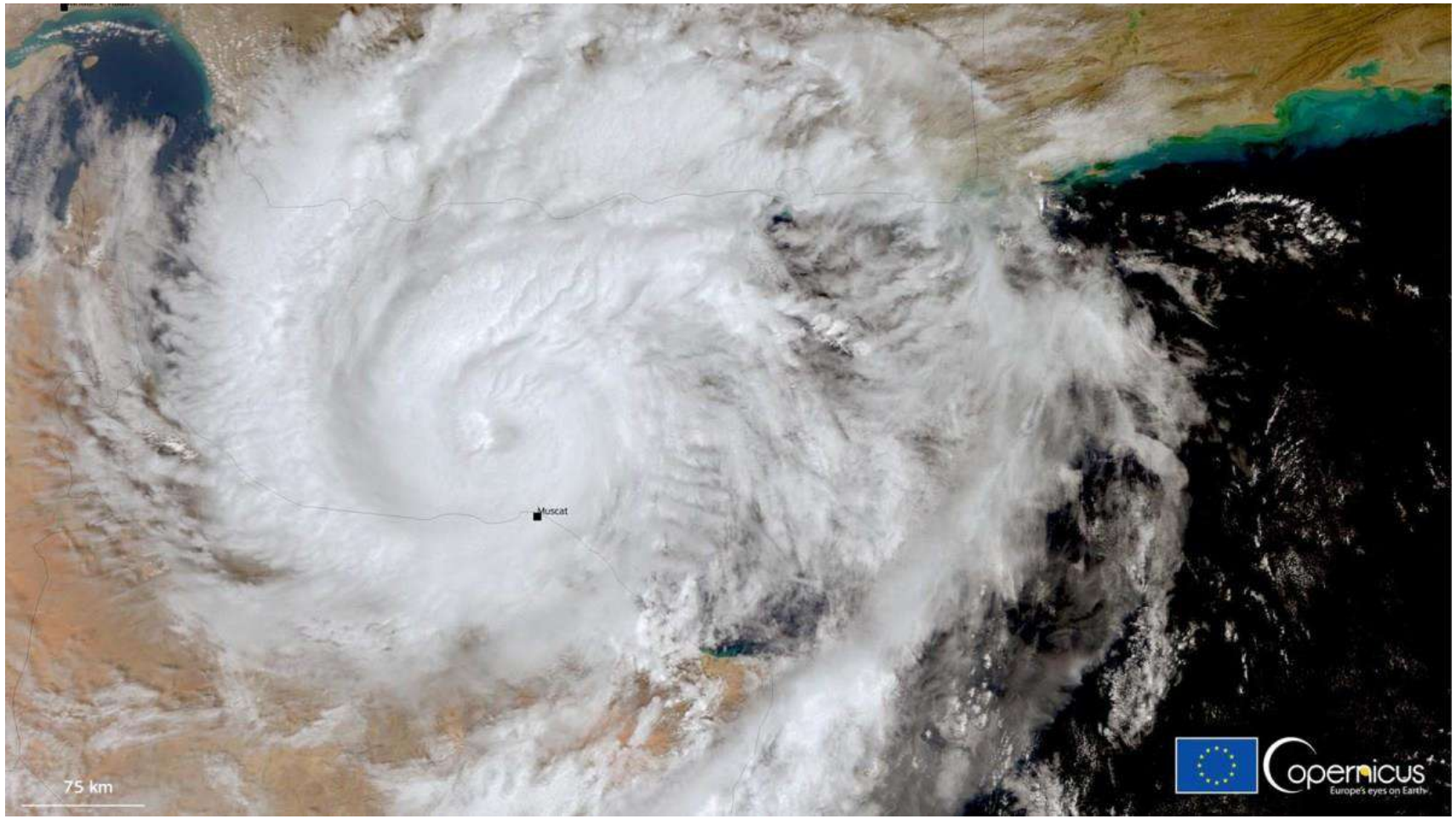
The Human Right to a Healthy & Sustainable Environment

Why did we change international law and what does it imply for Arab States?



Cyclone Shaheen, in 2021, over Oman, the UAE and Iran. Satellite imagery courtesy of Copernicus.

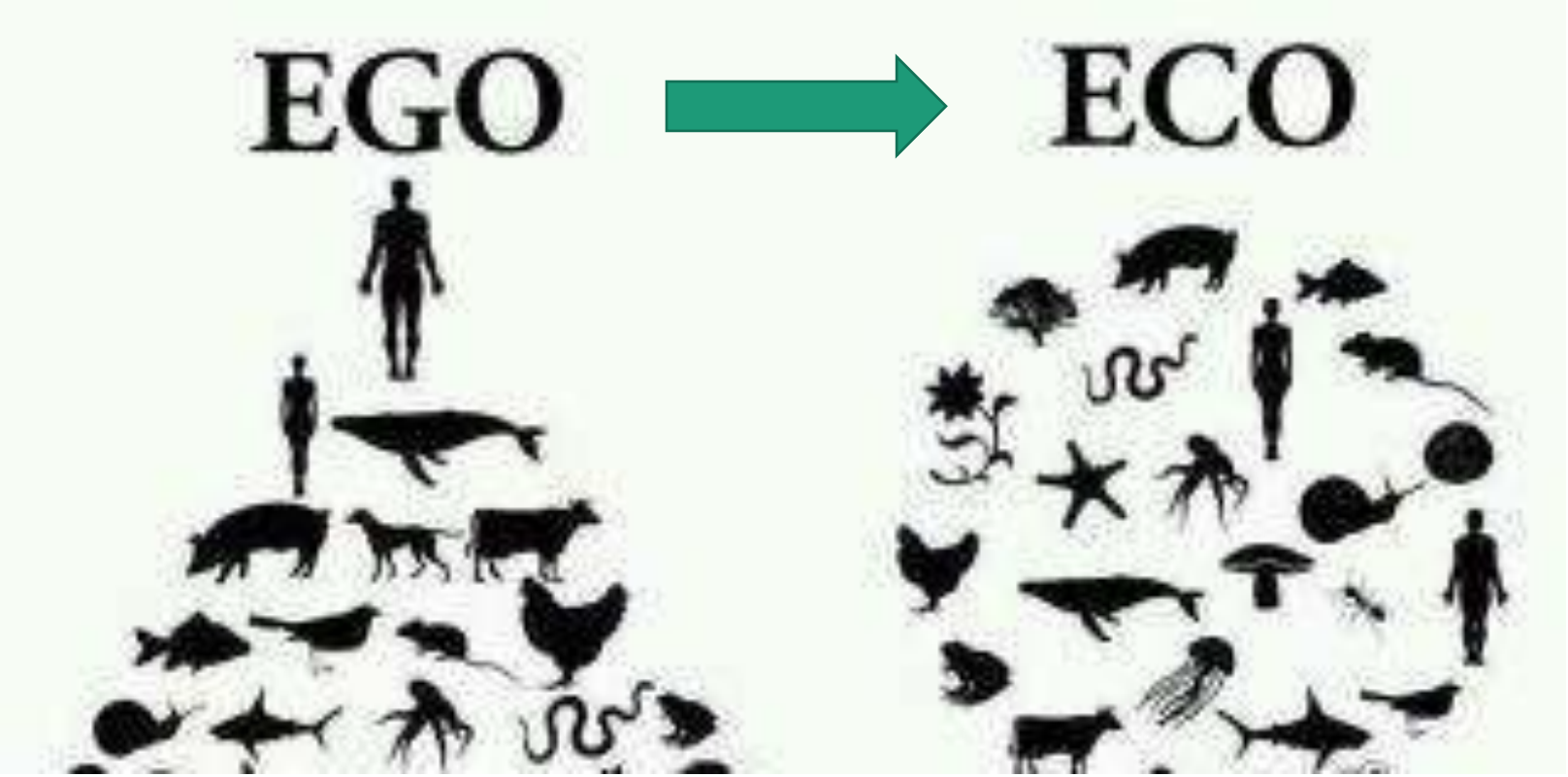
Introduction

- On 7th October 2021, the United Nations Human Rights Council established for the first time a resolution (48/13) that stated that a clean, healthy and sustainable environment is a human right.
- Through a second resolution (48/14), the Council also increased its focus on the human rights impacts of climate change by establishing a Special Rapporteur dedicated specifically to that issue.
- This presentation will focus on (1) why we reached this recognition of a healthy environment as a human right in international law, and then on (2) what it means for Qatar and other Arab countries.

(1) why did we reach this recognition of a healthy environment as a human right in international law?

