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Current disaster risk trends and future challenges in Northern Africa

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AFRICA-ARAB PLATFORM ON DISASTER RISK REDUCTION | Tunis, Tunisia | 9-13 October 2018

Objective

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Current disaster risk trends in Northern Africa and future challenges **associated with climate change and socio-economic transition**

Outline

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1. Global drivers

2. Current disaster risk trends

   - Hazard trends
   - Urbanization
   - Socio-economic transition

3. Highlights of Progress in DRR (Regional & National)

4. Future Challenges

Disaster risk
Global mega-trends

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DIRECT & INDIRECT IMPACTS
(social, economic, environmental)

Assessment of current & future disaster risk
to support risk-informed, preventive urban planning

Disaster risk
Global warming

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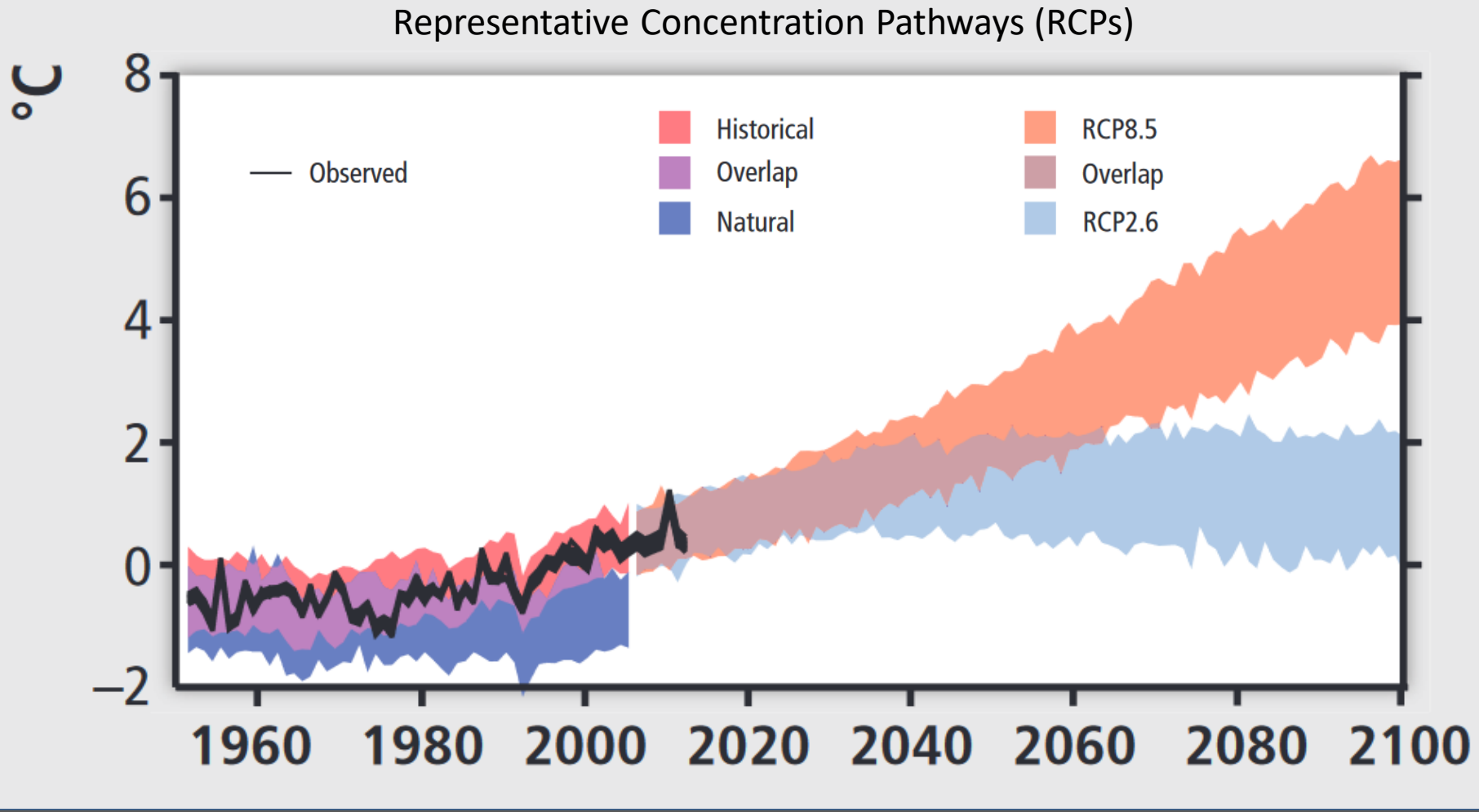
Near surface air temperature, the Arab Maghreb Union



Source: http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap22_FINAL.pdf

Disaster risk

More reported disasters than ever

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Number of reported disasters and the amount of damages

While the absolute number of disasters around the world has almost doubled since the 1980s, **the average number of natural disasters in North Africa has almost tripled over the same period.**

