

3
ARTIFICIAL INTELLIGENCE (AI) –
2
ENHANCED SPACE SOLUTIONS
1
FOR DISASTER RESILIENCE

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UNOOSA

WORLD SPACE FORUM 2023 | VIC

**PANEL II: ENHANCING THE CONTRIBUTION OF EARTH
OBSERVATION AND ARTIFICIAL INTELLIGENCE FOR FUTURE
EMERGENCY PLATFORMS**



SUPARCO



CASE PRETEXT

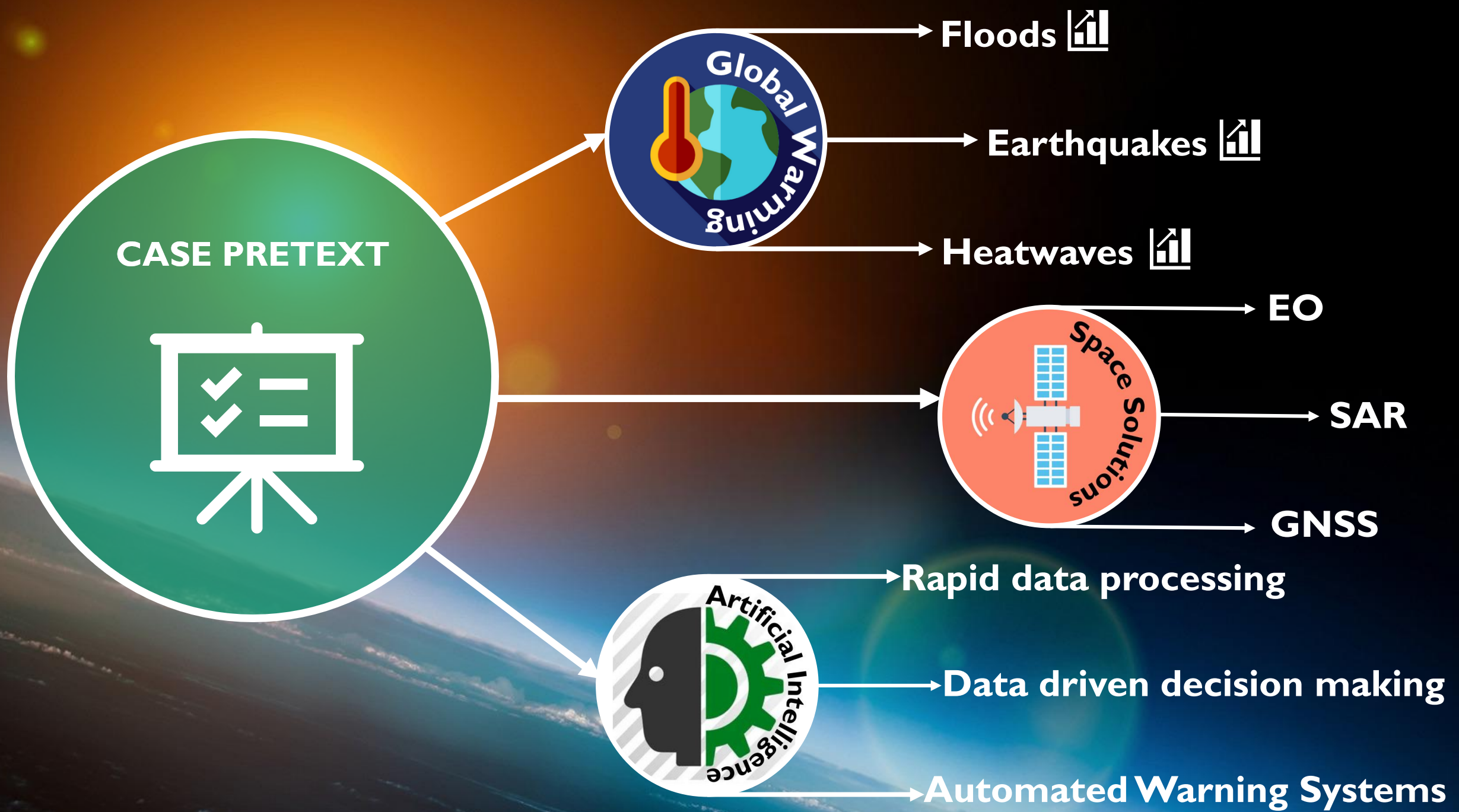


CHALLENGES



RECOMMENDATIONS

PRESENTATION SYNOPSIS



CASE PRETEXT



Floods

Earthquakes

Heatwaves

EO

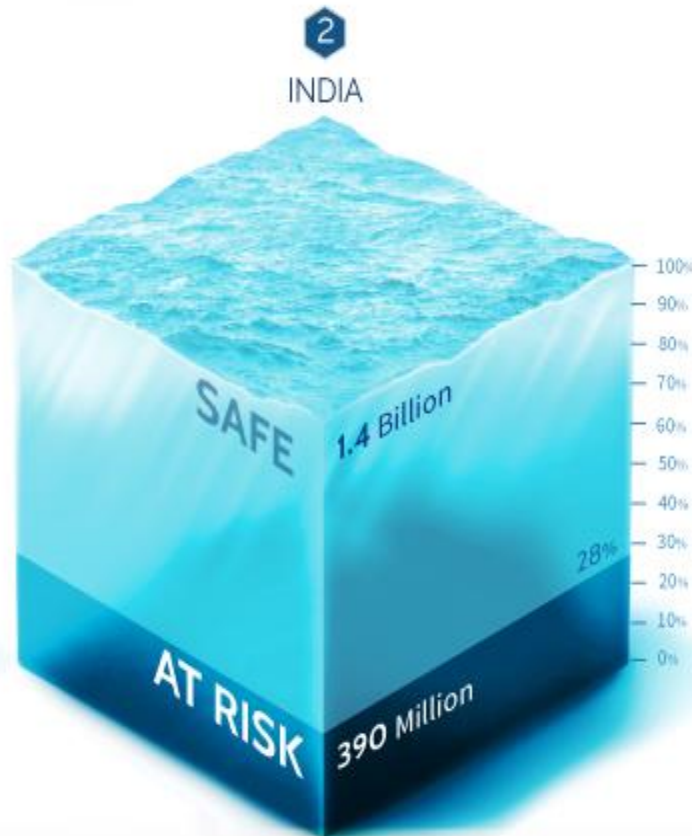
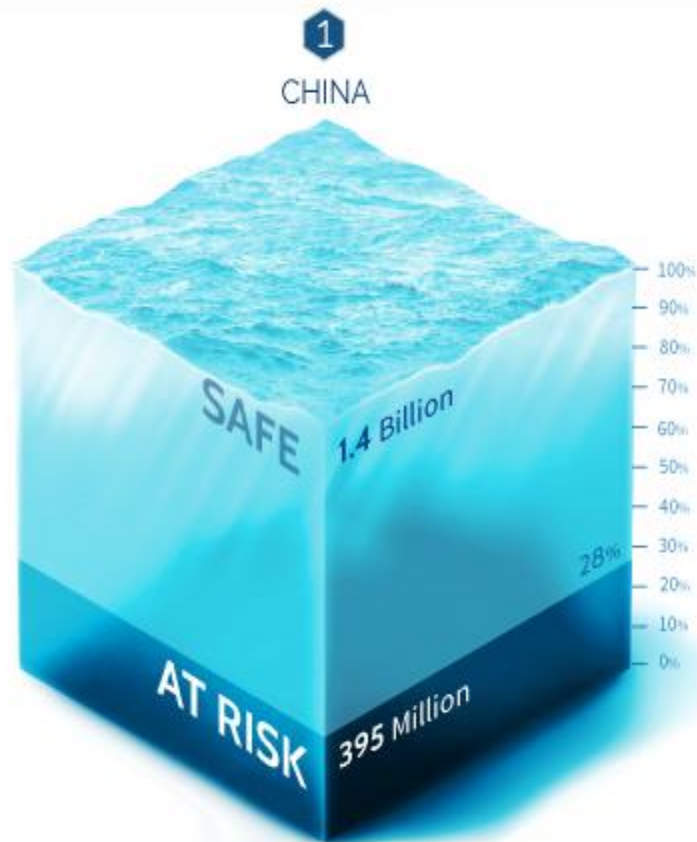
SAR

