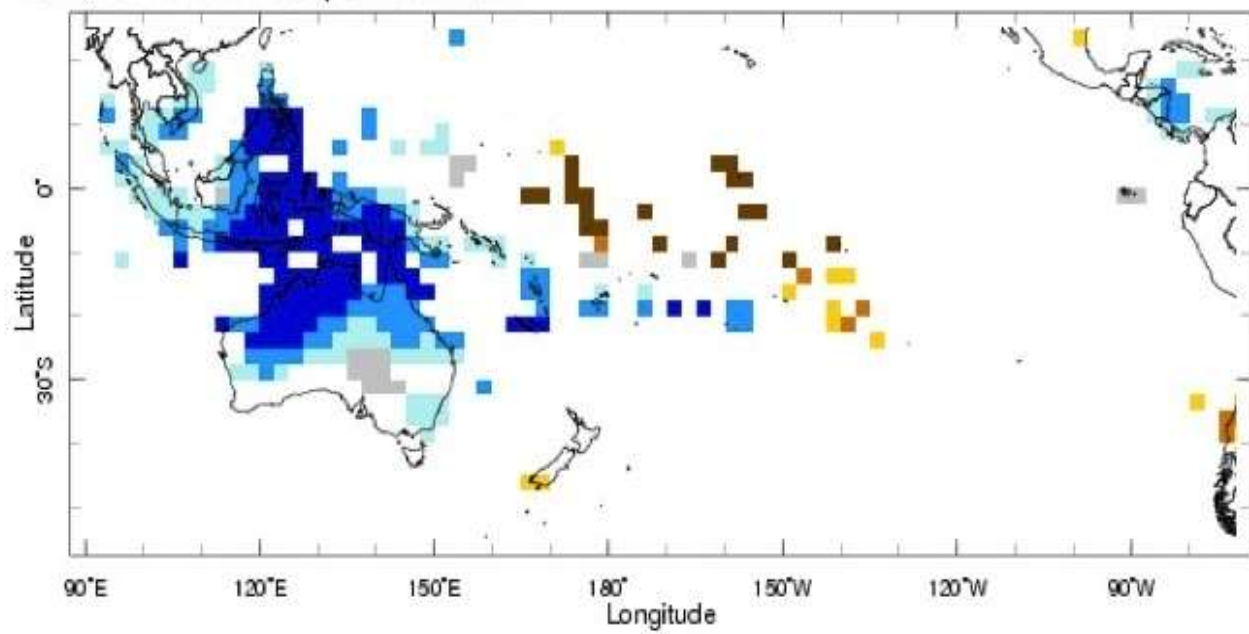
Forecast for Jun-Aug 2008  
issued May 2008

Observed rainfall for  
Jun-Aug 2008





# Tuvalu: La Niña preparedness



Forecast for Oct-Dec 2011, Forecast Issued Sep 2011

How confident can we be that the next 3 months will be unusually wet?