Source: EM-DAT, the OFDA/CRED International Disaster Database

Disaster risk

IPCC risk framework

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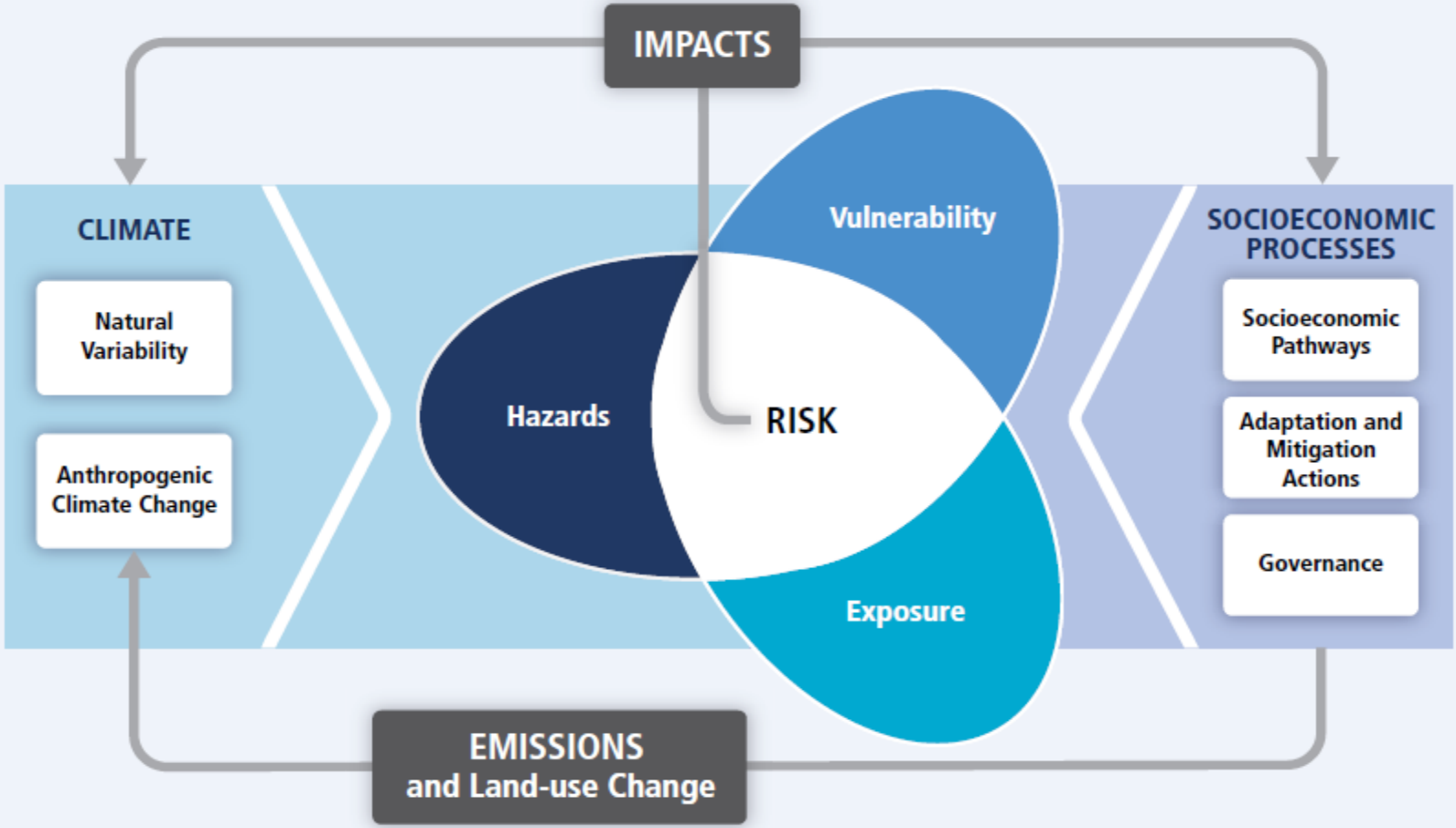

