Disaster Loss Data and Climate Change Impacts in the Arab Region

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Why Account for Disaster Loss?

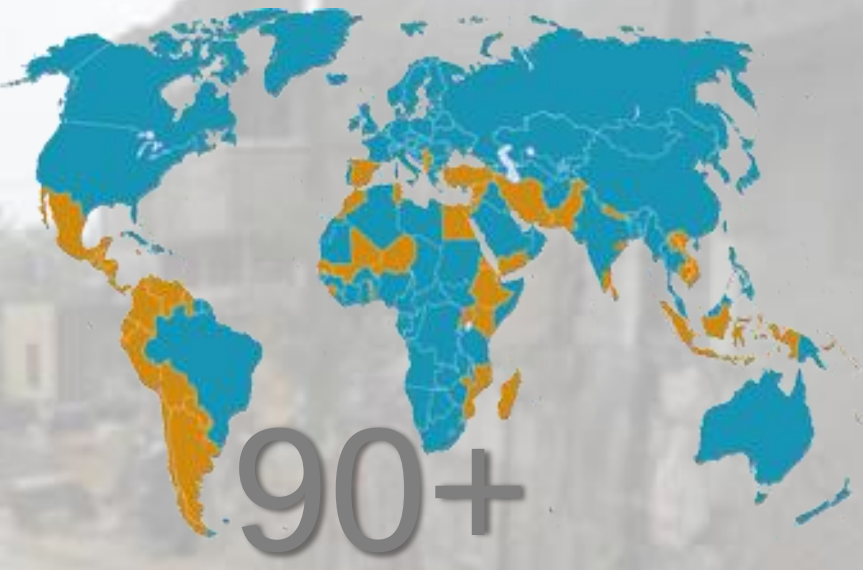
- To Measure and understand disaster risk in all its dimensions: vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment.
- To Identify changing and emerging trends in the frequency and losses of disasters (loss of life, livelihood, economic assets, or cultural heritage), especially when it comes to extensive risk
- To observe and identify extreme weather events within the context of climate-change
- To Inform decision-making, financing, and implementation of DRR, and CCA policies and strategies across the region

Why National Disaster Loss Data?

- New data allows to have a more complete picture of disaster losses.
- Direct losses are at least 60% more than the ones registered internationally.
- Small-scale disasters hamper local development and countries' competitiveness.

UNISDR & Disaster Loss Data

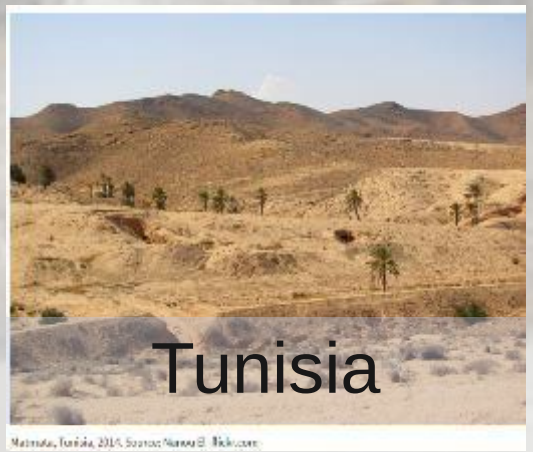
- Disaster loss data collection is now standardized and rolled out in more than 90 countries worldwide.
- In 2010 UNISDR's Regional Office for Arab States (ROAS) rolled-out the Global Initiative in the region. To date, ten of the twenty-two Arab countries established their national disaster damage and loss databases.

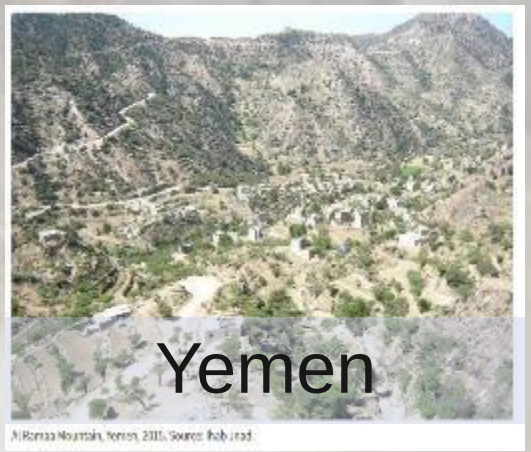


Countries have disaster loss data available online

- 10 disaster loss databases in the Arab Region (Comoros, Djibouti, Egypt, Jordan, Lebanon, Morocco, Palestine, Syria, Tunisia and Yemen).

