

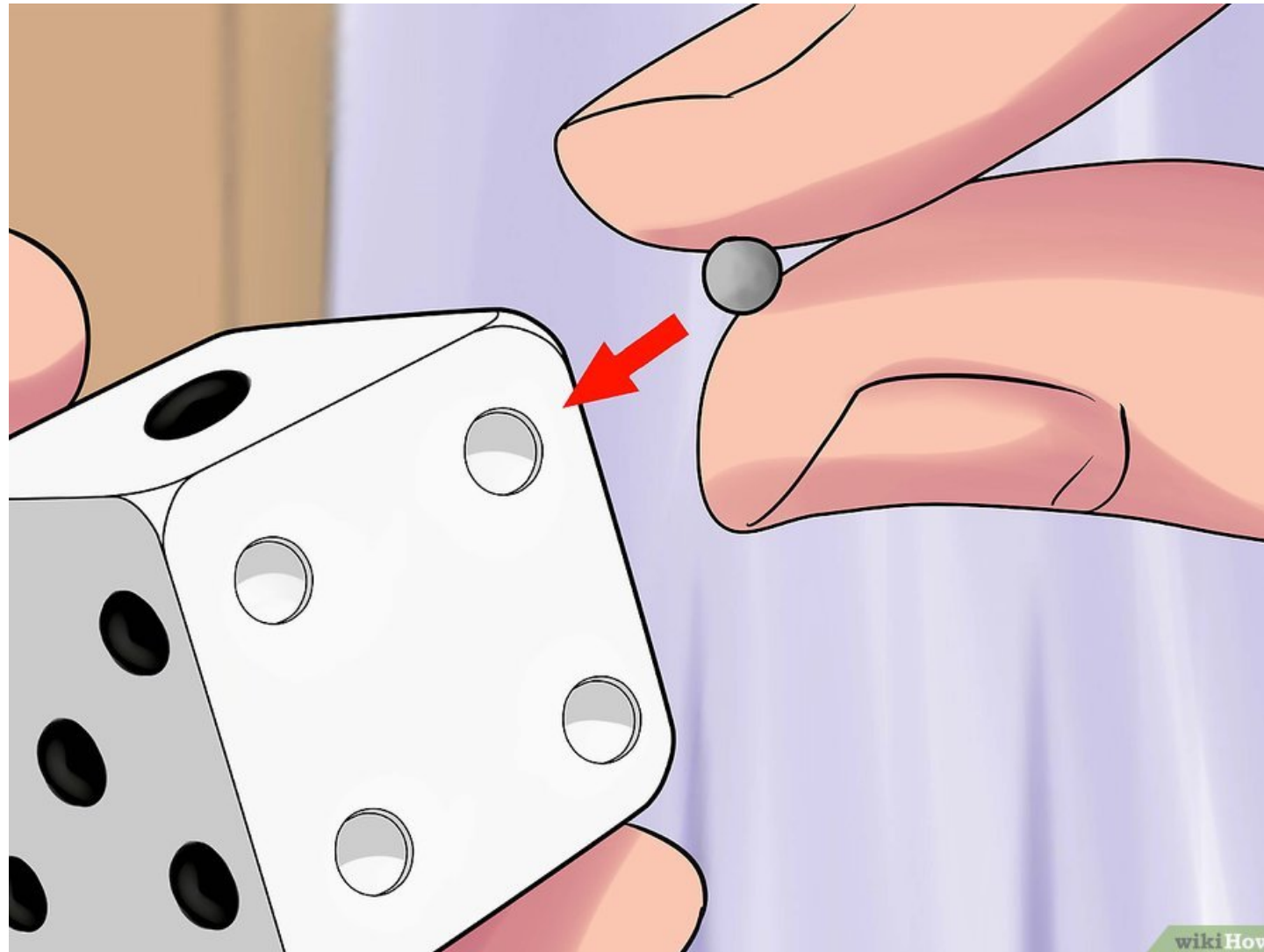
Wo liegen die Risiken des Klimawandels?

Und was ist Risiko überhaupt?