“Law is a reflection of the changing world outlook”

(Prof. Joord)



Due to the multiplication of disaster related to climate change (immense wildfires, heatwaves, coastal flooding, etc.) and because of the COVID crisis, citizens and decision-makers all around the world have increasingly started to see the world as a single environment. In it, Man is one element among many, and if he disrupts the rest of the global eco-system, humans’ own health will eventually suffer from it.

Design’s source: Permaculturepower association.
http://permaculturepower.wordpress.com/2012/03/15/wrong-right/)

Development of the foundations of modern UN protection system (a selection)

Protecting individuals via human rights

- 1948: Universal Declaration of Human Rights (UDHR)
- 1966: Covenant on Civil and Political Rights (CCRR) - classic rights

  Covenant on Economic, Social and Cultural Rights (CESCR)
- Convention on the Elimination of All Forms of Racial Discrimination
- 1979: Convention on the Elimination of All Forms of Discrimination against women
- 1989: Convention on the Rights of the Child

Protecting the environment via international agreements

- 1972: the Declaration of the United Nations Conference on the Human Environment
- 1992: the Rio Declaration on Environment and Development
- 2000: Millennium Development Goals
- 2002: Johannesburg Declaration on Sustainable Development
- 2015: Paris Agreement on Climate Change
- Sustainable Development Goals

2021: UN Human Rights Council established via a resolution (48/13) that a clean, healthy and sustainable environment is a human right.

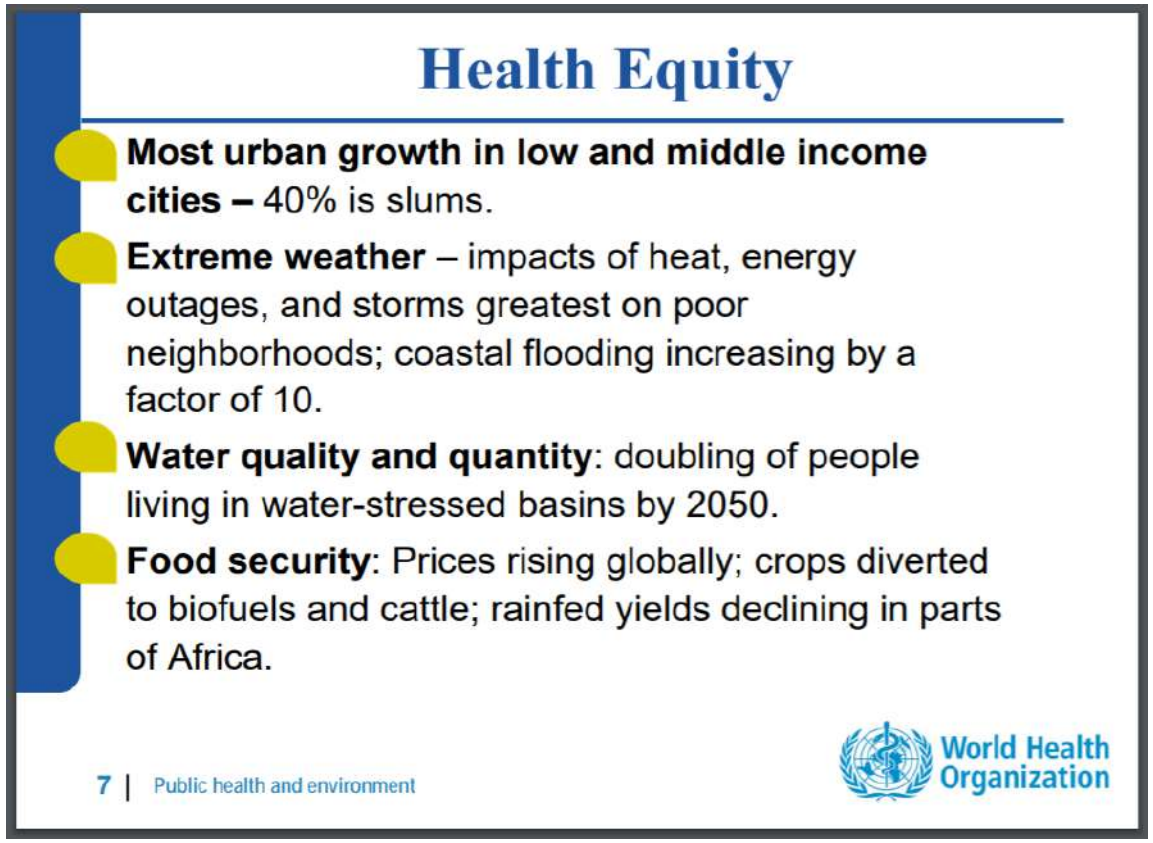
According to the World Health Organization

- According to WHO (2018), 24% of all global deaths (nearly 13.7 million deaths) per year are linked to the environment, due to risks such as air pollution and chemical exposure, but also increasing storms and devastating flooding.

Source: WHO. (2018). *Preventing disease through healthy environments: a global assessment of the burden of disease from environmental risks*. Retrieved from: https://www.who.int/publications/i/item/9789241565196.

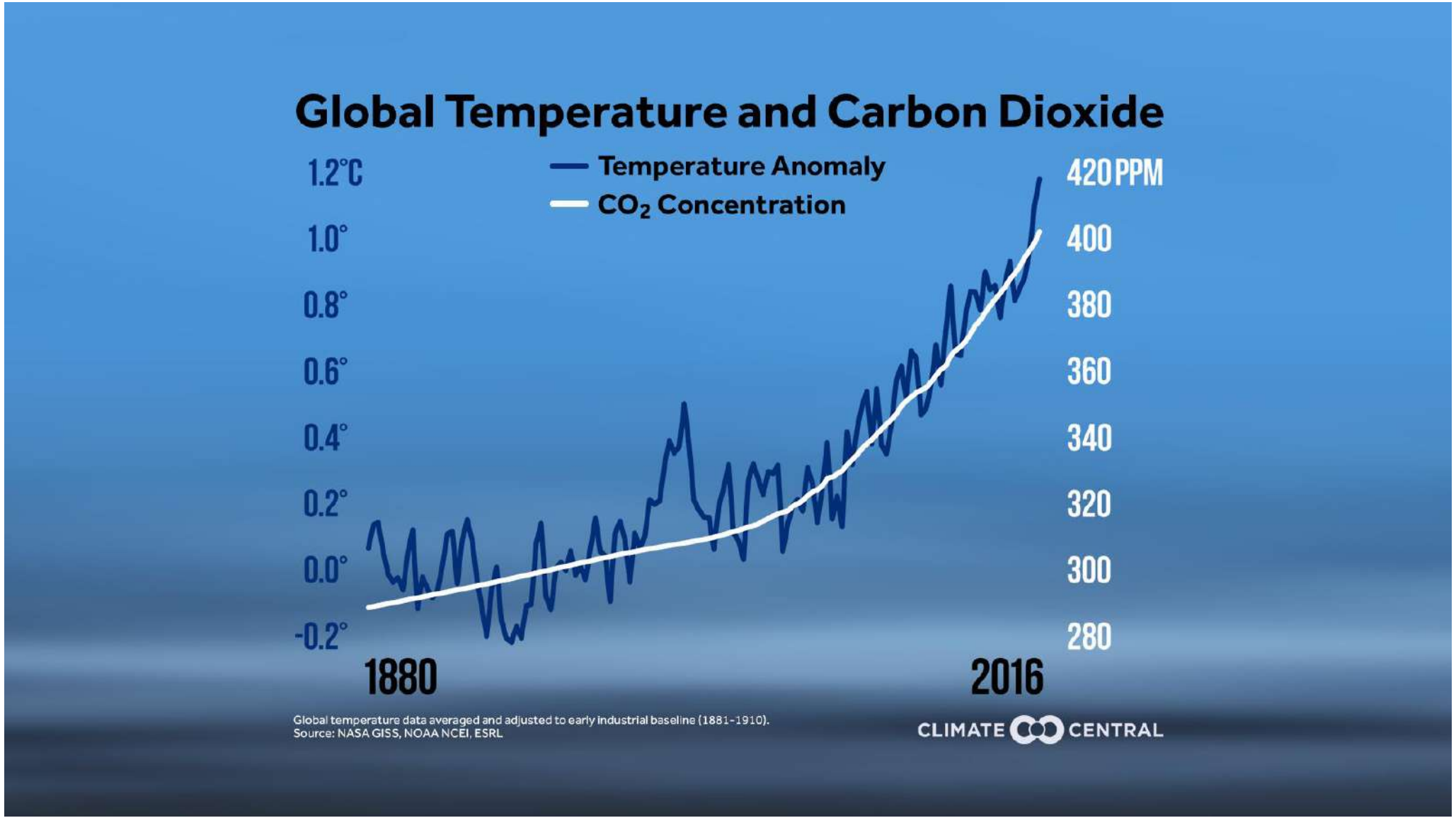
According to the World Health Organization