6 National Hazard Profiles

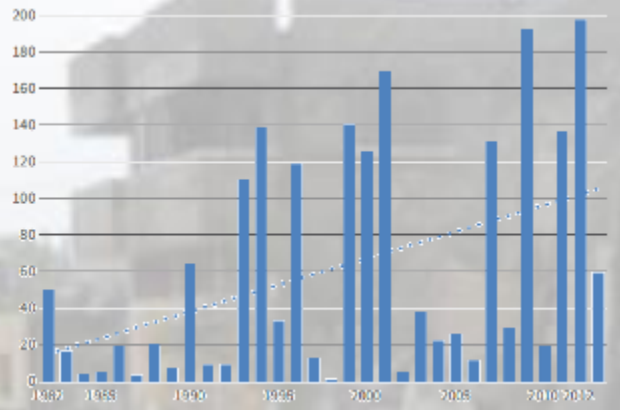




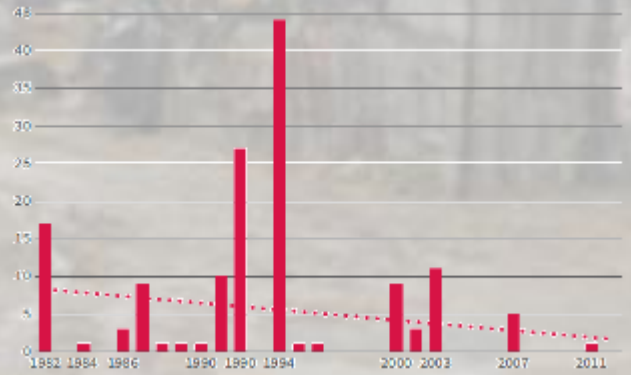
The 2017 RICCAR report on disaster loss data and climate change impacts is a collaborative effort undertaken by UNISDR and UN-ESCWA and the RICCAR framework is jointly implemented by the UN and LAS

Disaster Loss Data

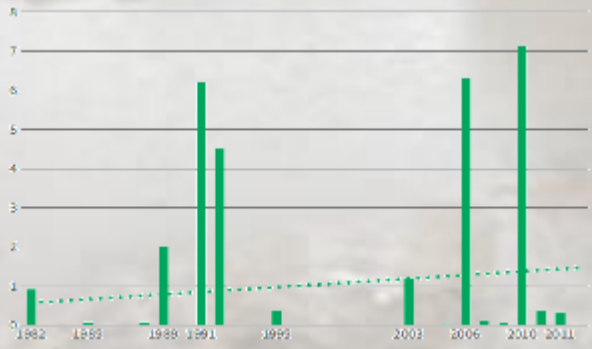
- Disaster frequency, mortality, and economic losses are measured for all 6 countries
- The overall trend of disaster **frequency** is clearly ***increasing*** across the region
- The overall trend of disaster **mortality** is ***decreasing*** in all of the assessed countries
- Although disaster related deaths have decreased, **economic losses** due to disasters have mainly ***increased*** *with some exceptions to the trend*



Tunisia: Disaster Frequency (1982-2013)