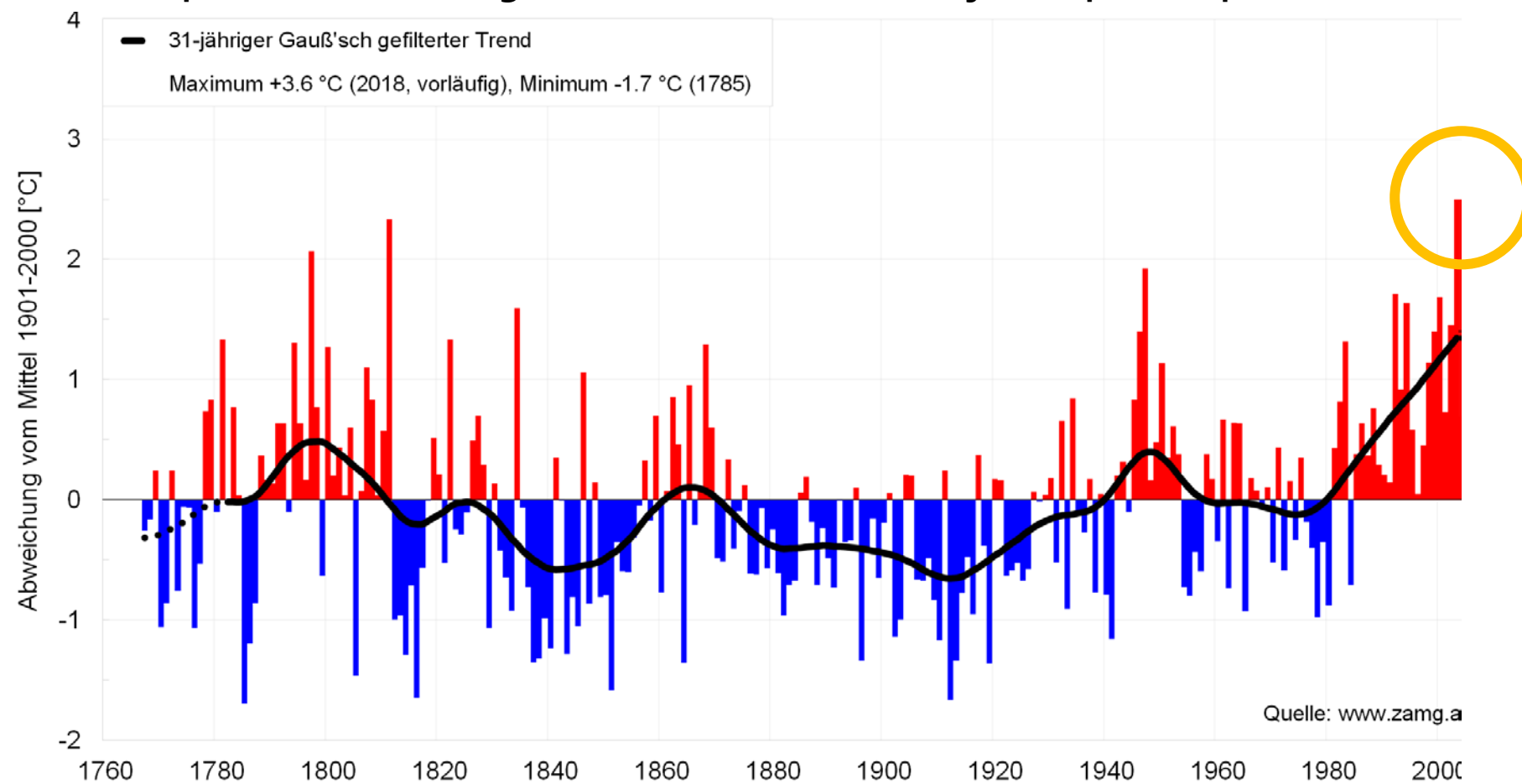
Dr. Stefan Kienberger

Universität Salzburg – Fachbereich