Climate risks and the changing landscape of food security in the Arab Region

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2015 opportunities

- Post 2015 Framework For Disaster Risk Reduction (March 2015)
- Sustainable Development Goals (September 2015)
- Climate change agreements through the UNFCCC (December 2015).
The IPCC Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation
Climate change
disaster risk, exposure, vulnerability, and resilience
human systems and ecosystems

Managing risks from climate extremes at
local level
national level
international level

Toward a sustainable and resilient future

Case studies
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**
Socioeconomic development interacts with natural climate variations and human-caused climate change to influence disaster risk.
Increasing vulnerability, exposure, or severity and frequency of climate events increases disaster risk.

Disaster risk management and climate change adaptation can influence the degree to which extreme events translate into impacts and disasters.
Climate models project more frequent hot days throughout the 21st century.
Managing the risks: heat waves in Europe

Risk Factors
- lack of access to cooling
- age
- pre-existing health problems
- poverty and isolation
- infrastructure

Risk Management/Adaptation
- cooling in public facilities
- warning systems
- social care networks
- urban green space
- changes in urban infrastructure

France, August 2003 (over 14,000 dead)

Projected: *likely* increase in heat wave frequency and very *likely* increase in warm days and nights across Europe
Managing the risks: **drought** in the context of **food security** in West Africa

**Risk Factors**
- more variable rain
- population growth
- ecosystem degradation
- poor health and education systems

**Risk Management/Adaptation**
- improved water management
- sustainable farming practice
- drought-resistant crops
- drought forecasting

Projected: *low confidence* in drought projections for West Africa
INCREASING MAGNITUDES OF WARMING INCREASE THE LIKELIHOOD OF SEVERE AND PERVERSIVE IMPACTS
Global mean temperature change (°C relative to 1850–1900, as an approximation of preindustrial levels)

°C
date

1900 1950 2000 2050 2100

°C

Overlay

Observed
RCP8.5 (a high-emission scenario)
Overlap
RCP2.6 (a low-emission mitigation scenario)
RISKS OF CLIMATE CHANGE INCREASE WITH CONTINUED HIGH EMISSIONS
VULNERABILITY AND EXPOSURE AROUND THE WORLD
VULNERABILITY AND EXPOSURE AROUND THE WORLD
CLIMATE CHANGE
REDUCING AND MANAGING RISKS
ADAPTATION IS ALREADY OCCURRING
ADAPTATION IS ALREADY OCCURRING
EFFECTIVE CLIMATE CHANGE ADAPTATION
A MORE VIBRANT WORLD
Climate change and health: on the latest IPCC report

The Intergovernmental Panel on Climate Change (IPCC) released its latest report on March 31, 2014. This report was the second instalment of the Fifth Assessment Report, prepared by Working Group 2, on impacts, vulnerability, and adaptation to climate change.¹ In this Comment, we, as contributors to the chapter on human health, explain how the IPCC report was prepared and highlight important findings.

The IPCC reviews and assesses the scientific published work on climate change. As an intergovernmental body, it is a fact that the IPCC process allows input from governments and the general public. The Fifth Assessment Report began 5 years ago (appendix) and aspects of the IPCC process distinguish its assessments from other reviews and scientific publications. One difference is the substantial role of member states in determination of, in the initial stages, the scope of the reports and the membership of writing groups. At the beginning of each round of assessment, meetings organised by the IPCC decide on the structure of the reports, including the number of chapters and the topics to be covered, and then invite authors and members of writing groups. The final government input occurs as part of the peer review process. However, the member states must approve and sign off on the final report. Thus, the IPCC assessments

Risk and potential for adaptation

Risk level with current adaptation

Risk level with high adaptation

Potential for adaptation to reduce risk
Present-day impacts of climate change on human health

- Under-nutrition
- Vector-borne diseases
- Occupational health
- Mental health and violence
- Extreme weather events
- Air quality
- Food and water-borne infections
- Heat
2080-2100

Under-nutrition

+ 4°C

Heat

Food and water-borne infections

Air quality

Extreme weather events

Mental health and violence

Occupational health

Vector-borne diseases
Increasing certainty about negative impact of climate change on agriculture and crop yields
• Increasing certainty about negative impact of climate change on agriculture and crop yields
• Additional stress expected on food security systems due to socio-economic impacts of climate change
• Increasing certainty about negative impact of climate change on agriculture and crop yields
• Additional stress expected on food security systems due to socio-economic impacts of climate change
• Human displacement, violent conflict and indirect socio-political stability links to climate change recognized
Towards a post-2015 DRR Framework

- Requested by the UN General Assembly Resolution A/RES/66/199 - Modalities agreed in A/RES/68/211
- UNISDR is facilitating consultations that engage a full range of actors from Member States to civil society.
- Consultation events include the Global and Regional Platforms, national and local events, and targeted events of stakeholders, partners and networks.
- Expected to be adopted at the 3rd World Conference on Disaster Risk Reduction and endorsed by the UN General Assembly in 2015.

2013

Consultations started in March 2012 (with some 89 events up to the Global Platform) through 2013...

MAY 19-23
Global Platform for Disaster Risk Reduction
(Geneva, Switzerland)

SEP-NOV
UN Secretary-General’s Report and UN General Assembly Resolution on the International Strategy for Disaster Reduction

2014

... and continues in 2014

MAY 19-23
Global Platform for Disaster Risk Reduction
(Geneva, Switzerland)

MAY 19-23
MINISTERIAL CONFERENCES AND REGIONAL PLATFORMS ON DISASTER RISK REDUCTION
- Feb 13-15 : Africa (Arusha, Tanzania)
- Mar 19-21 : Arab States (Aqaba, Jordan)
- Sep 23-25 : Europe (Oslo, Norway)

JUL 14-15
1st Preparatory Committee Meeting (Geneva, Switzerland)
Subject to an anticipated decision of the UN General Assembly in 2013

NOV 17-18
2nd Preparatory Committee Meeting (Geneva, Switzerland)
Subject to an anticipated decision of the UN General Assembly in 2013

2015

MAR 14-18 / SENDAI, JAPAN
The 3rd World Conference on Disaster Risk Reduction will review the implementation of the Hyogo Framework for Action and is expected to adopt a successor framework for disaster risk reduction.

SEP-NOV
UN Secretary-General’s Report and UN General Assembly Resolution on the International Strategy for Disaster Reduction. The UN General Assembly Session will also consider the post-2015 disaster risk reduction framework for endorsement.
Statement on establishing an international science advisory mechanism for disaster risk reduction to strengthen resilience for the post-2015 agenda