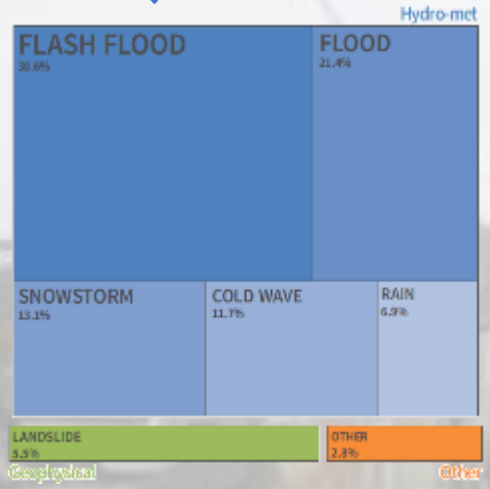
Jordan: Disaster Mortality: (1982-2012



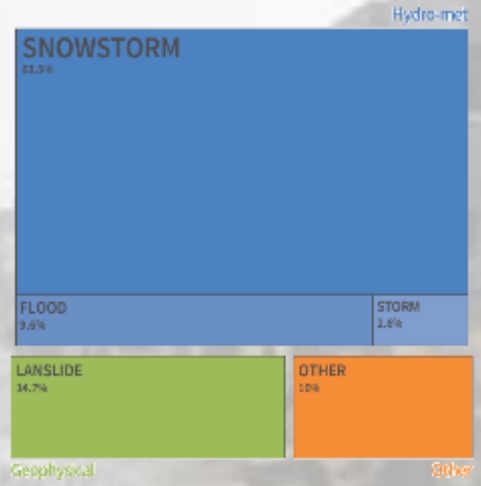
Lebanon: Economic Losses (1980-2013

Disaster Mortality: Breakdown by Hazard type

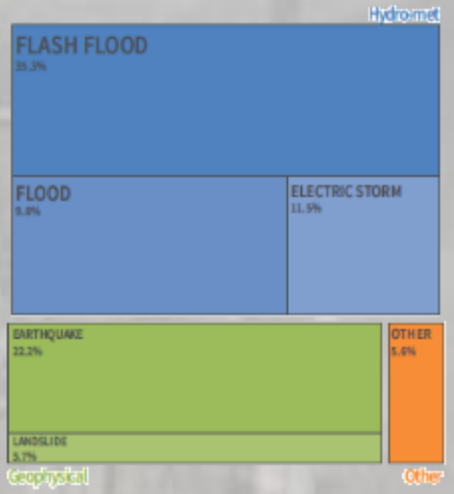
Jordan



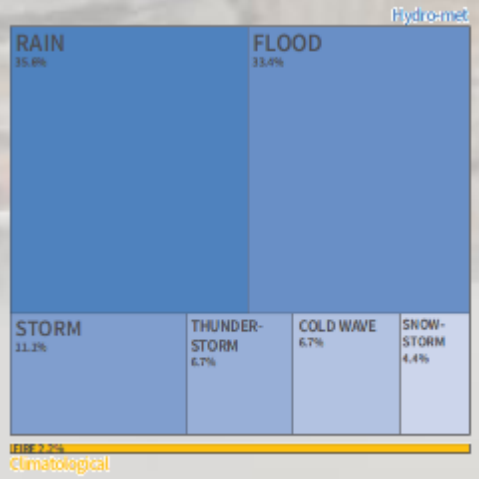
Lebanon



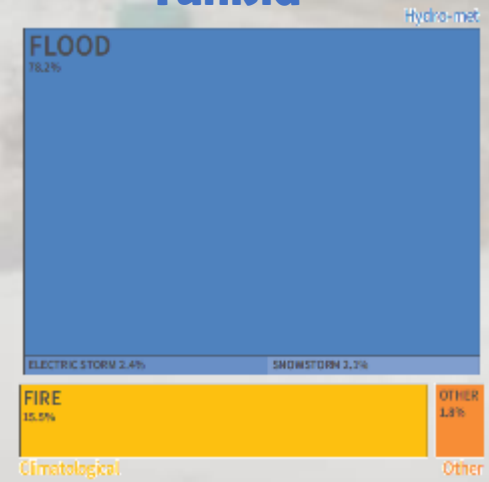
Yemen



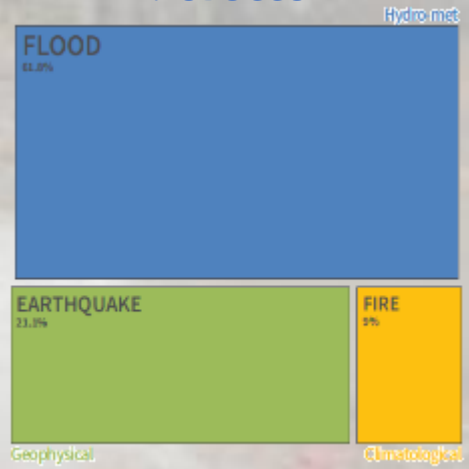
Palestine



Tunisia



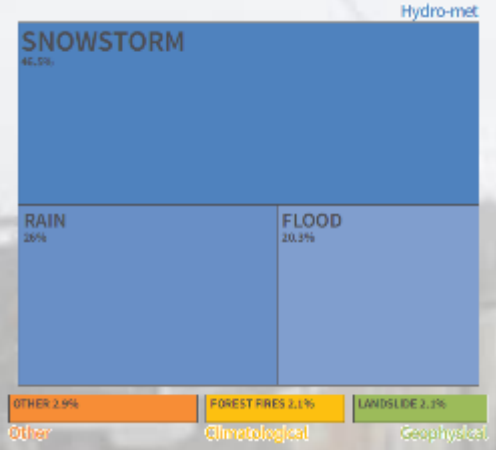
Morocco



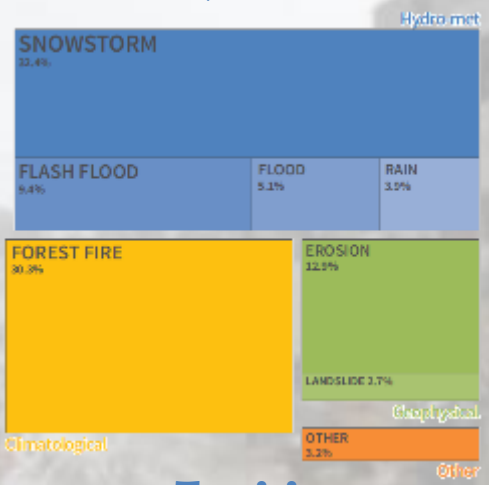
Floods cause the overwhelming majority of fatalities followed by flash floods; however, other hazards are also responsible such as snowstorms in Lebanon