für Geoinformatik – Z_GIS

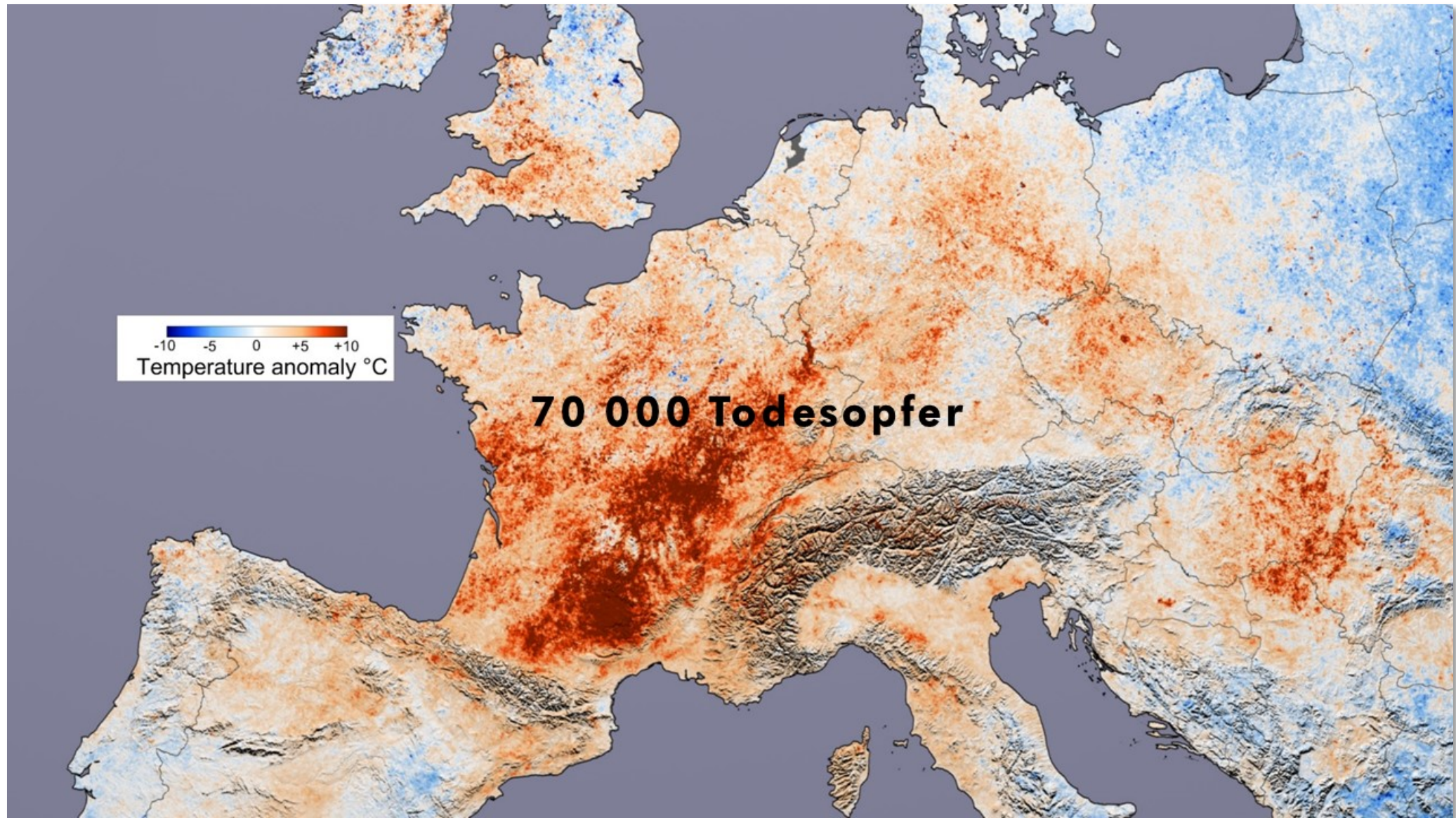
Der gezinkte Würfel!