GNSS

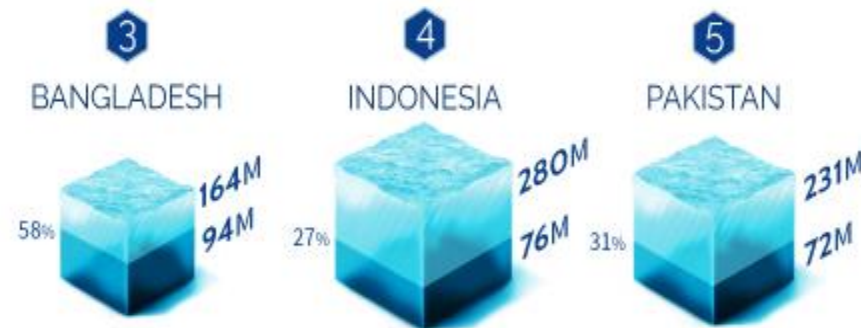
Rapid data processing

Data driven decision making

Automated Warning Systems



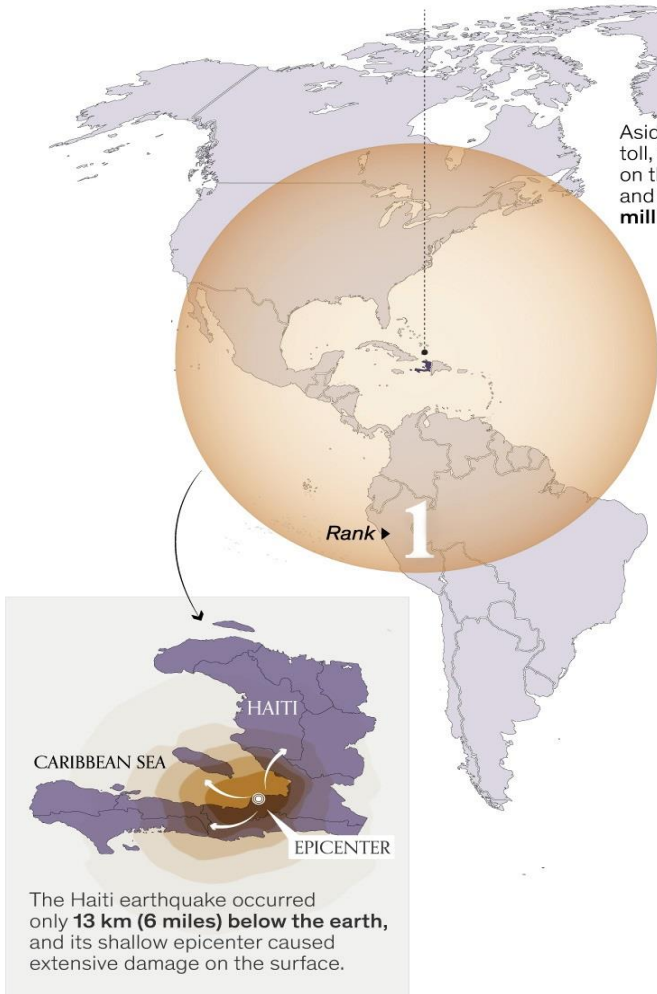
Since June 2022, severe flooding across Pakistan submerged more than one-third of the country, affecting 33 million people and resulting in more than 1,400 deaths.



Source: Rentschler, J., Salhab, M. & Jafin o, B.A. Flood exposure and poverty in 188 countries. Nat Commun 13, 3527 (2022). <https://doi.org/10.1038/s41467-022-30727-4>

COUNTRIES Ranking of FLOODING

Location ▶ HAITI
 Death toll ▶ **316,000** †7.0
 When ▶ JAN 2010



Aside from its high death toll, the 2023 earthquake on the border of Türkiye and Syria left close to **1.5 million** without homes.

TÜRKIYE & SYRIA
50,132 †7.8
 FEB 2023

IRAN
50,000 †6.6
 DEC 2003

CHINA
87,500 †7.9
 MAY 2008

NEPAL
8,800 †7.8
 APR 2015

JAPAN
20,000 †9.0
 MAR 2011

In the aftermath of the Fukushima disaster caused by the Honshu earthquake, uranium prices dropped **60%** in the next 3 years.