The risk is a function of hazard, exposure and vulnerability

Source: IPCC 2014

Disaster risk
Hazard trends

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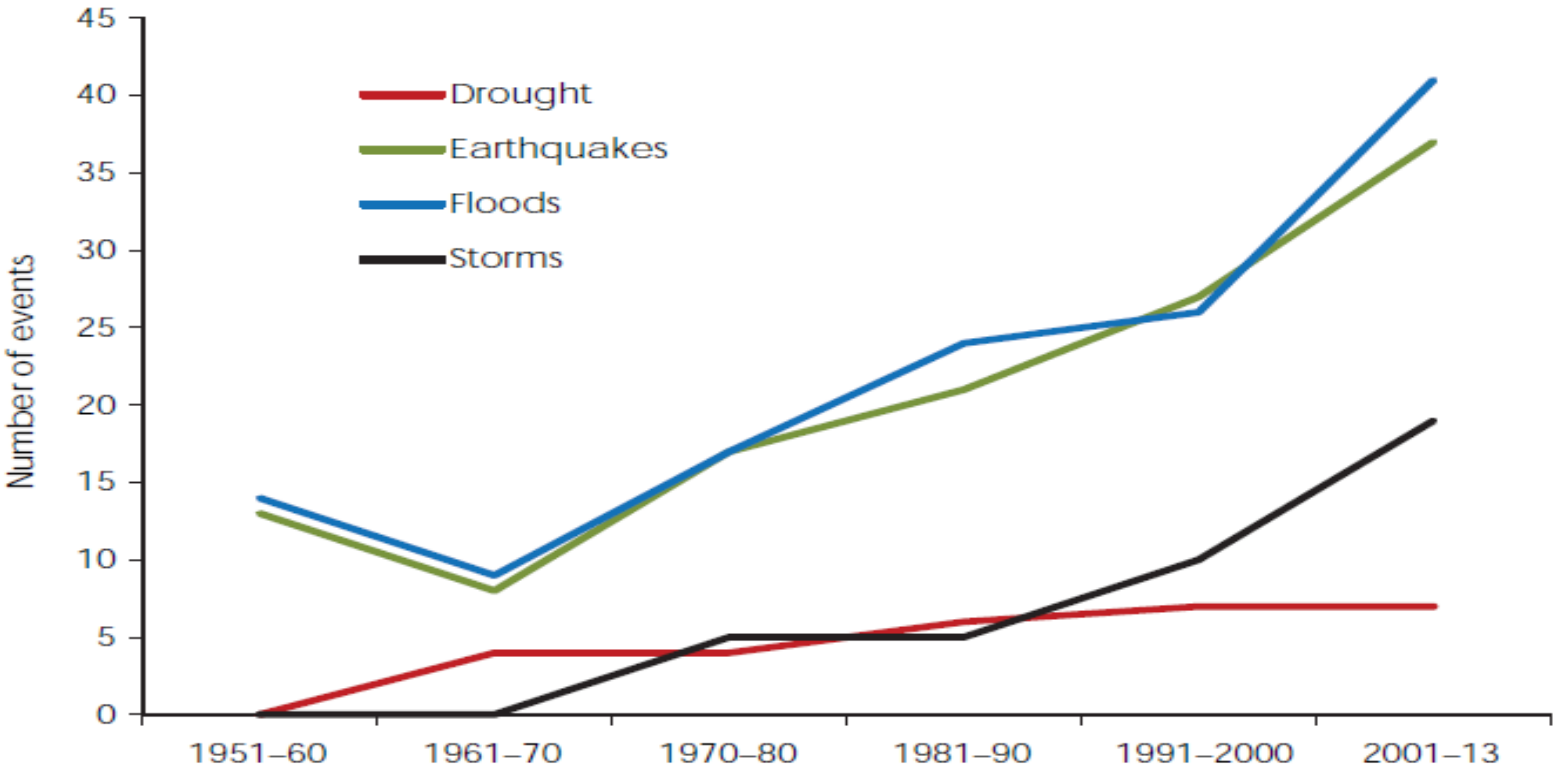
Average number of disaster in the MNA region by time 1951-2005



This increase in disasters is mainly due to an increase in exposure and vulnerability across the region. **The 2011 *Global Assessment Report* finds that, although global flood mortality risk has been on the decrease since 2000, in MNA, it is still increasing.**

Source: EM-DAT, 1951-2005/2011 Global Assessment Report on Disaster Risk Reduction

Disaster risk
Hazard trends

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1. The year 2010 was the hottest in the region since the 1800s, and **several countries set new national temperature highs.**
2. **Water scarcity makes the region even more vulnerable.**
3. Climate change could **make hazards more intense and more frequent.**
4. Climate events could also **lead to increased internal migration and displacement**.
5. **Sea-level rise** induced by climate change **exacerbates exposure of MNA's coastal cities.**

GFDRR

Disaster risk
Demographic change

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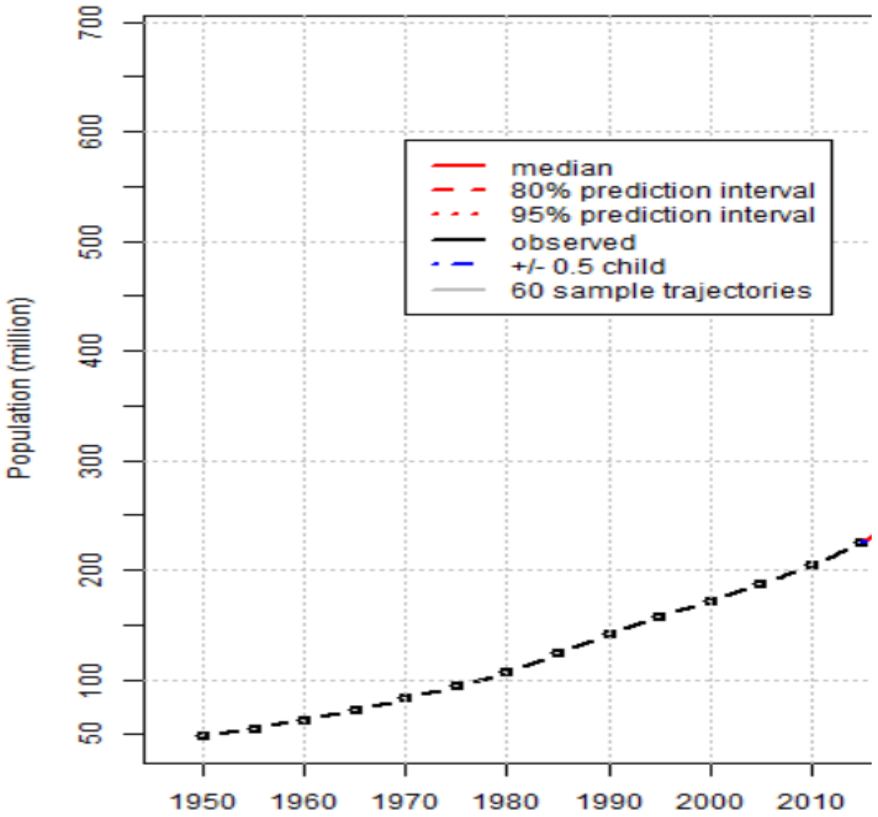
North Africa: Total Population



MNA's rapid urbanization into potentially hazardous locations is increasing the exposure of people and economic assets to disaster events.