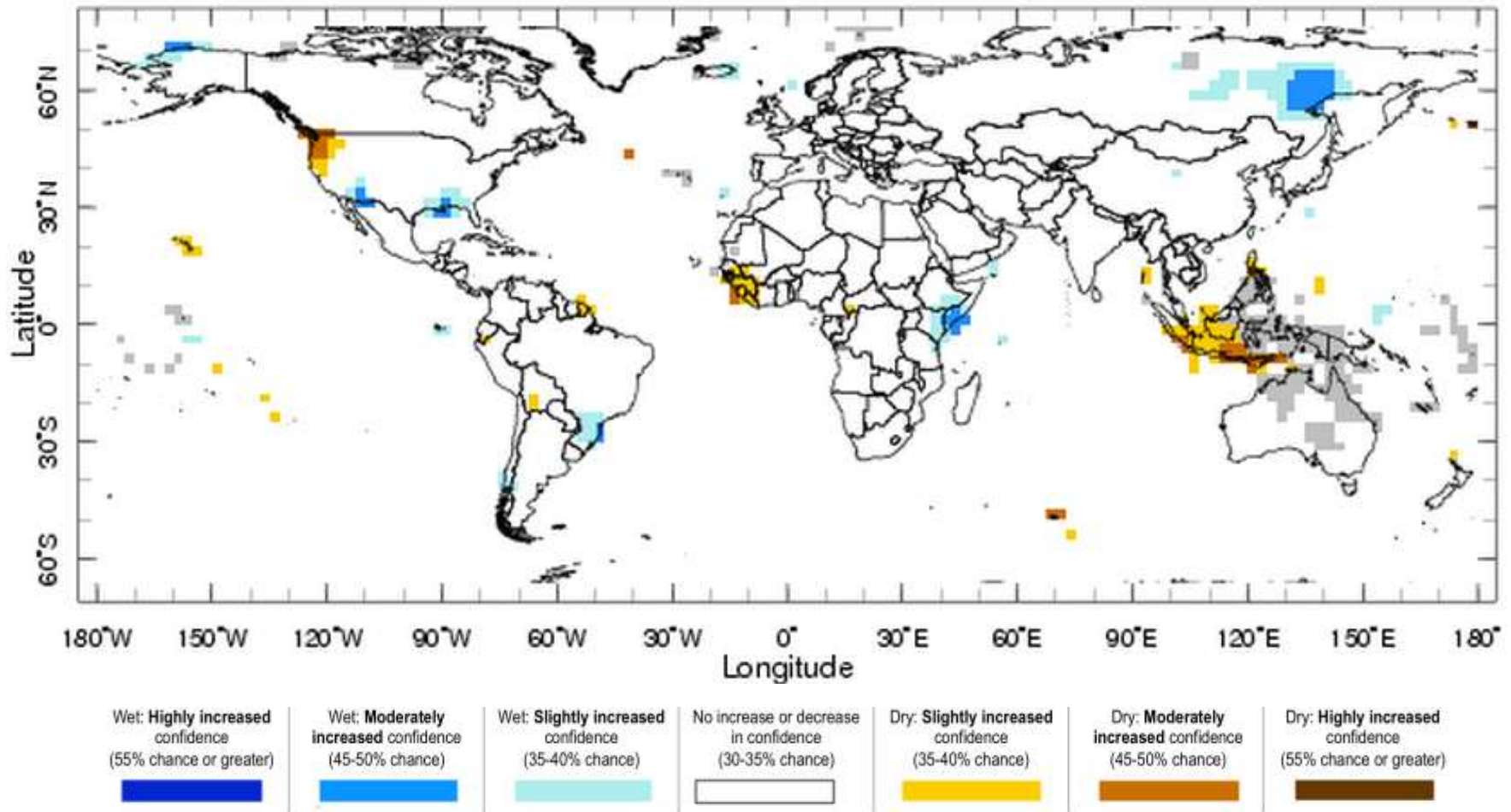
# Tuvalu Red Cross response

(based on capacity  
built in previous years)



- Follow-up with regional and national climate service providers
- Joint drought action plan with government agencies
- Outreach to communities (water conservation, hygiene&sanitation)

# NOW: El Niño! Watch the monthly seasonal forecast (next 3-6 months)



**Global Forecast: Total Rain and Snow for September-November 2012**

# Challenges for humanitarian organizations

- institutional **culture**
  - **perverse incentives**, including from donor financing
    - **communication gap** between risk information and decision-making

LET'S  
PLAY!



THE GAME

YOU 



(RED CROSS  
WORKER)



**Early Action**

**Stand up for Flood Preparedness:**  
*Pay 1 bean before rains*



**Wait & See**

**Stay sitting (doing non-disaster tasks):**  
*Pay nothing*

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**CLIMATE CENTRE**



International Federation  
of Red Cross and Red Crescent Societies

The Netherlands  **Red Cross**