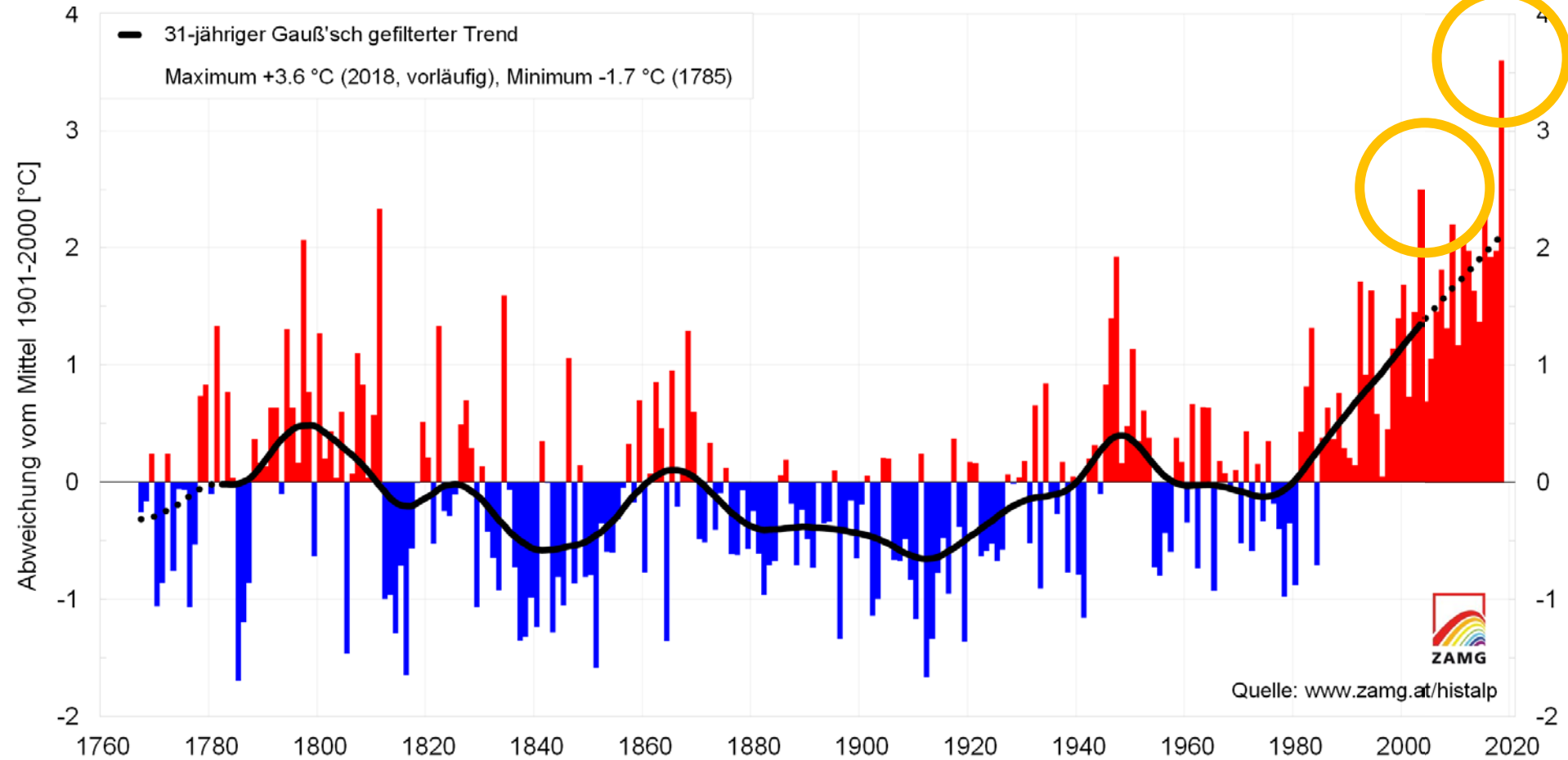
Temperaturabweichung Österreich – Sommerhalbjahr (April – September)



Hitzewelle 2003

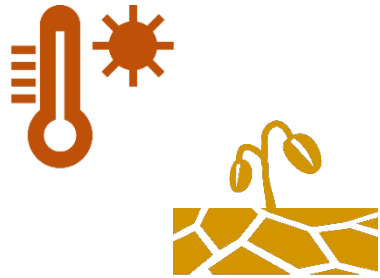


Temperaturabweichung Österreich – Sommerhalbjahr (April – September)