Source: United Nations, Population Division (2017)

Disaster risk
Socioeconomic transition

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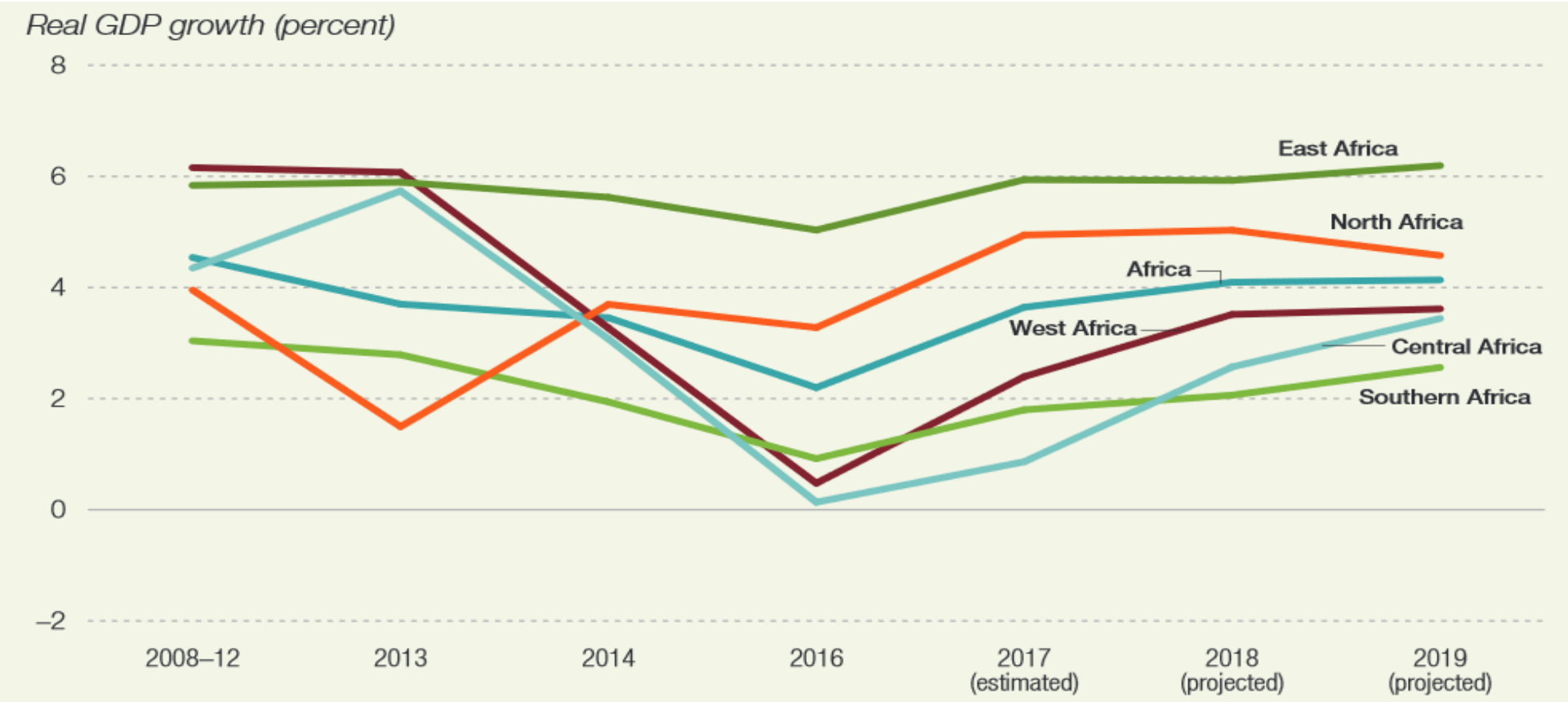
Real growth rates in North Africa and other regions of Africa 2008-2019



Projections by climatologists and united Nations specialists **suggest that MNA economies and livelihoods will be the second most affected by climate change.**