Many WHO publications have now highlighted the links between a degraded environment and health hazards. See e.g., WHO (2019)

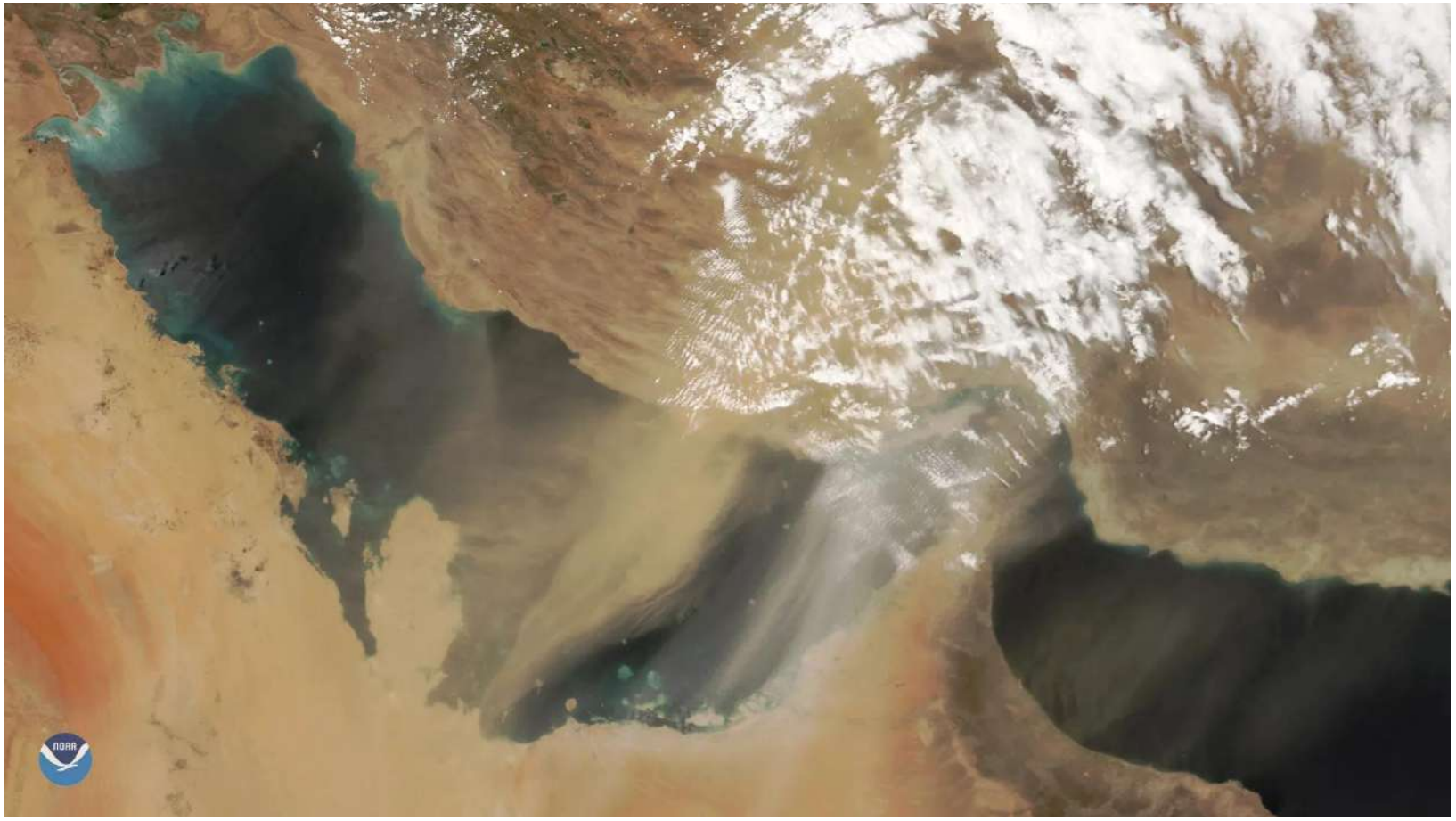


Source: WHO (2019). Environmental health in the BRICS – linking health, equity and climate Findings from the WHO Health in the Green Economy initiative. Retrieved from: https://www.who.int/global_health_histories/seminars/presentation56.pdf

المؤشرات: أوقات اكثر حرارة
(According to NASA and NOAA)



The fast-growing Arabian Gulf cities — such as Doha, Abu Dhabi, Dubai, and Kuwait — are facing an increase in dust storms

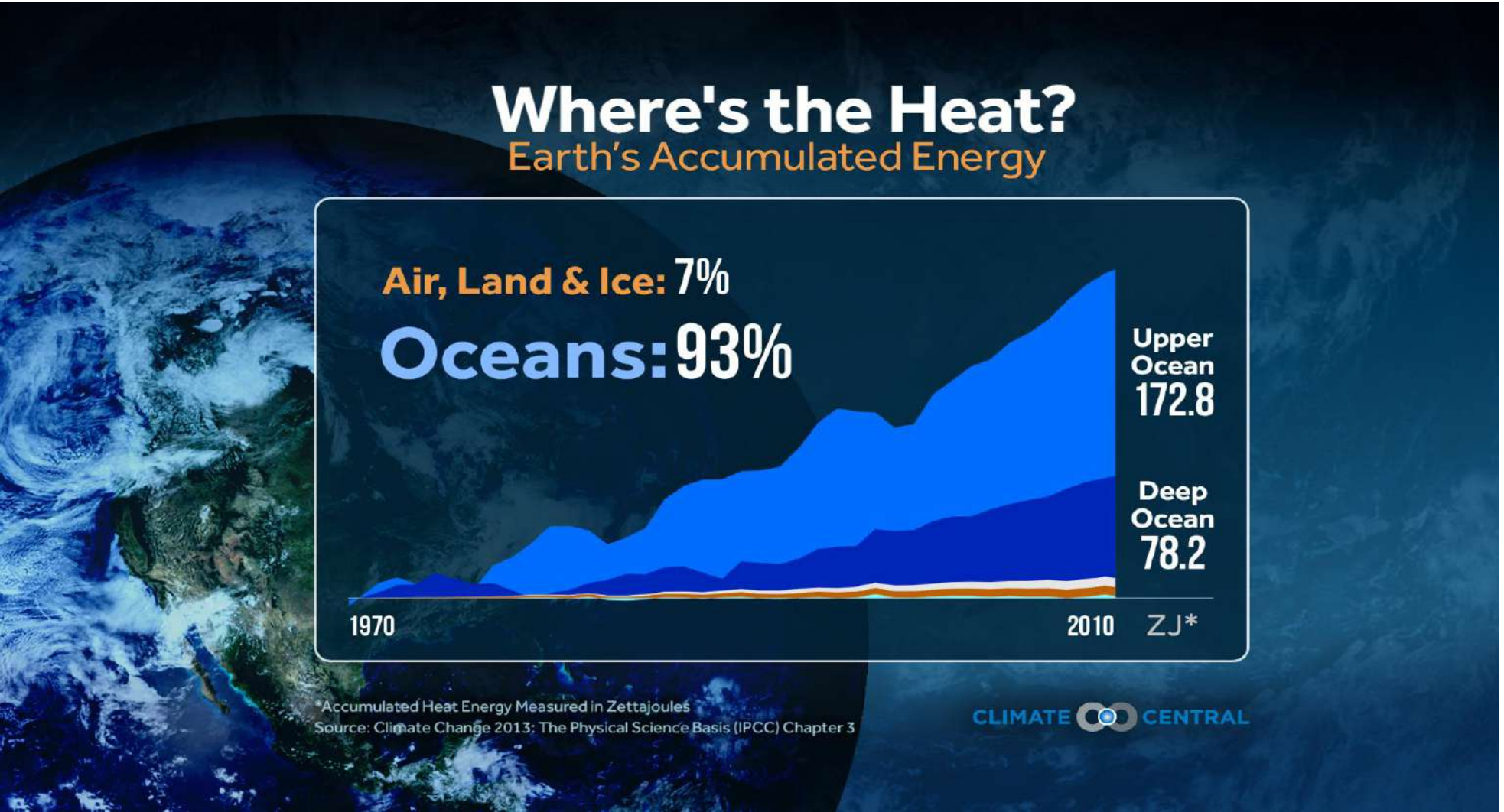


See e.g., Hermida, L., Merino, A., Sánchez, J. L., Fernández-González, S., García-Ortega, E., & López, L. (2018). Characterization of synoptic patterns causing dust outbreaks that affect the Arabian Peninsula. *Atmospheric Research*, *199*, 29-39.