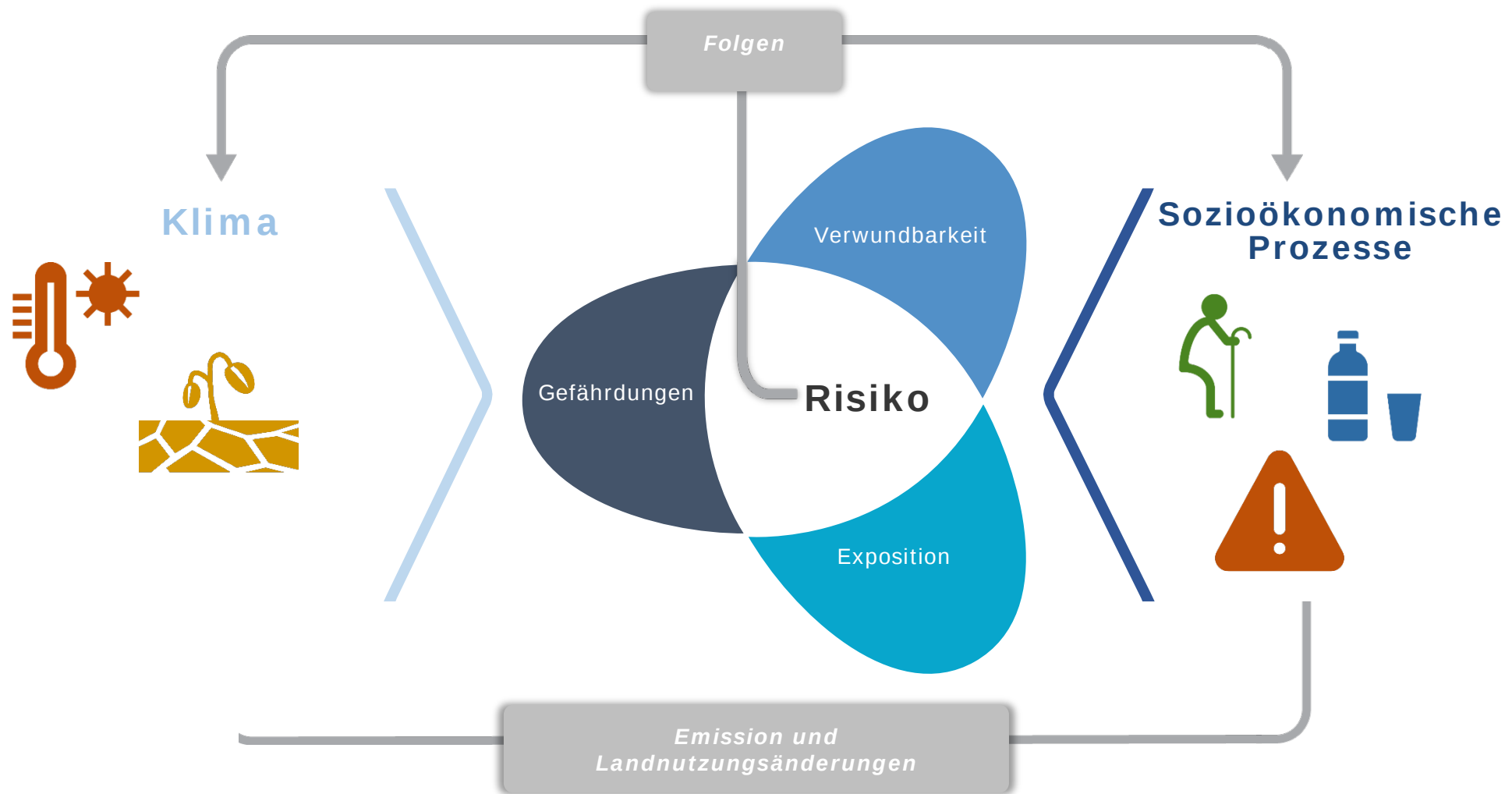
Warum gibt es Todesfälle?

Klima



Sozioökonomische Prozesse





Regional key risks and potential for risk reduction

Representative key risks for each region for

Physical systems

Glaciers, snow, ice and/or permafrost

Rivers, lakes, floods and/or drought

Coastal erosion and/or sea level effects

Biological systems

Terrestrial ecosystems

Wildfire

Marine ecosystems

Human and managed systems

Food production

Livelihoods, health and/or economics

Polar Regions (Arctic and Antarctic)

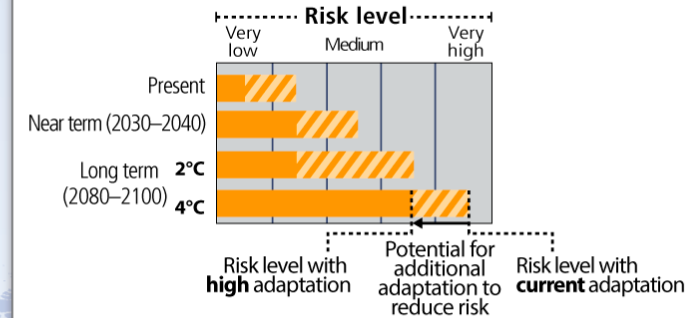
Risks for ecosystems



Risks for health and well-being

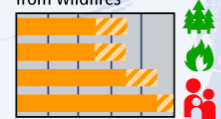


Unprecedented challenges, especially from rate of change



North America

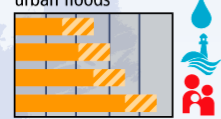
Increased damages from wildfires



Heat-related human mortality



Increased damages from river and coastal urban floods



Europe

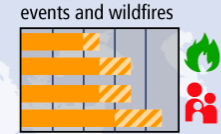
Increased damages from river and coastal floods