Source: AfDB statistics

Disaster risk

Socioeconomic transition

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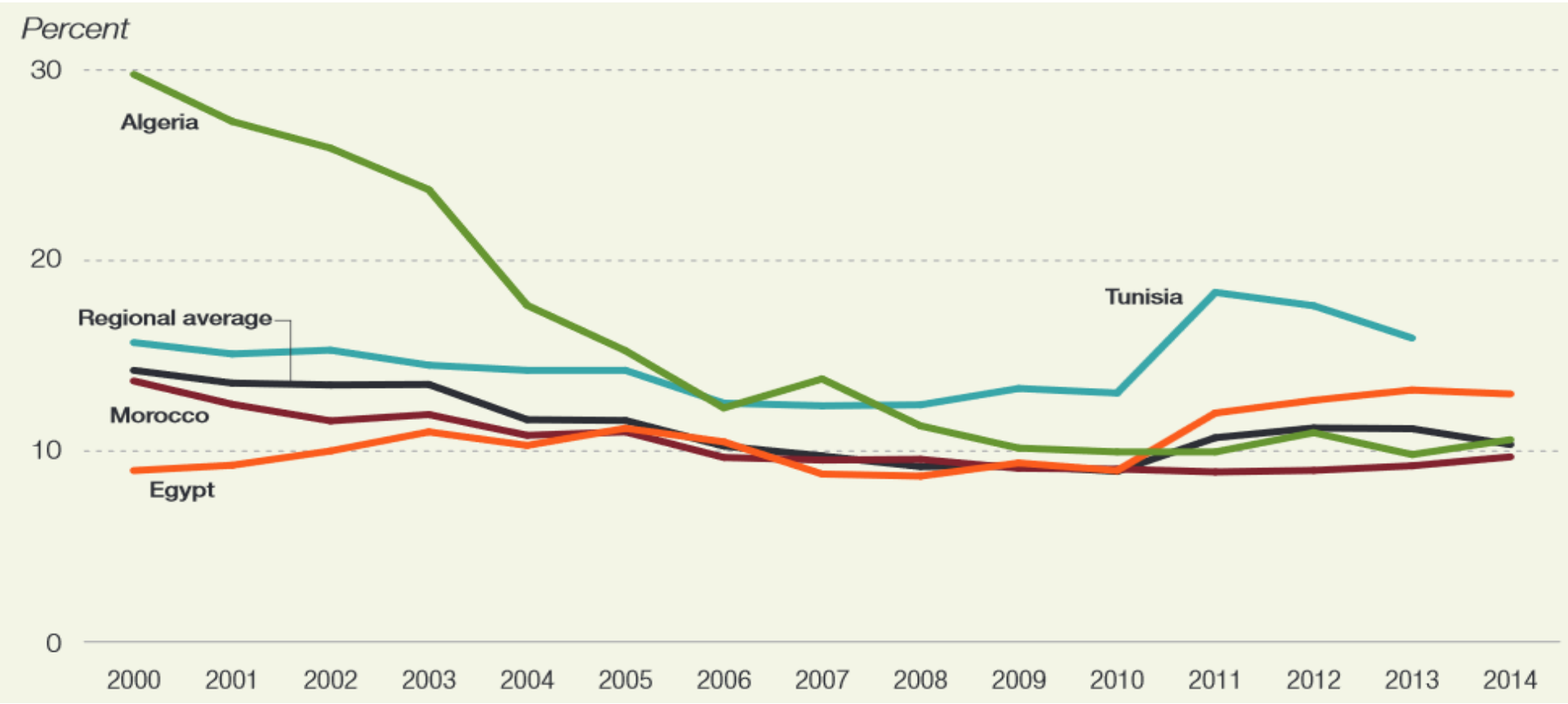
Trends in unemployment in four North African Countries, 2000-2014



The future of the roughly 100 million poor people who are the least resilient to disasters is most concerning

Source: World Bank, World Development Indicators

Disaster risk

Socioeconomic transition

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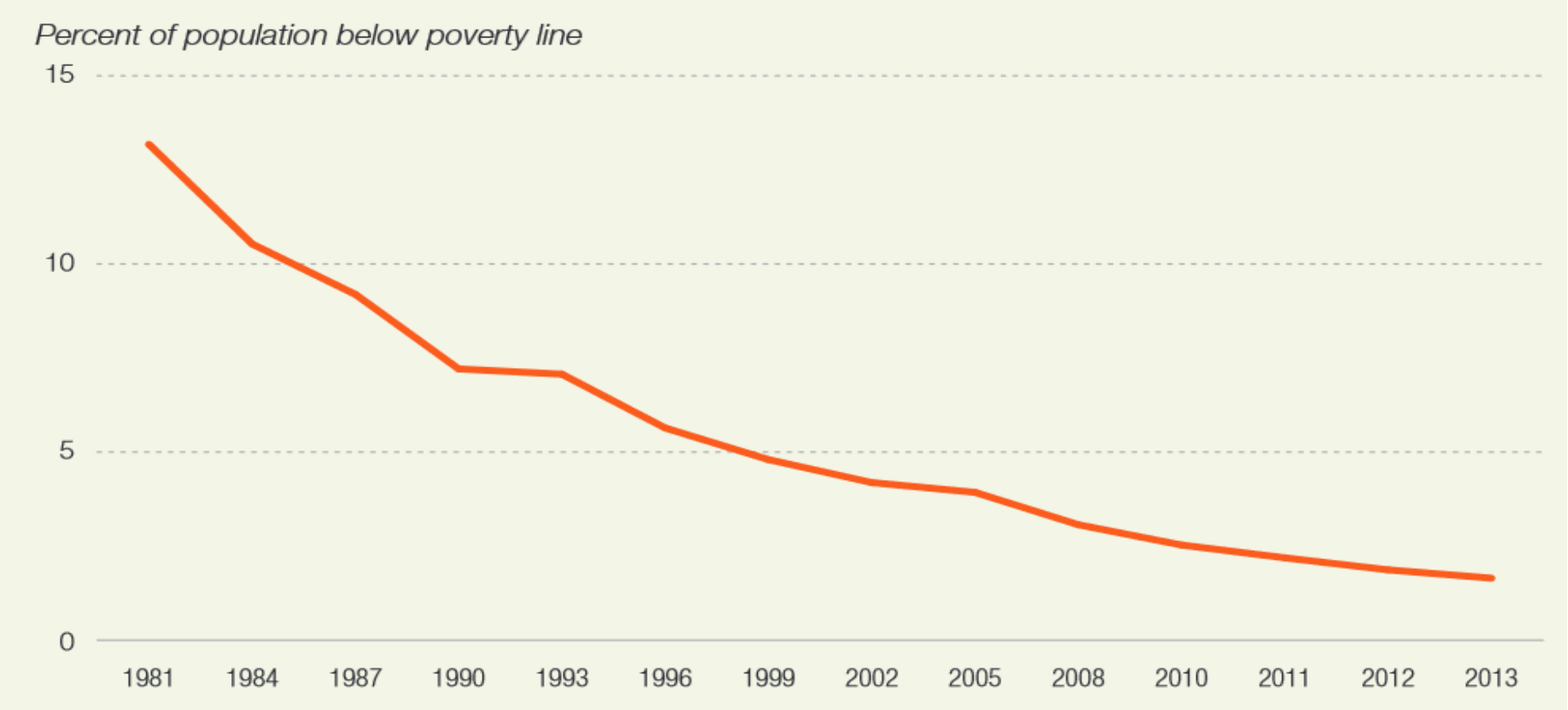
Poverty trends in North Africa, 1981-2013