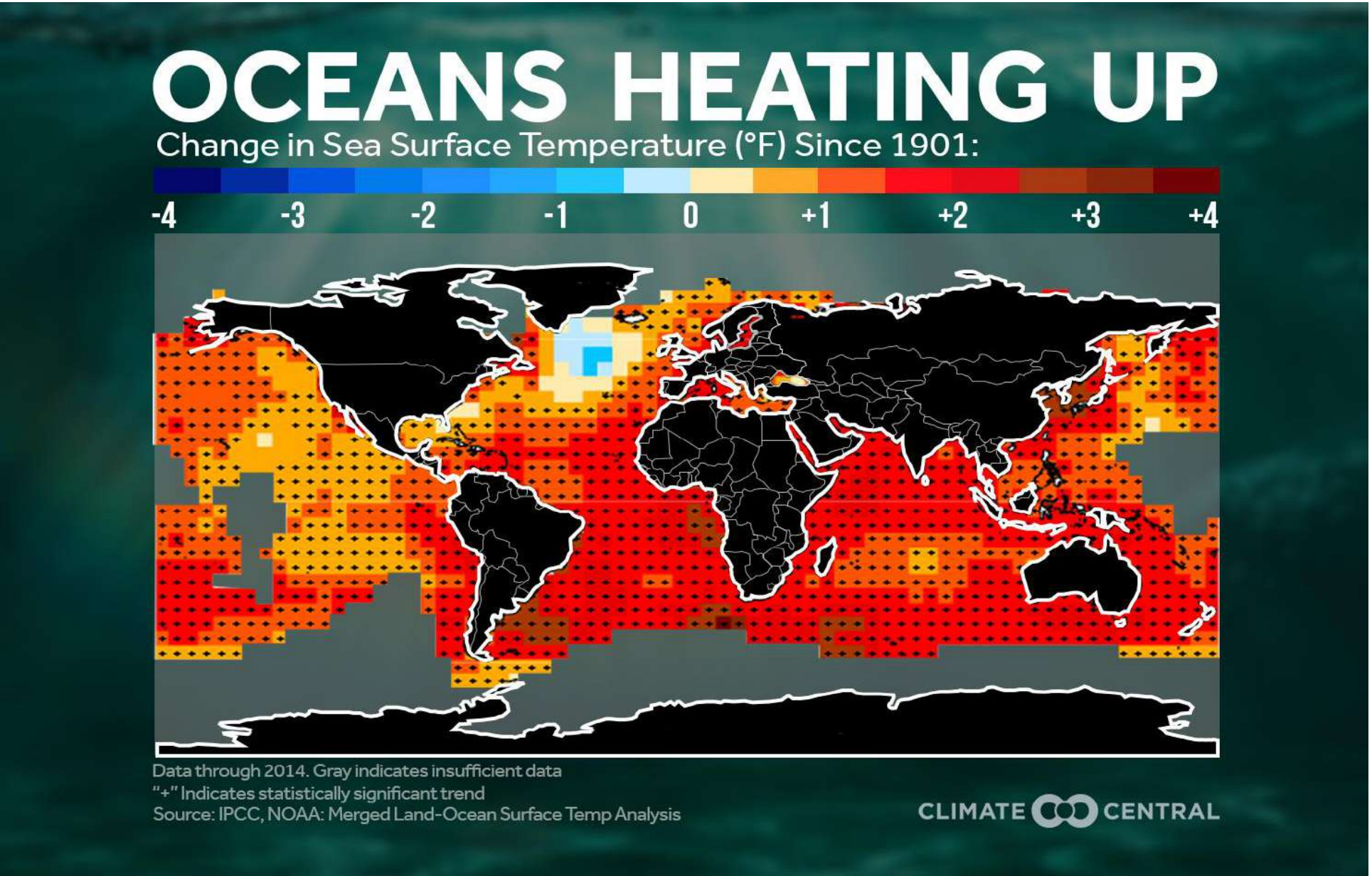
According to the WHO

- "Airborne dust presents serious risks for human health. Dust particle size is a key determinant of potential hazard to human health. Particles larger than 10 µm are not breathable, thus can only damage external organs – mostly causing skin and eye irritations, conjunctivitis and enhanced susceptibility to ocular infection. Inhalable particles, those smaller than 10 µm, often get trapped in the nose, mouth and upper respiratory tract, thus can be associated with respiratory disorders such as asthma, tracheitis, pneumonia, allergic rhinitis and silicosis. However, finer particles may penetrate the lower respiratory tract and enter the bloodstream, where they can affect all internal organs and be responsible for cardiovascular disorders. A global model assessment in 2014 estimated that exposure to dust particles caused about 400 000 premature deaths by cardiopulmonary disease in the over 30 population."