Increased water restrictions

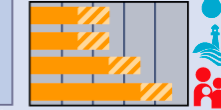


Increased damages from extreme heat events and wildfires



Asia

Increased flood damage to infrastructure, livelihoods and settlements



Heat-related human mortality



Increased drought-related water and food shortage



The Ocean

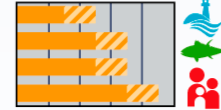
Distributional shift and reduced fisheries catch potential at low latitudes



Increased mass coral bleaching and mortality



Coastal inundation and habitat loss



Central and South America

Reduced water availability and increased flooding and landslides



Reduced food production and quality



Spread of vector-borne diseases



Africa

Compounded stress on water resources



Reduced crop productivity and livelihood and food security



Vector- and water-borne diseases



Small islands

Loss of livelihoods, settlements, infrastructure, ecosystem services and economic stability



Risks for low-lying coastal areas

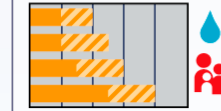


Australasia

Significant change in composition and structure of coral reef systems



Increased flood damage to infrastructure and settlements



Increased risks to coastal infrastructure and low-lying ecosystems



Regional key risks and potential for risk reduction

Representative key risks for each region for

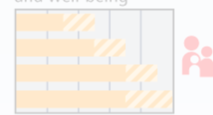


Polar Regions (Arctic and Antarctic)

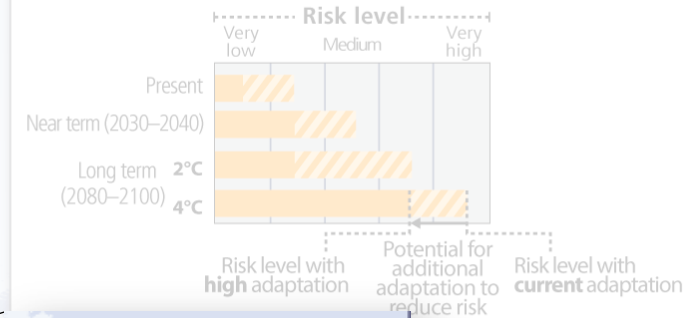
Risks for ecosystems



Risks for health and well-being



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Increased damages from river and coastal urban floods

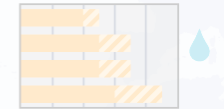


Europe

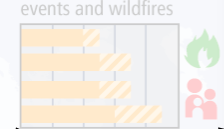
Increased damages from river and coastal floods



Increased water restrictions



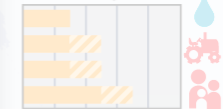
Increased damages from extreme heat events and wildfires



Increased damages from extreme heat events and wildfires

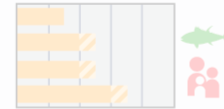


Increased drought-related water and food shortage

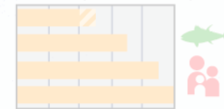


The Ocean

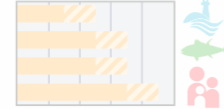
Distributional shift and reduced fisheries catch potential at low latitudes



Increased mass coral bleaching and mortality

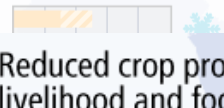


Coastal inundation and habitat loss



Central and South America

Reduced water availability and increased flooding and landslides



Reduced crop productivity and livelihood and food security

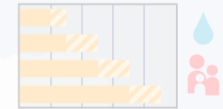


not assessed

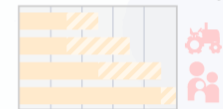
not assessed

Africa

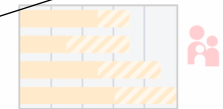
Compounded stress on water resources



Reduced crop productivity and livelihood and food security

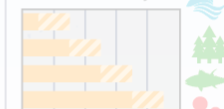


Vector- and water-borne diseases

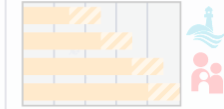


Small islands

Loss of livelihoods, settlements, infrastructure, ecosystem services and economic stability

