

An aerial photograph showing a vast, parched landscape with deep, irregular cracks in the dry earth. In the lower-left quadrant, a person wearing a white shirt, dark pants, and a wide-brimmed hat is working with a long wooden pole, possibly planting or tending to small green seedlings. The overall scene conveys the impact of extreme drought and climate change.

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

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**Acknowledgement:**

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## Calendar SREX

- ❖ Norway: proposal at P29 (31 Aug – 4 Sept 2008)
  - in cooperation with ISDR (International Strategy for Disaster Reduction)
- ❖ Revised proposal at B38 (24-25 Nov 2008)
- ❖ Scoping meeting (23-26 Mar 2009)
- ❖ Panel decision at P30 (21-23 Apr 2009)
- ❖ Four Lead Author Meetings
  - LA1, Panama City, Panama (9-12 Nov 2009)
  - LA2, Hanoi, Vietnam (22-25 Mar 2010)
  - LA3, Geneva, Switzerland (25-28 Oct 2010)
  - LA4, Gold Coast, Australia (16-19 May 2011)
- ❖ **1<sup>st</sup> Joint Session of WGI/WGII: Kampala, Uganda (14-19 Nov 2011)**

2008

2009

2010

2011

## Outline SREX

1. Climate Change: New Dimensions in Disaster Risk, Exposure, Vulnerability, & Resilience

**CONTEXT  
BACKGROUND**

2. Determinants of Risk: Exposure & Vulnerability

3. Changes in Climate Extremes and their Impacts on the Natural Physical Environment

**PHYSICAL BASIS**

4. Changes in Impacts of Climate Extremes: Human Systems and Ecosystems

**IMPACTS**

5. Managing the Risks from Climate Extremes at the Local Level

6. National Systems for Managing the Risks from Climate Extremes and Disasters

7. Managing the Risks: International Level & Integration Across Scales

**FROM LOCAL  
TO INTERNATIONAL**

8. Toward a Sustainable & Resilient Future

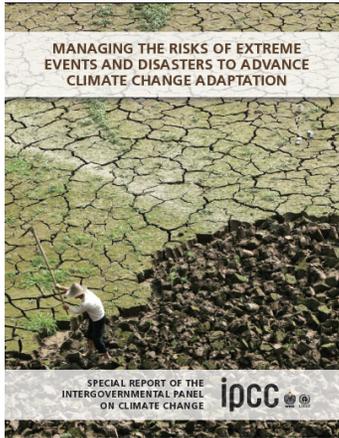
9. Case Studies

**OUTLOOK & EXAMPLES**

## Review Process

- ❖ **Expert Review of FOD (26 Jul – 20 Sept 2010)**
  - 220 sets of comments
  - 8,056 comments
- ❖ **Government and Expert Review of SOD (7 Feb – 1 Apr 2011)**
  - 162 sets of comments (23 Governments and 8 Observer Organizations)
  - 9,478 comments
- ❖ **Final Government Distribution (22 Aug – 14 Oct 2011)**
  - 38 sets of comments (31 Governments and 7 Observer Organizations)
  - 1,077 comments

**Total of 18,611 comments**



- **Evidence and Agreement**
- **Confidence**
  - Very low, low, medium, high, very high
  - Qualitative judgments, not probabilistic
- **Likelihood**

### Evidence and Agreement

Agreement ↑	<i>High agreement Limited evidence</i>	<i>High agreement Medium evidence</i>	<i>High agreement Robust evidence</i>
	<i>Medium agreement Limited evidence</i>	<i>Medium agreement Medium evidence</i>	<i>Medium agreement Robust evidence</i>
	<i>Low agreement Limited evidence</i>	<i>Low agreement Medium evidence</i>	<i>Low agreement Robust evidence</i>
	Evidence (type, amount, quality, consistency) →		

Confidence Scale

### Likelihood: Calibrated Language

Term	Likelihood of the outcome
<i>Virtually certain</i>	99-100% probability
<i>Very likely</i>	90-100% probability
<i>Likely</i>	66-100% probability
<i>About as likely as not</i>	33 to 66% probability
<i>Unlikely</i>	0-33% probability
<i>Very unlikely</i>	0-10% probability
<i>Exceptionally unlikely</i>	0-1% probability

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



# Impacts from weather and climate events depend on:



*nature and severity of event*



*vulnerability*



*exposure*

Since 1950, extreme hot days and heavy precipitation have become more common

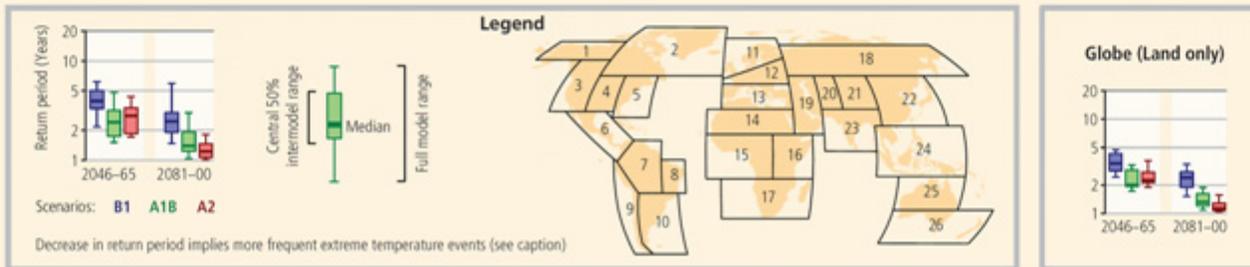


There is evidence that anthropogenic influences, including increasing atmospheric GHG concentrations, have changed these extremes