Economic Loss: Breakdown by Hazard type

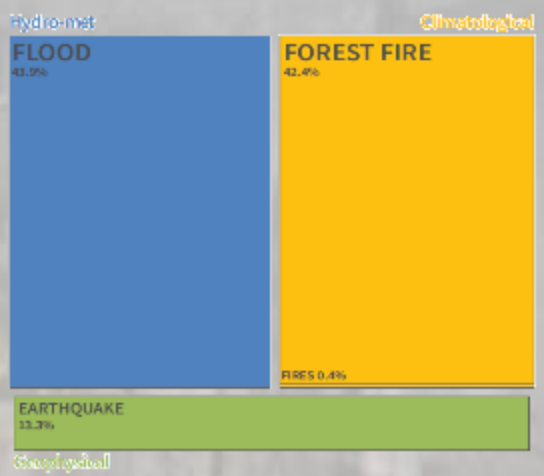
Lebanon



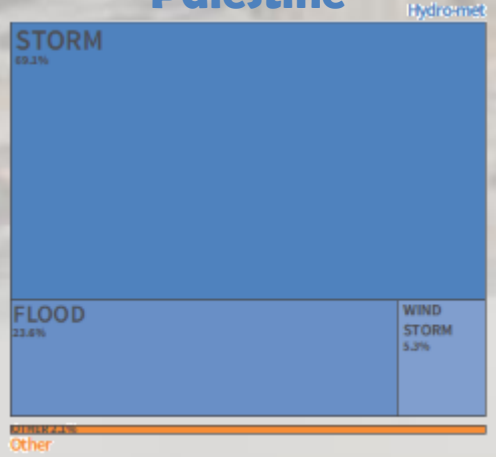
Jordan



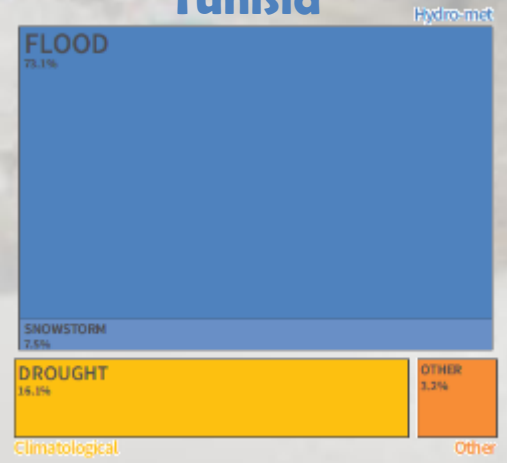
Morocco



Palestine



Tunisia



Yemen

Hazards which cause Economic losses can be quite different from those responsible for the highest levels of mortality (for example, in Morocco forest fires cause 42% of economic losses but only 9% of disaster-related deaths