Oceans Are Warming



- Most of the warmth has gone into the oceans, not atmosphere



Ocean temperatures have risen across the globe in the last century

SIXTH ASSESSMENT REPORT

Working Group I – The Physical Science Basis

ipcc

INTERGOVERNMENTAL PANEL ON climate change

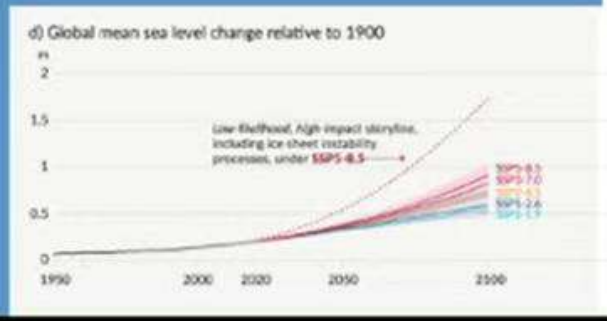
WMO UNEP

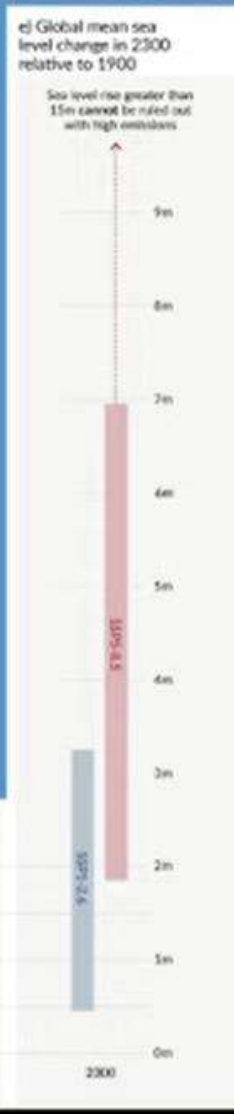
NIOZ

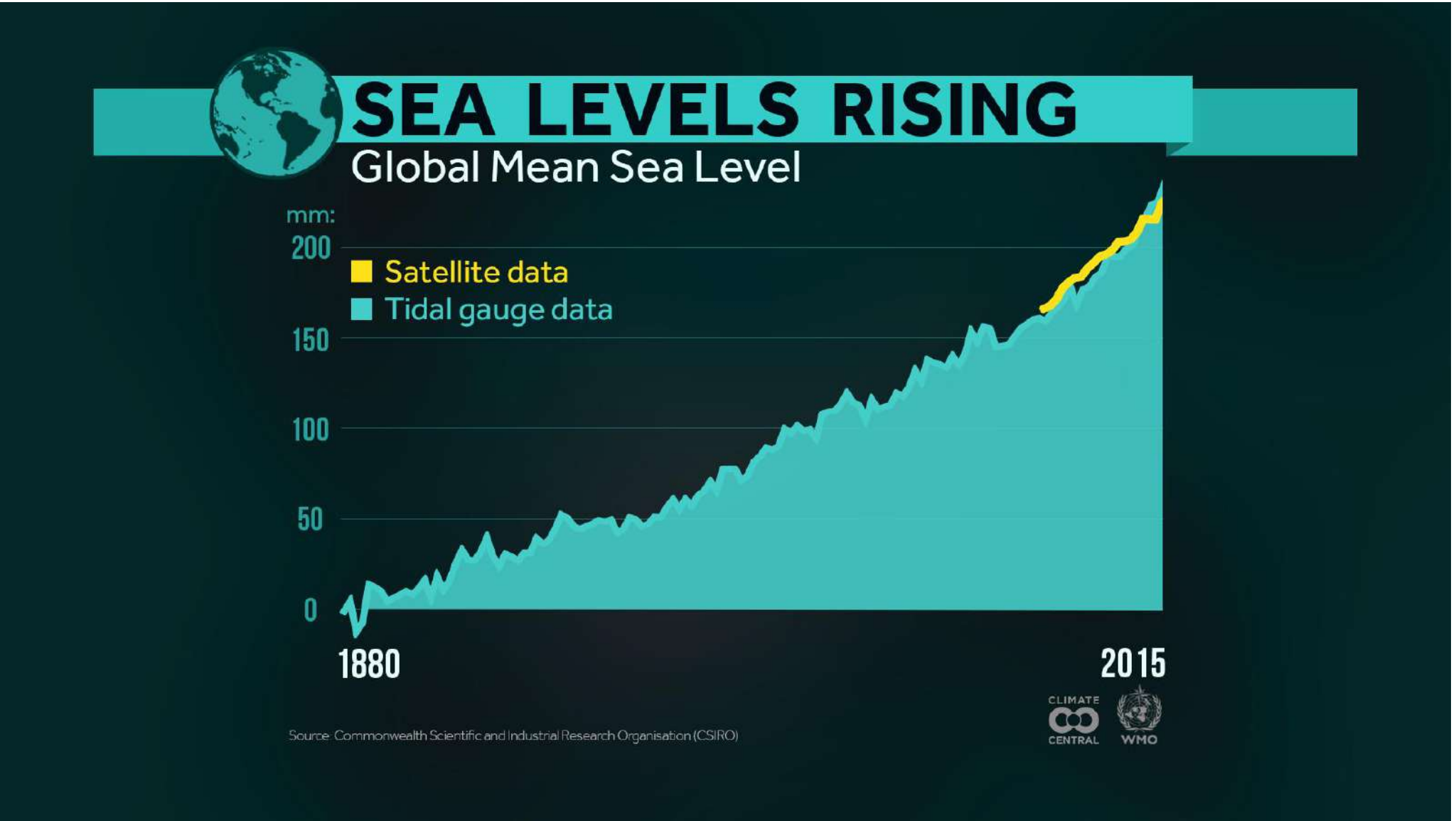
TAKE HOME MESSAGES

- Sea level will continue to rise throughout the 21st century and beyond
- The rate of sea-level rise is strongly determined by the amount of greenhouse gas emissions
- Deep and rapid emission reduction is needed to minimize sea level rise
- Even under strong emission reductions, sea level will continue to rise due to slow responding processes, and can still amount to 1-3 m by 2300

- مستوى سطح البحر سوف يستمر بالارتفاع
- معدل ارتفاع سطح البحر مرهون بكمية انبعاثات الغازات الدفيئة
- تقليل الانبعاثات ضروري وبسرعة لتخفيف شدة الزيادة
- حتى في ظل تخفيف الانبعاثات بشكل كبير، ارتفاع مستوى سطح البحر لا مفر منه، بسبب التأخر في تخفيف الانبعاثات

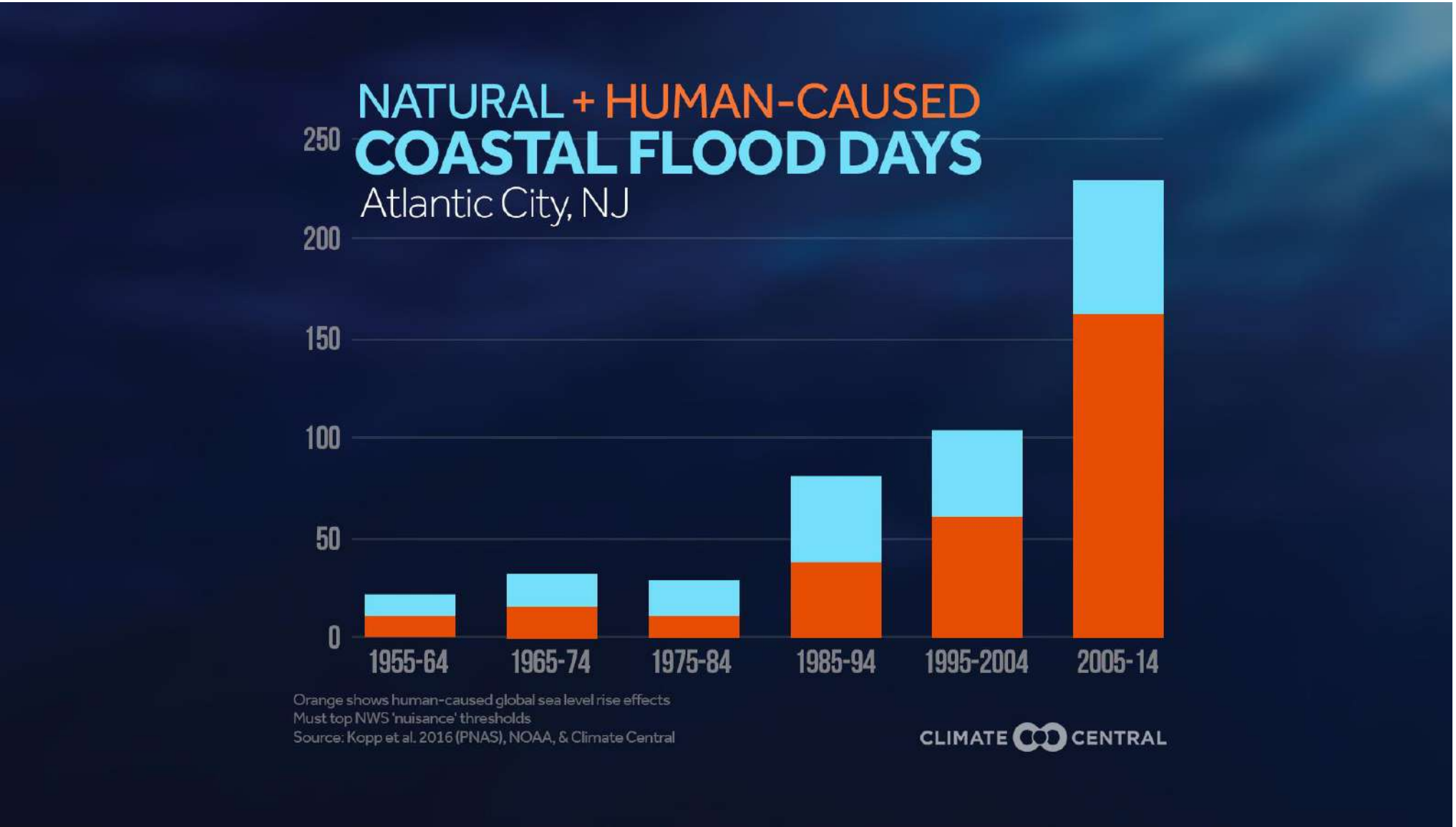






Caused by:

- Warm, expanding waters
- Melting ice sheets (Antarctica, Greenland)
- Melting glaciers



- Higher seas have led to more coastal flooding*, with road closings, overwhelmed storm drains, compromised infrastructure.
- *(Generally about 1.5’ above high tide)

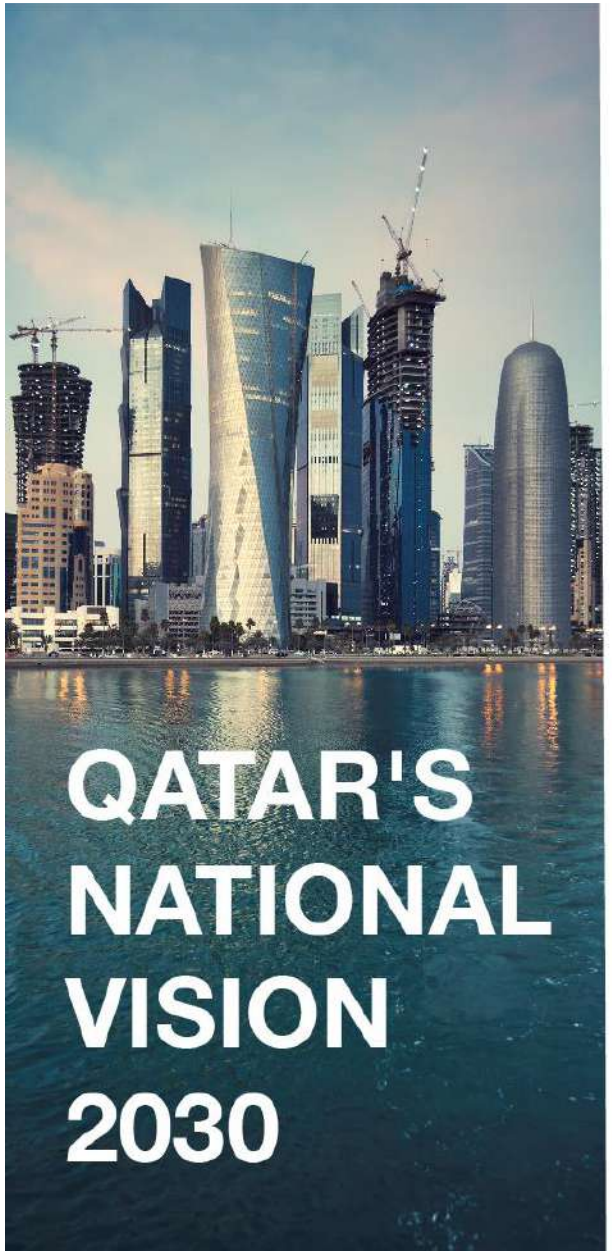
- *“B.2 Many changes in the climate system become larger in direct relation to increasing global warming. They include increases in the frequency and intensity of hot extremes, marine heatwaves, and heavy precipitation,* (…) *droughts in some regions, and proportion of intense tropical cyclones* (…).”