Poverty as a critical indicator of vulnerability

Source: World Bank PovcalNet

Disaster risk

Socioeconomic transition

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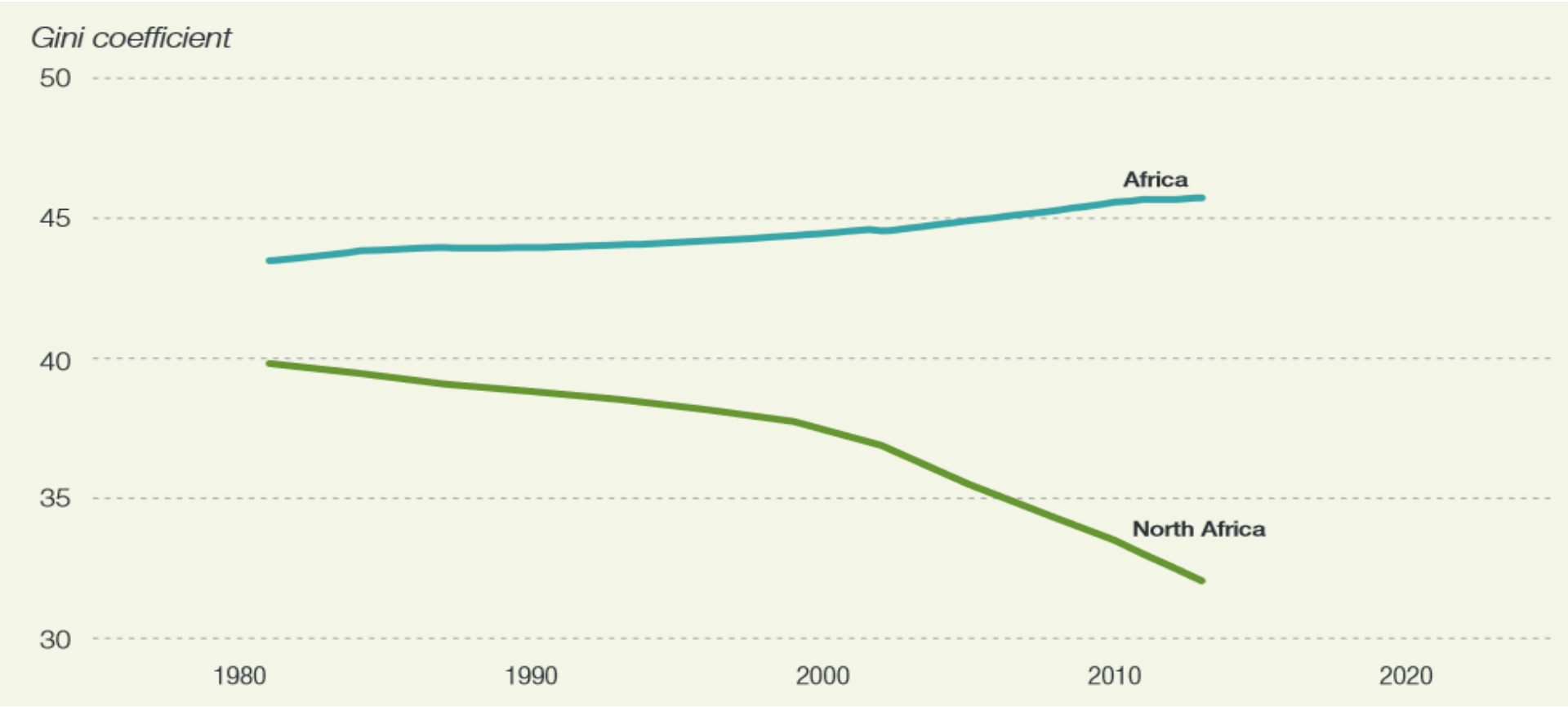
Income inequality in North Africa, 1980-2020