1981 – 2012 Jordan

593 records

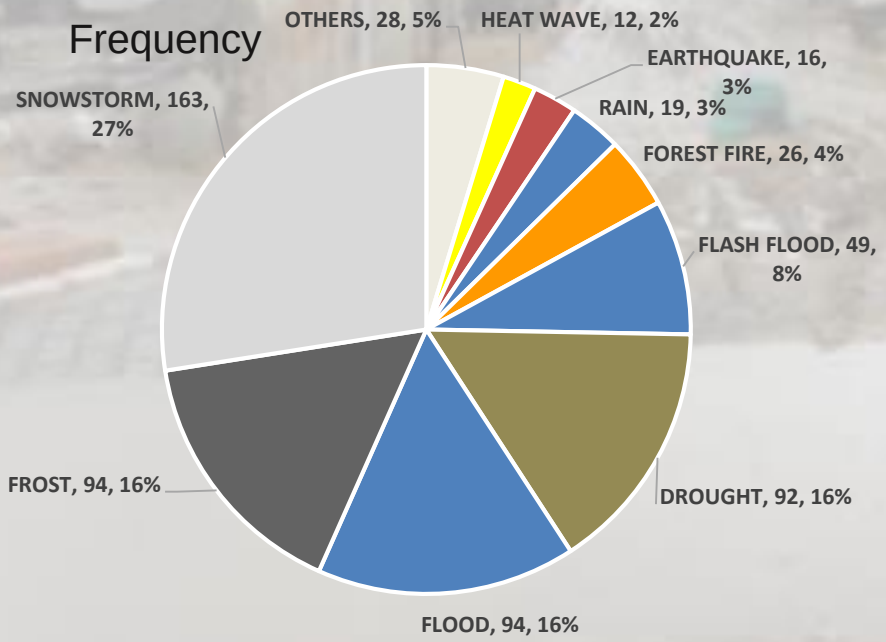
145 deaths

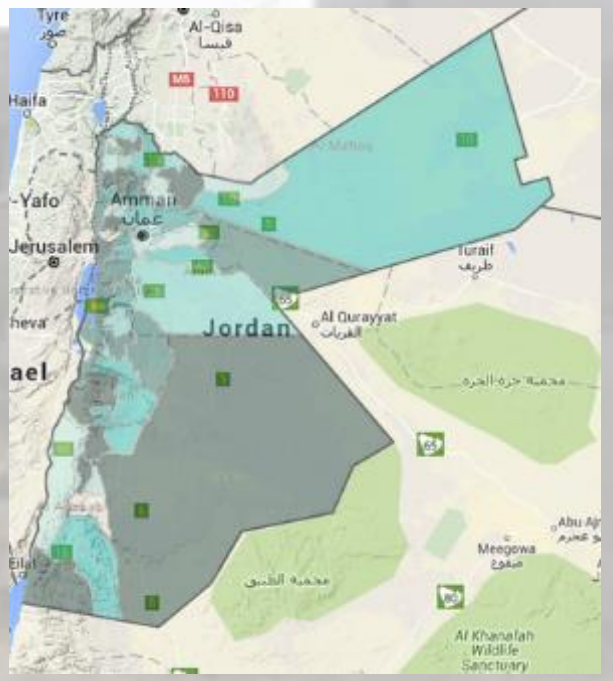
29 million US$ estimated **losses**

83 houses destroyed

594 houses damaged

840 ha of **crops** damaged





Spatial footprint of frequency

Hydro-meteorological related impacts:

97% of all records
97% of mortalities.
95% of economic losses.

1980 – 2011 Lebanon

2527 records

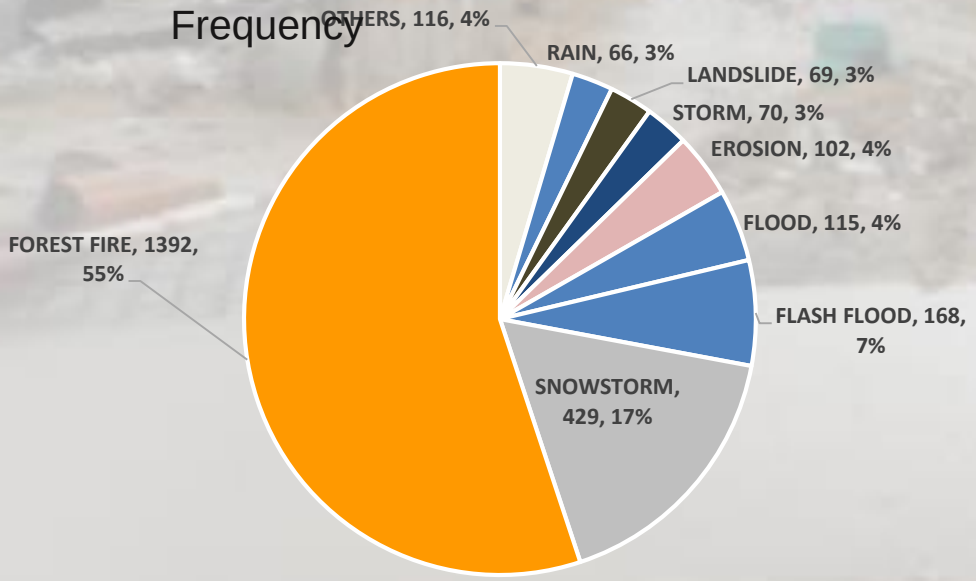
156 deaths

48 million US$ estimated losses

181 houses destroyed

1366 houses damaged

17700 ha of crops damaged



Spatial footprint of frequency

Hydro-meteorological related impacts:

75% of all records
100% of mortalities.
86% of economic losses.