(IPCC, 2021, p.19)

- العديد من التغيرات في النظام المناخي تصبح متفاقمة أكثر مع زيادة ظاهرة الاحتباس الحراري. التغيرات تتضمن زيادة في شدة موجات الحرارة المتطرفة، وموجات الحر البحرية وشدة هطول الامطار، بالإضافة إلى موجات جفاف في بعض المناطق بالإضافة إلى زيادة شدة الأعاصير في مناطق أخرى.

(IPCC, 2021, p.19)

(2) what does it mean for Qatar (and other Arab countries)?



QATAR'S NATIONAL VISION 2030

The national vision aims to transform Qatar into an advanced country by 2030, capable of sustaining its own development and providing a high standard of living for its population and future generations.

The state of Qatar aims to achieve this through the following four pillars.

مكتب الإتصال الحكومي
Government Communications Office

Human development

Development of all Qatar's people to enable them to sustain a prosperous society

Social development

Development of a just and caring society based on high moral standards, and capable of playing a significant role in the global partnership for development

Economic development

Development of a competitive and diversified economy capable of meeting the needs of, and securing a high standard of living, all its people both for the present.

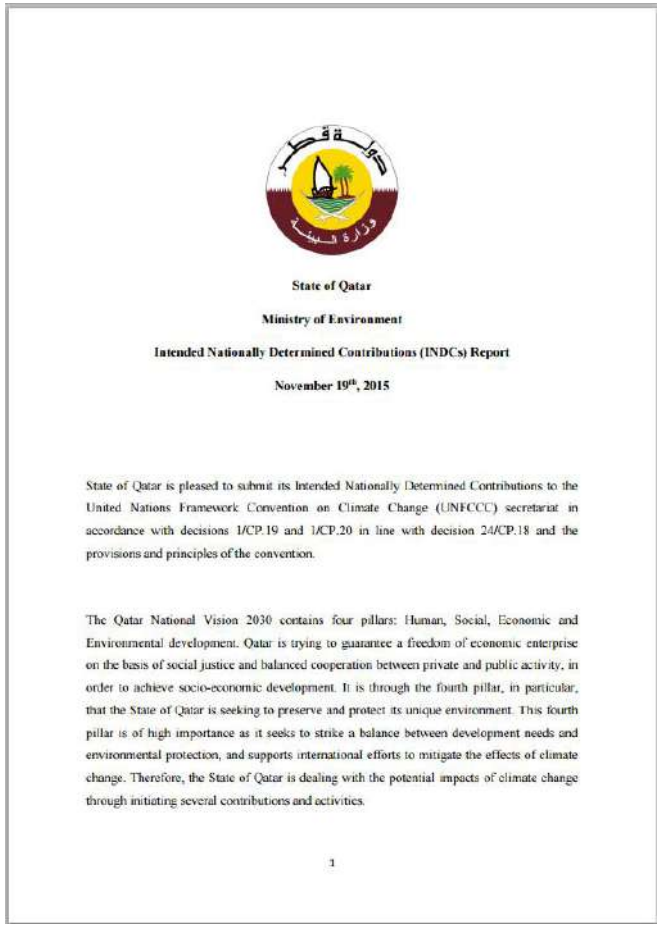
Environmental development

Management of the environment such that there is harmony between economic growth, social development and environmental protection

Sea Level Rise

- *"قطر معرضة بشدة لارتفاع مستوى سطح البحر لأنها معرضة للفيضانات الداخلية بنسبة 18.2٪ من مساحة أراضيها ، عند ارتفاع أقل من 5 أمتار في مستوى سطح البحر ، إلى جانب الآثار السلبية المصاحبة على السكان حيث يعيش 96٪ على الساحل. المناطق."*
- *"Qatar is extremely vulnerable to sea level rise as it is liable to inland flooding of 18.2% of its land area, at less than 5m rise in sea level, along with the associated adverse impacts on the population as 96% are living on the coastal areas."*

Source: Intended Nationally Determined Contributions (INDCs) Report, Ministry of Environment, State of Qatar November 19th, 2015.



State of Qatar

Ministry of Environment

Intended Nationally Determined Contributions (INDCs) Report

November 19th, 2015

State of Qatar is pleased to submit its Intended Nationally Determined Contributions to the United Nations Framework Convention on Climate Change (UNFCCC) secretariat in accordance with decisions 1/CP.19 and 1/CP.20 in line with decision 24/CP.18 and the provisions and principles of the convention.

The Qatar National Vision 2030 contains four pillars: Human, Social, Economic and Environmental development. Qatar is trying to guarantee a freedom of economic enterprise on the basis of social justice and balanced cooperation between private and public activity, in order to achieve socio-economic development. It is through the fourth pillar, in particular, that the State of Qatar is seeking to preserve and protect its unique environment. This fourth pillar is of high importance as it seeks to strike a balance between development needs and environmental protection, and supports international efforts to mitigate the effects of climate change. Therefore, the State of Qatar is dealing with the potential impacts of climate change through initiating several contributions and activities.

1

- ارتفاع سطح البحر يعود لعدة عوامل =

  التمدد الحراري للمحيطات + ذوبان الثلوج والجليد

- بعض الدراسات تشير إلى أن متوسط درجة حرارة الأرض سوف ترتفع ل 3 أو 3.5 درجات. وهي زيادة كافية لتجعل مستوى سطح البحر يرتفع لمترين او اكثر في نهاية هذا القرن.
- ارتفاع مستوى سطح البحر يمكن أن يهدد سلامة وجودة حياة الملاين من السكان في العالم العربي. ماذا عن الدوحة؟

- Sea level rise (SLR) is the result of a combination of factors:

  thermal expansion of oceans (50%) + increase in loss of land ice (glaciers and ice sheets)

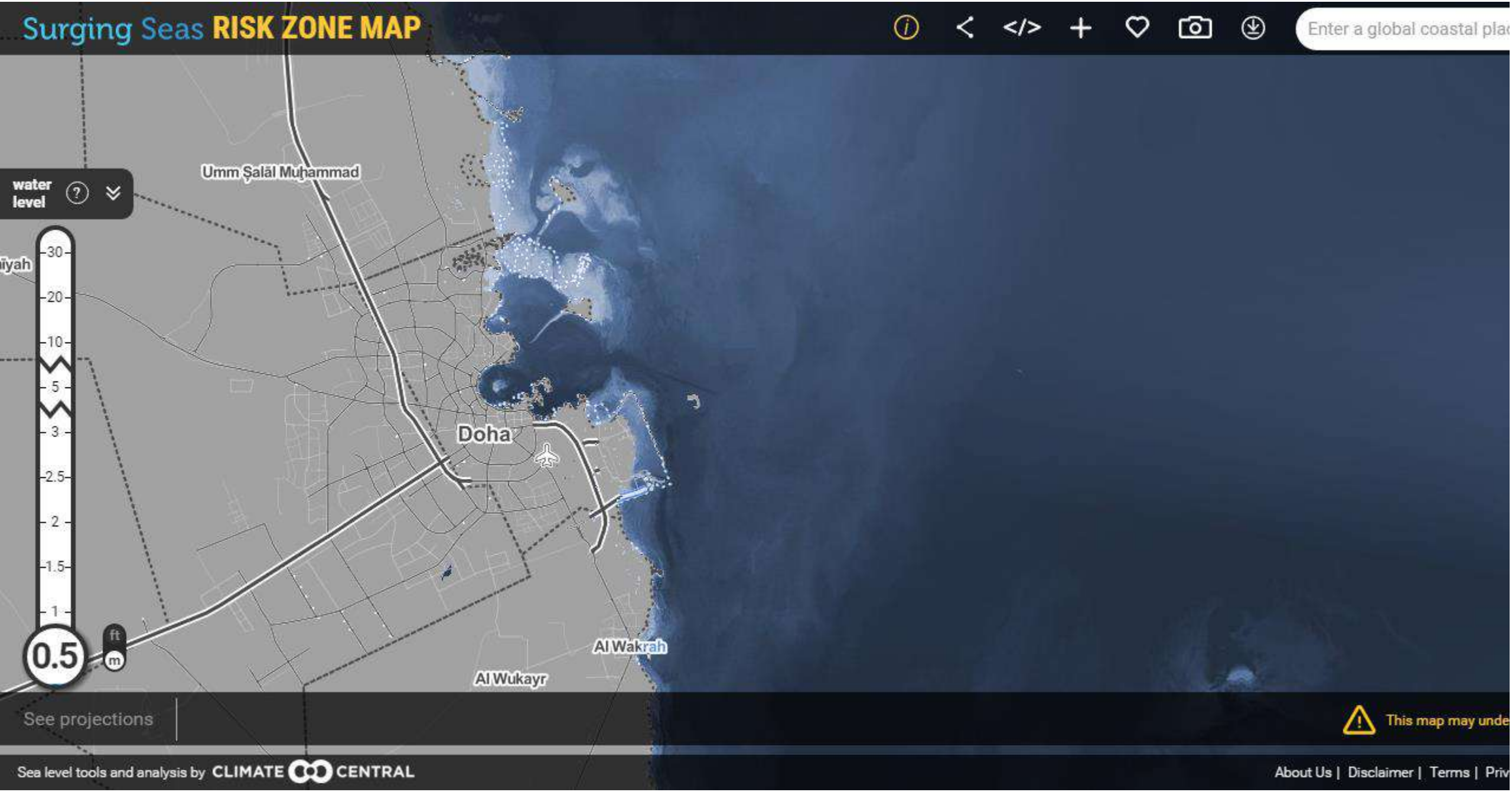
- Some studies consider the world to be on a trajectory of +3 to +3.5 degrees C. by the end of this century — a high level of temperature increase that is likely to cause up two meters of SLR by the by the end of this century and several meters more during the next.
- SLR is expected to directly affect the safety and standards of living of millions of inhabitants of the Arab world’s coastal cities in the decades to come. What about Doha?