Inequality as a critical indicator of vulnerability

Source: World Bank PovcalNet

Disaster risk
Risk dimensions and components

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INFORM country risk profiles for 191 countries

	Egypt	Libya	Tunisia	Algeria	Morocco	Mauritania
Inform risk	**4.5**	**6**	**3**	**4.2**	**3.9**	**5.5**
Hazard and exposure	6.3	8.4	3.7	5	4.6	4.6
Vulnerability	3.3	3.9	1.5	3.3	2.6	5.2
Lack of coping capacity	4.5	6.7	4.8	4.6	5	7.1
Country risk rank	**59**	**18**	**111**	**71**	**85**	**27**

Scale (0-10)

Source: http://www.inform-index.org

INFORM
INDEX FOR RISK MANAGEMENT

Disaster risk
Risk dimensions and components

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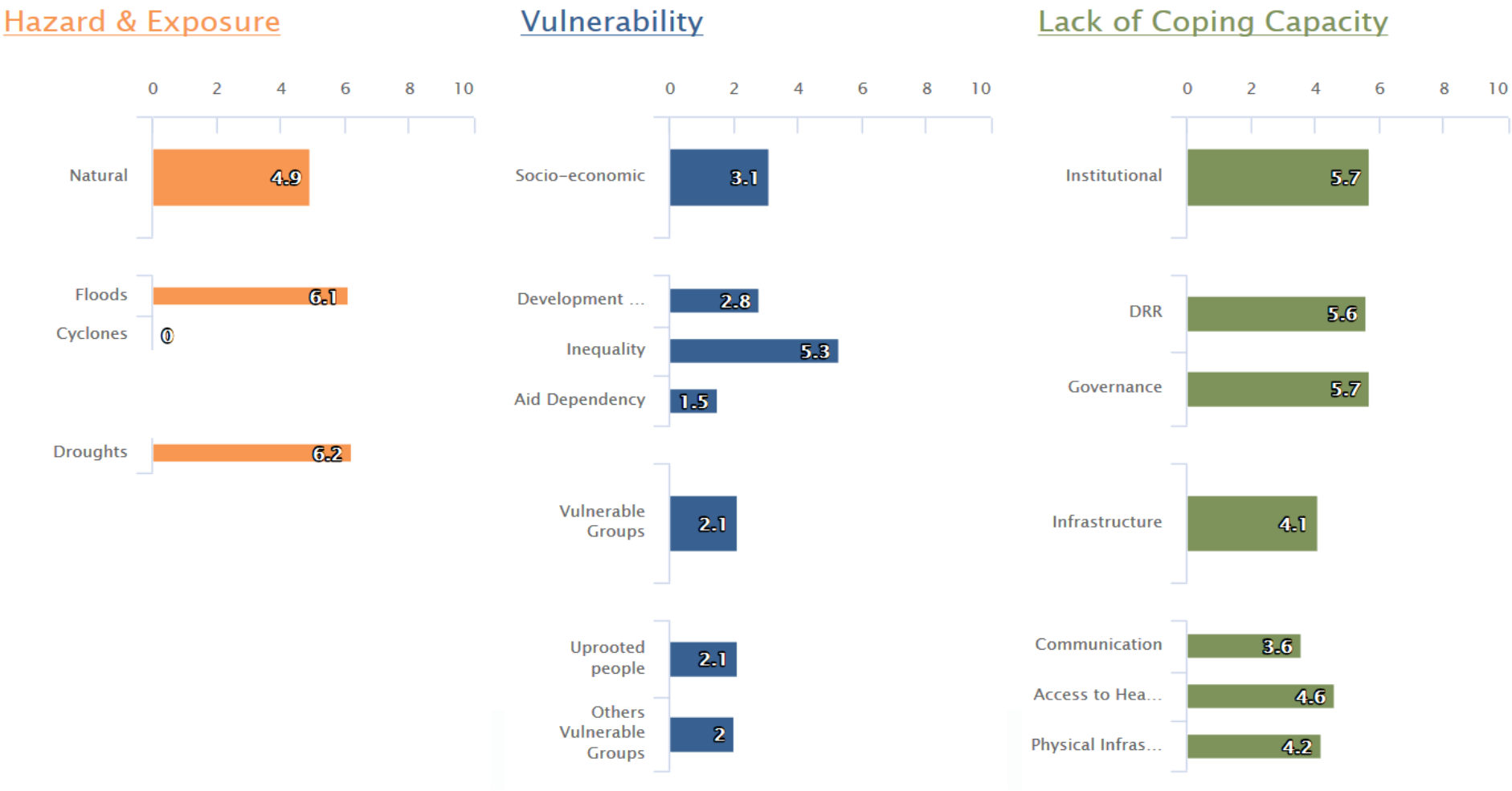

Source: http://www.inform-index.org

Highlights of Progress
Regional level

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- ✓ **Some progress has been made in DRM at the regional level.**
- ✓ A number of **regional initiatives** have emerged over the last few years, **indicating the rise in importance of DRM in the region.**
- ✓ **Governments are focusing their efforts on preventive risk management**, "Making Cities Resilient," to support cities in managing. Almost 300 municipalities in the region have joined the campaign
- ✓ **Regional DRM is facilitated mainly by intergovernmental organizations participation.**
- ✓ **International institutions are increasingly working together to build disaster and climate resilience in MNA.**

Source: Natural Disasters in the Middle East and North Africa: A Regional Overview

Highlights of Progress
National level

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- ✓ **The devastation caused by disasters in MNA has provided opportunities for assessing how risks can be managed.**

- ✓ In this rapidly changing environment, **the risk management dialogue has deepened, resulting in the strengthening of DRM institutions and the development of policies, action plans, and programs.**

- ✓ Significant **efforts** have also been made **to design and enforce new DRM policies, plans, and legislation.** Algeria, Egypt, and Morocco are a few of the countries that have designed policies and established DRM units to strengthen coordination.