1990 – 2013 Morocco

713 records

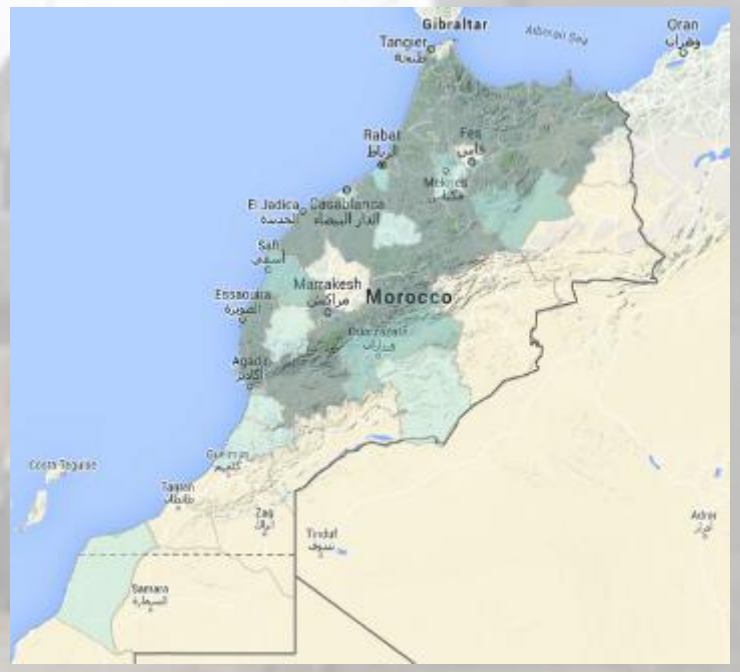
2165 deaths

530 million US$ estimated losses

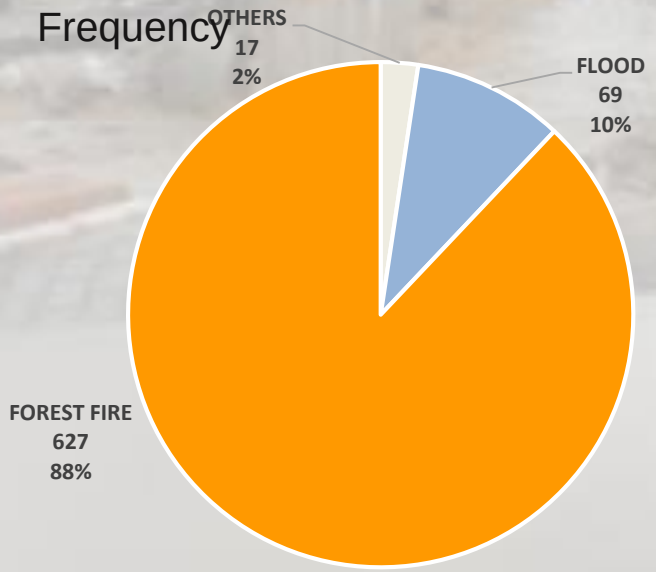
5109 houses destroyed

21915 houses damaged

281000 ha of crops damaged



Spatial footprint of frequency



Hydro-meteorological related impacts:

88% of all records
70% of mortalities
75% of economic losses.