## Emissions Scenarios A1B, A2:

A 1-in-20 year hottest day is *likely* to become a 1-in-2 year event by the end of the 21<sup>st</sup> century

➔ 10× more frequent

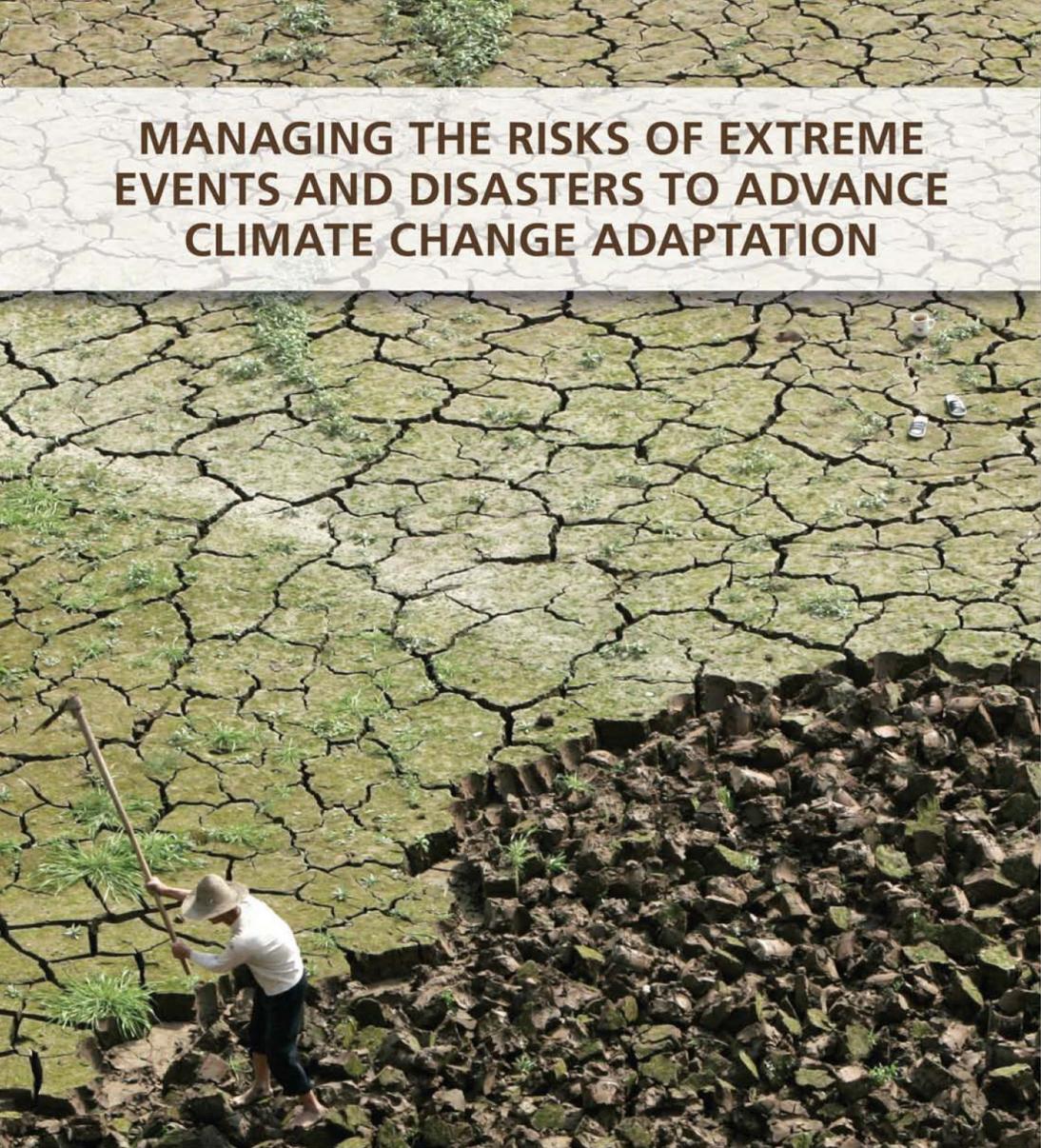


# Effective risk management and adaptation strategies are tailored to **local** and **regional** needs and circumstances

- changes in climate extremes **vary across regions**
- each region has unique **vulnerabilities** and **exposure** to hazards
- effective **risk management** and adaptation address the factors contributing to exposure and vulnerability



The most effective strategies offer **development benefits** in the relatively near term and **reduce vulnerability** over the longer term



**MANAGING THE RISKS OF EXTREME  
EVENTS AND DISASTERS TO ADVANCE  
CLIMATE CHANGE ADAPTATION**

[www.ipcc.ch](http://www.ipcc.ch)

[www.ipcc-wg2.gov/SREX](http://www.ipcc-wg2.gov/SREX)

**SPECIAL REPORT OF THE  
INTERGOVERNMENTAL PANEL  
ON CLIMATE CHANGE**