Different projections of Sea Level Rise exist, depending on many factors and scientific assumptions

The United Nations latest IPCC report (2021, p.30) shows possibly (up to) 1.8 m by 2100 under SSP8.5.

But some studies, especially when integrating some global environment thresholds, indicate over 3 m under SSP 2.6. (See for instance Hansen, DeConto & Pollard).

The projections on the following slides were made in 2015 for the UNESCO-Qatar University conference on climate change, prior to the Paris Summit on climate change. If climate change continues unabated, a few meters of sea level rise could indeed threaten Qatar’s coastline this Century, maybe within half a century.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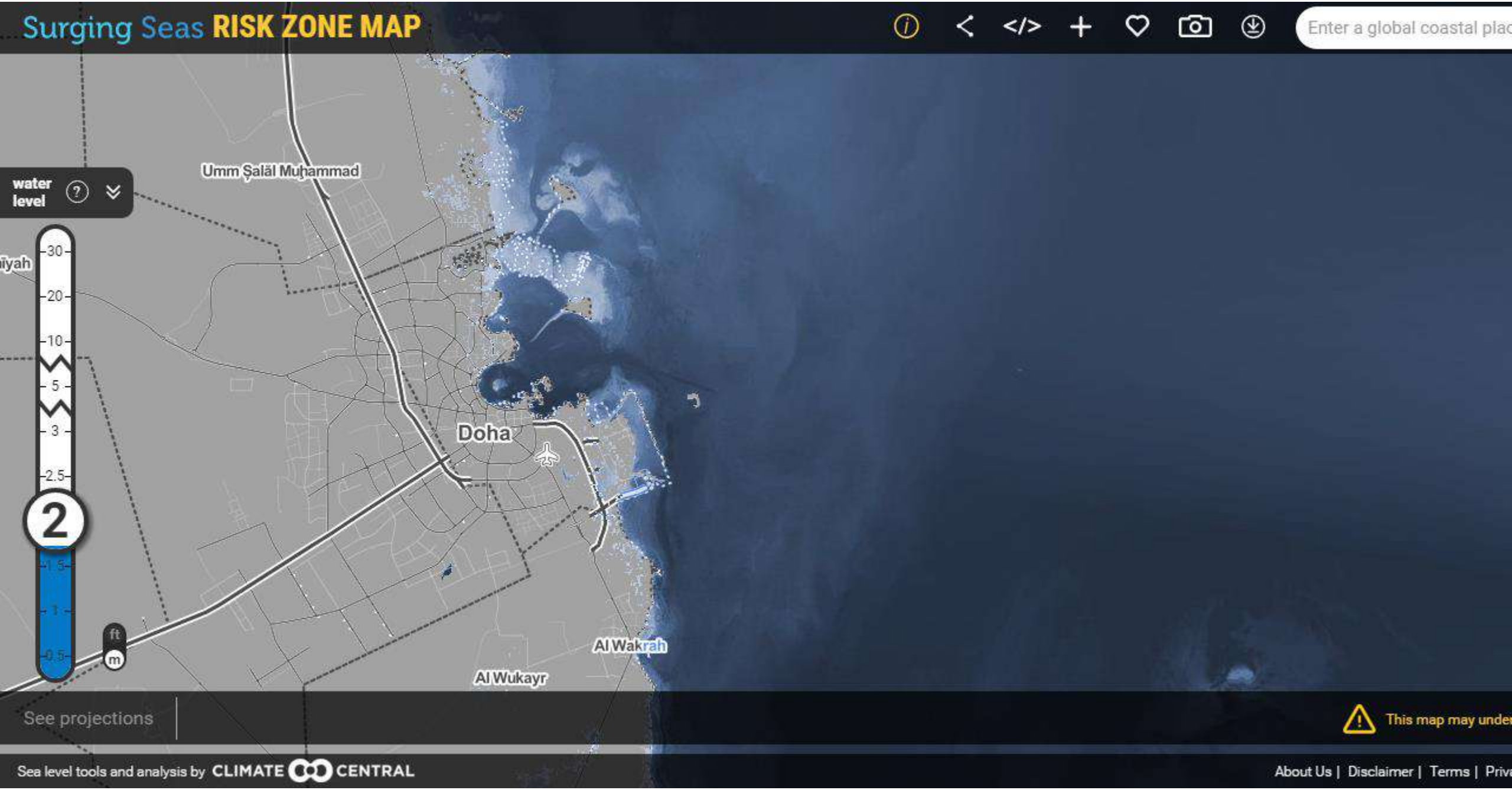
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Risks of Sea Level Rise are compounded in Qatar by

(A) Land subsidence (slow decrease of the general level of the land in some specific areas) &
(B) Extreme Weather Events

(A) Land subsidence findings for Qatar include:

(1) high subsidence rates (-5 to -7 mm/yr) were detected along reclaimed coastal areas south and east Doha (south east of Umm Salal town), areas that are underlain by the Upper Dammam formation chalky limestone;

(2) moderate to high deformation rates (-4 to -6 mm/yr) were observed over the gypsiferous sabkha of Ras Laffan, Al Khor, and along the western coastal areas of Qatar and over the Dukhan depression/oil field;

(3) moderate subsidence rates (-2 to -4 mm/yr) over groundwater-fed (from Rus and Umm er Radhuma aquifers) agricultural fields in north and central Qatar;

(4) spatial correspondence between the distribution of TSE injection wells and moderate subsidence rates (-2 to -5 mm/yr) possibly indicating the dissolutive impact of the injected TSE (water) on the soluble layers in the subsurface; and

(5) depressions inferred from DEM (area: 1 - 5 km2), mostly in the south and eastern areas, lie within or near (100 m) moderate to high subsiding (-2 to -6 mm/yr) areas and could potentially grow into sinkholes."

Publication: American Geophysical Union, Fall Meeting 2018, abstract #G21C-0575,
https://ui.adsabs.harvard.edu/abs/2018AGUFM.G21C0575G/abstract

(B) Extreme Weather Events

- *“B.2 Many changes in the climate system become larger in direct relation to increasing global warming. They include increases in the frequency and intensity of hot extremes, marine heatwaves, and heavy precipitation,* (…) *droughts in some regions, and proportion of intense tropical cyclones* (…).”