1982 – 2013 Tunisia

1918 records

330 deaths

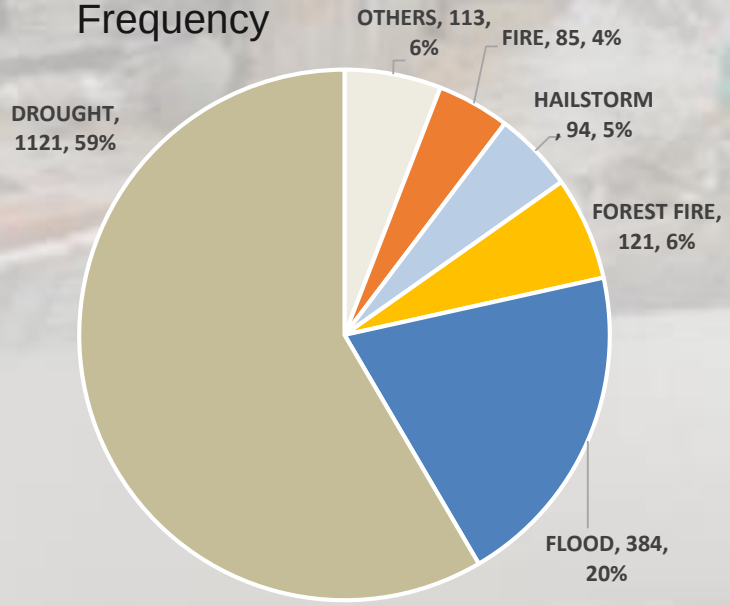
684 million US$ estimated losses

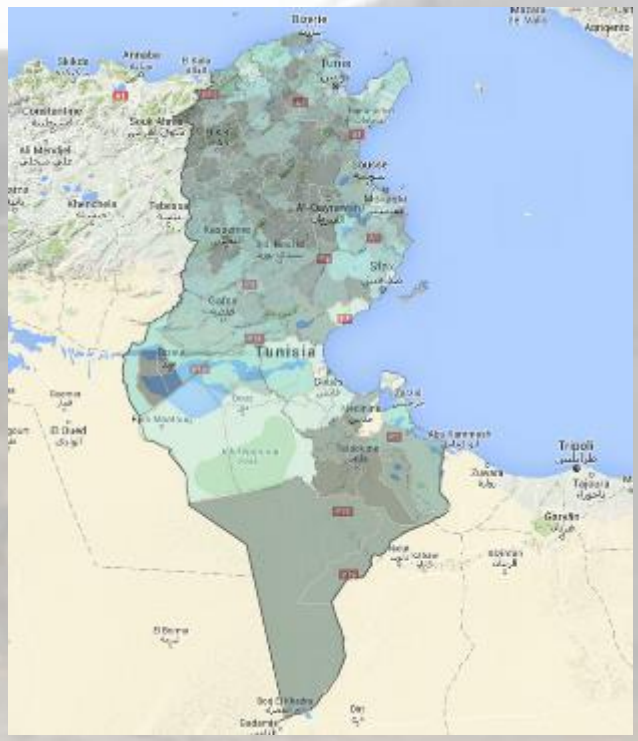
17821 houses destroyed

24728 houses damaged

837000 ha of crops damaged

Frequency





Spatial footprint of frequency

Hydro-meteorological related impacts:

99% of all records
100% of mortalities!
98% of economic losses.

No data
< 3
3-6
6-8
8-11
11-13
> 13

1980 – 2013 Palestine

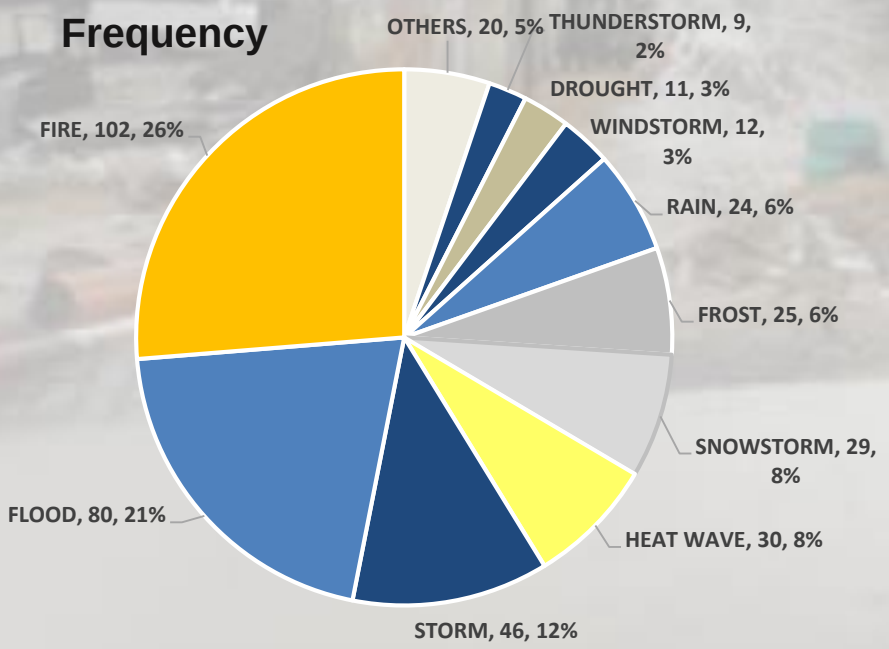
388 records

45 deaths

11 million US$ estimated losses

65 houses destroyed

798 houses damaged



Spatial footprint of frequency

No data
< 5
5-20
20-30
30-40
40-70
> 70

Hydro-meteorological related impacts:

99.23% of all records
69% of total mortality
92% of total economic losses

1971 – 2013 Yemen

1637 records

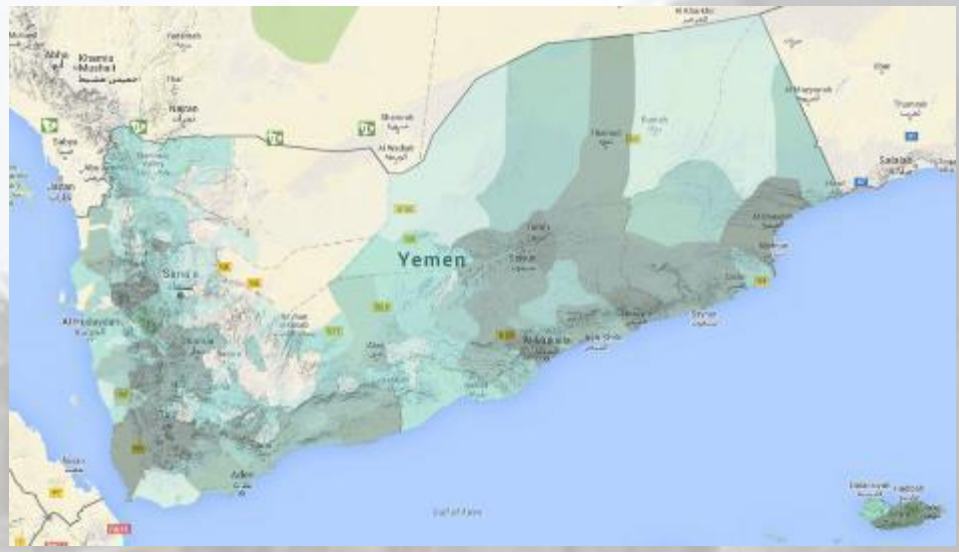
4126 deaths

3 billion US$ estimated losses

22392 houses destroyed

37311 houses damaged

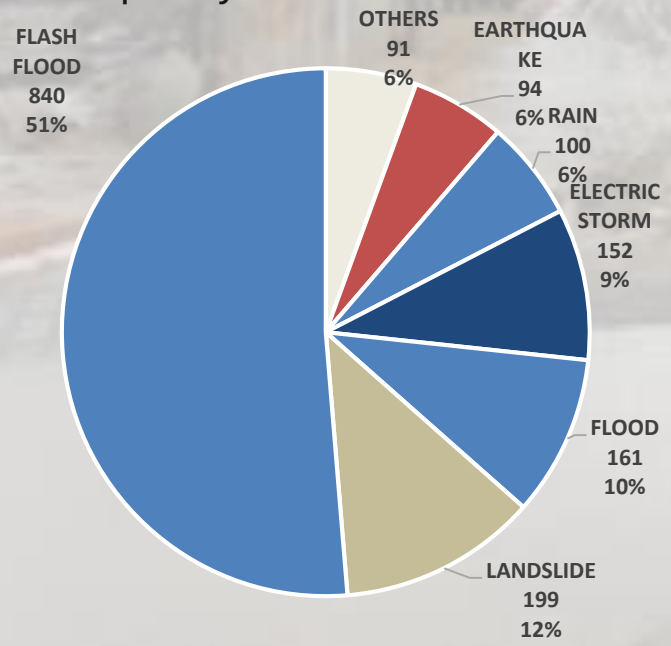
20200 ha of crops damaged



Spatial footprint of frequency

No data
< 1
1-2
2-4
4-7
7-15
> 15

Frequency



Hydro-meteorological related impacts:

95% of all records (out of which 51% of records refer to flash flood)
Flash flood is the deadliest disaster.
97% of 3 billion USD due to flash and flash floods events.

Sendai Framework Monitoring

- Disaster loss data can be used for the Sendai Framework Monitor starting January 2018
- Establishes baselines for measurements against the Sendai Framework's targets:
  - Target (a): 'reduce disaster mortality'
  - Target (c): 'reduce economic loss/GDP'
- Disaster loss data will lead to risk-informed planning, which in turn will lead to the achievement of target (e): 'increase the number of countries with national/local DRR strategies by 2020'

Challenges

- Data is limited (all loss databases in the region are only up to 2012/2013)
- Further investments and efforts are needed to update, enhance, and harmonize the national loss databases
- Better understanding of past losses, and risk levels including climate change impact is needed to empower policy making.

Recommendations

1. Invest

- Historical loss databases
- High quality data on hazard, exposure, and vulnerability

2. Share

- Data is more valuable with more stakeholders
- Widespread, understandable, easy to access, ideally open to public, and using online platforms.
- Enable the general public to understand disaster risk and climate change

3. Build Capacities (to use and understand)

- Availability for decision makers, public and private sectors
- Education and training in understanding risk data
- Further analysis to provide more accurate maps

RICCAR
Regional Initiative for the Assessment of Climate Change Impacts on Water Resources and Socio-Economic Vulnerability in the Arab Region

UNISDR
The United Nations Office for Disaster Risk Reduction

Thank You!