INDONESIA
230,000 †9.1
 DEC 2004

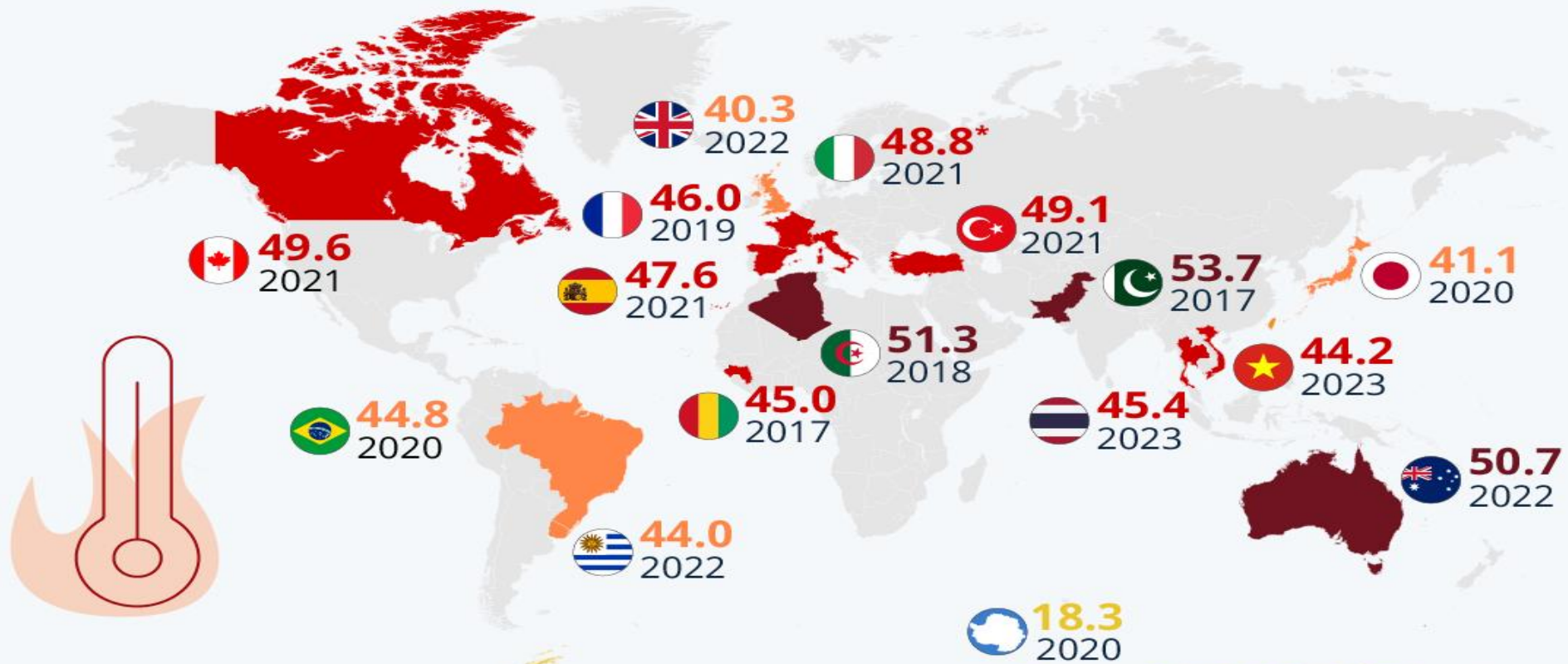
PAKISTAN
80,000 †7.6
 OCT 2005

INDIA
20,000 †7.7
 JAN 2001



Earthquakes ranked by the total deaths caused, including those from secondary events like tsunamis that occurred after the earthquake. Source: NCEI

COUNTRIES Ranking of EARTHQUAKE



As of July 10, 2023.

* European record still being validated by the WMO.

Sources: World Meteorological Organization, media reports, Statista research

COUNTRIES affected by HEATWAVES



CHALLENGES

01

High implementing cost

02

Specialized expertise and skilled professional

03

Technology Gap



Global Platform for assistance to Space & Non-Space fairing nations



Joint Research programs



International Agreements & Policy
making



THANK YOU