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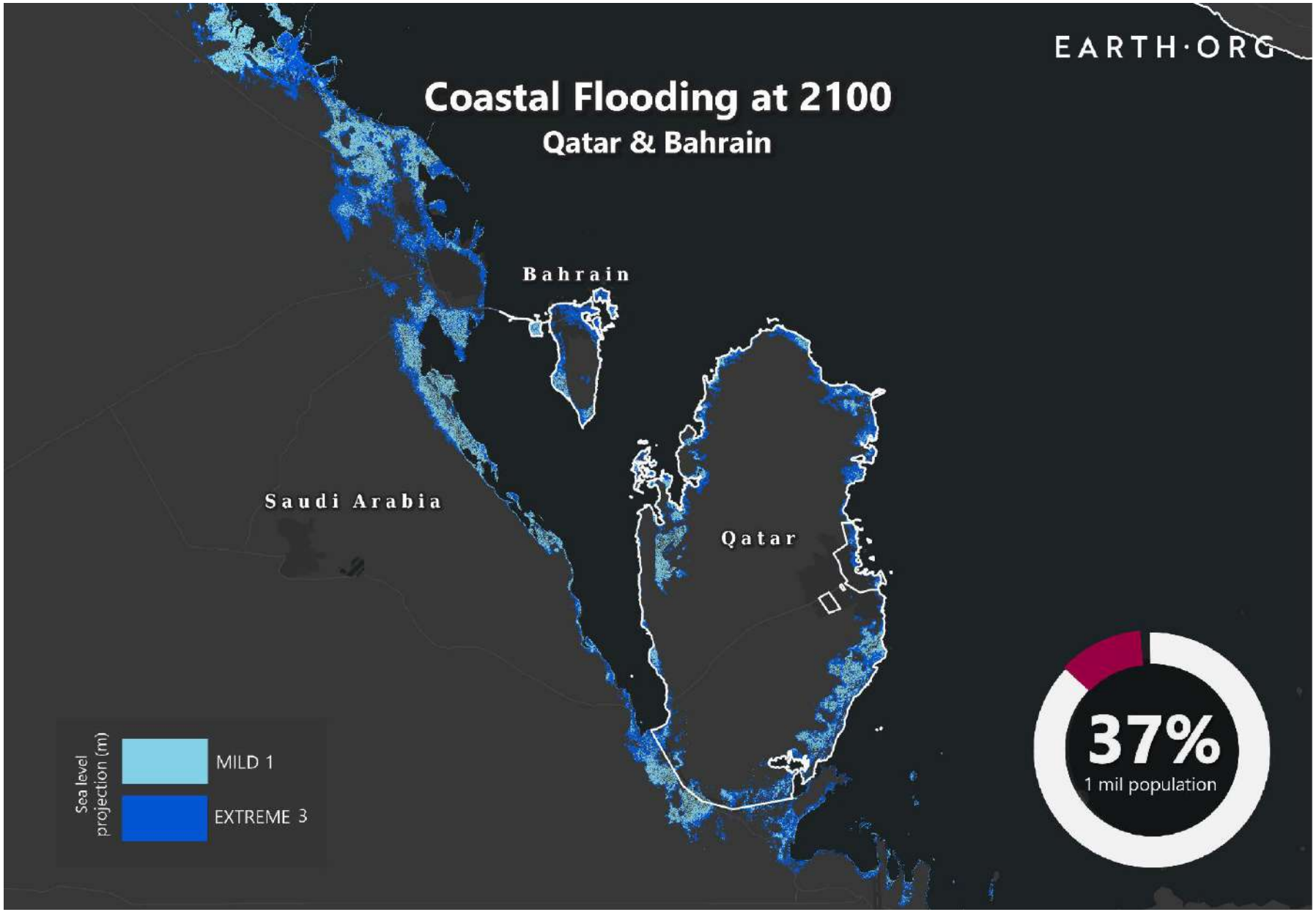
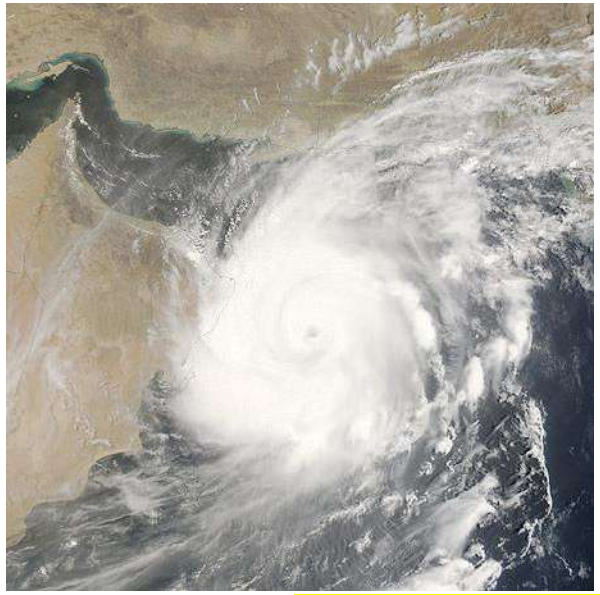


Source: Owen Mulhern (2020). Earth.org. Retrieved from: https://earth.org/data_visualization/sea-level-rise-by-2100-qatar-and-bahrain/

زيادة مخاطر الأحداث البيئية المتطرفة

Increased Extreme Environmental Events in the GCC



Images of Cyclone Gonu, Oman, 2007.

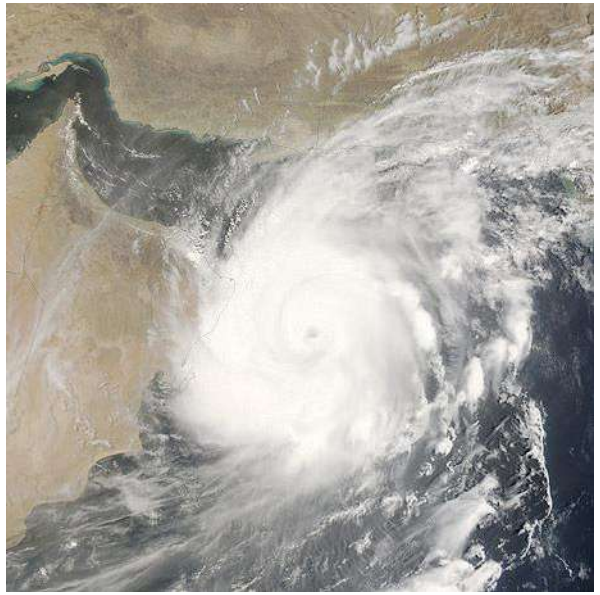
Members of Oman's military repair damage caused by cyclone Shaheen, in Oman, in October 2021. (Oman News Agency/Reuters).

The cyclone killed a dozen persons and may have generated billions in damage.

زيادة مخاطر الأحداث البيئية المتطرفة

Increased Extreme Environmental Events

يؤدي تغير المناخ إلى ارتفاع درجة حرارة مياه الخليج وقد تتحول الأعاصير المدارية إلى حقيقة واقعة فوق الخليج وتؤثر بشكل خطير على قطر.



Climate change is warming up the Gulf waters and **tropical cyclones could become a reality over these waters** (not just the Arabian Sea) **and could dangerously affect Qatar.**

"Grey swan" cyclones — rare tropical storms that are impossible to anticipate from the historical record alone — will become more frequent in the next century for parts of Florida, Australia, and cities along the Persian Gulf, according to a study by the MIT (USA) and published last year in the journal *Nature Climate Change.* here

These extreme tropical cyclones can whip up devastating storm surges, with effects similar to that of Hurricane Katrina, 10 years ago.

إعصار كاترينا واثاره المدمرة

Hurricane Katrina: Devastation in the world’s Richest country (2005)

The cost of KATRINA: 47 Billion USD (in 2005)

Last but not least: The risk of a **black swan**

SLR +

Extreme Environmental Events

Key takeaways

- **There has been a very positive development in the system of the United Nations with the recognition of the Human Right to a Healthy and Sustainable Environment** Now, all Arab states can use this as an opportunity for reforms OR be liable to some inaction.

- **Environmental risks are threatening Qatar's population in terms of health, personal safety and prosperity,** in the short, medium and long term (particularly via temperature increase, sea level rise, and EEEs) .

- **Climate Change Mitigation and Adaptation Solutions exist**, there is no fatality. Choices now are crucially important; delays may increase the cost.

- **Smart Adaptation to climate change risks could be an opportunity for Qatar, such as**:
  - More paths for cycling and walking across the city;
  - Greater levels of reuse of retreated water (TSEs) and greywater;
  - A national mangrove reforestation program building on international successes and learning from failures abroad.
  - Etc.

Thank you for your attention

Main references

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GENERAL ONLINE RESOURCES

Climate Central

www.climatecentral.org

International Panel on Climate Change

https://www.ipcc.ch/

NASA Climate

https://climate.nasa.gov/

UNDP for Arab States

https://www.arabstates.undp.org/content/rbas/en/home/sustainable-development-goals/goal-13-climate-action.html

Word Health Organization

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