Source: Natural Disasters in the Middle East and North Africa: A Regional Overview

Disaster risk
Remaining challenges

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- Despite the encouraging progress, **more needs to be done at regional, national, and local levels.**
- **Decentralization** of the DRM agenda **has moved slowly,** although some countries are making a progressive shift.
- **Solid systems** that would **guarantee dialogue**, information exchange, and strategic and operational coordination **among different administrative levels** and across key sectors **have yet to emerge**.
- **Few** DRM systems have **utilized land-use planning and management** and influenced investment policies **to encourage effective integrated risk management.**
- **Disaster risk financing and insurance (DRFI) instruments are rarely used in MNA countries.**

Outlook

ARIMA (01/2019-12/2020)

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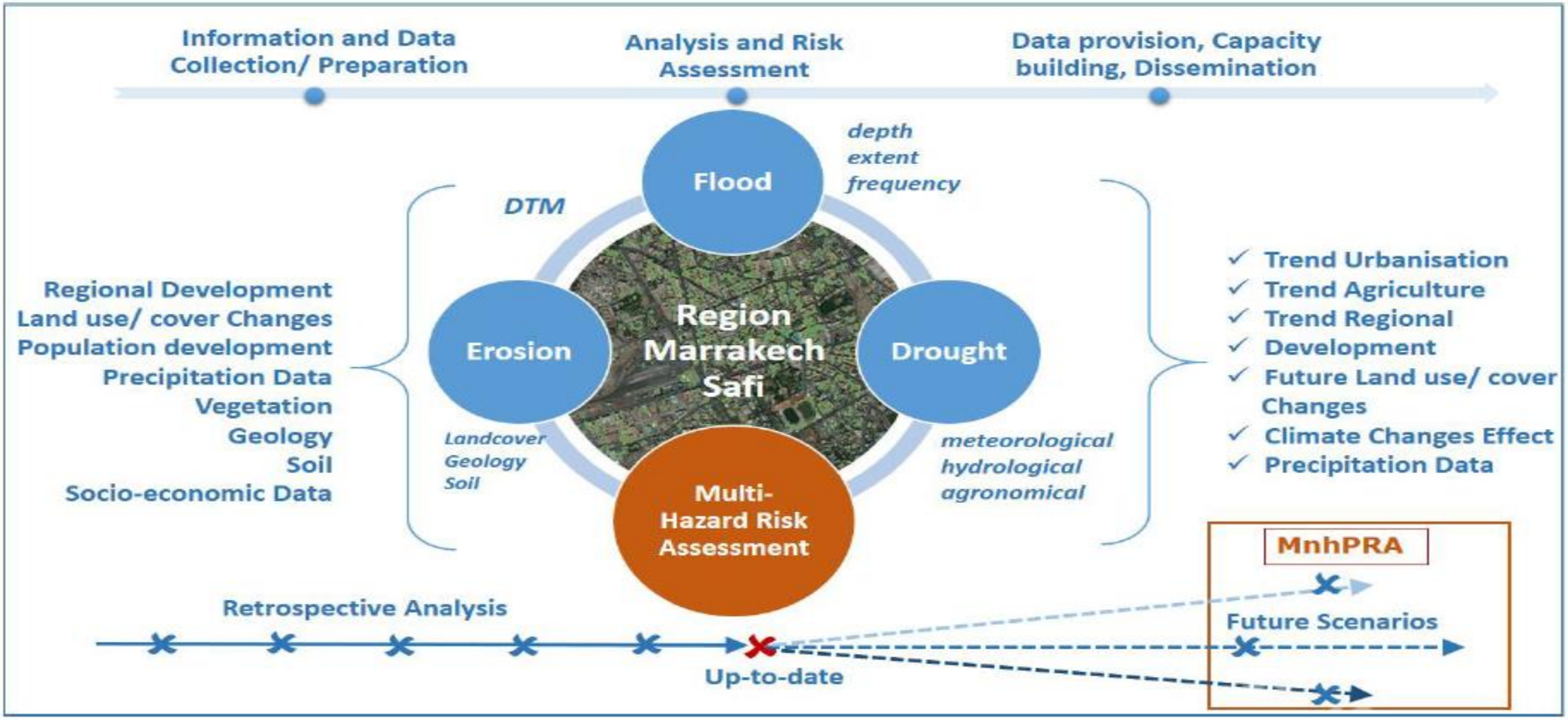

- **ARIMA will develop a spatial multi-hazard risk information platform** (MRIP) for the benefit of the **Marrakech-Safi Regional** stakeholders **based on innovative risk assessment and simulation methods. IABG**/ lead, **CADI University**, **UN University** (UNU-EHS**), RESING (Morocco), CIMA Research Foundation (Italy).**

Thank you