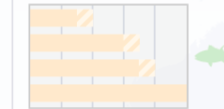


Risks for low-lying coastal areas



Australasia

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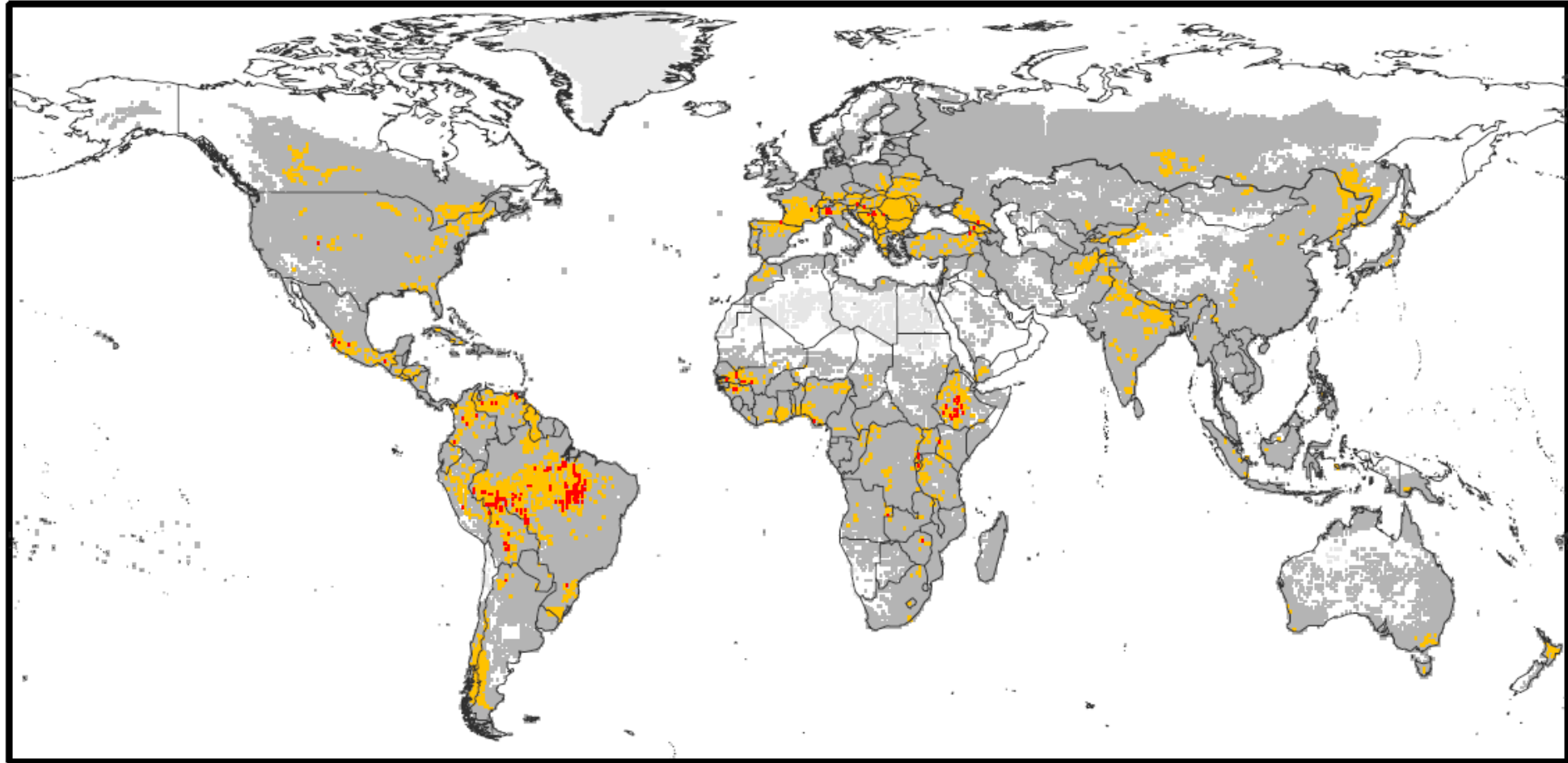
Increased flood damage to infrastructure and settlements



Increased risks to coastal infrastructure and low-lying ecosystems



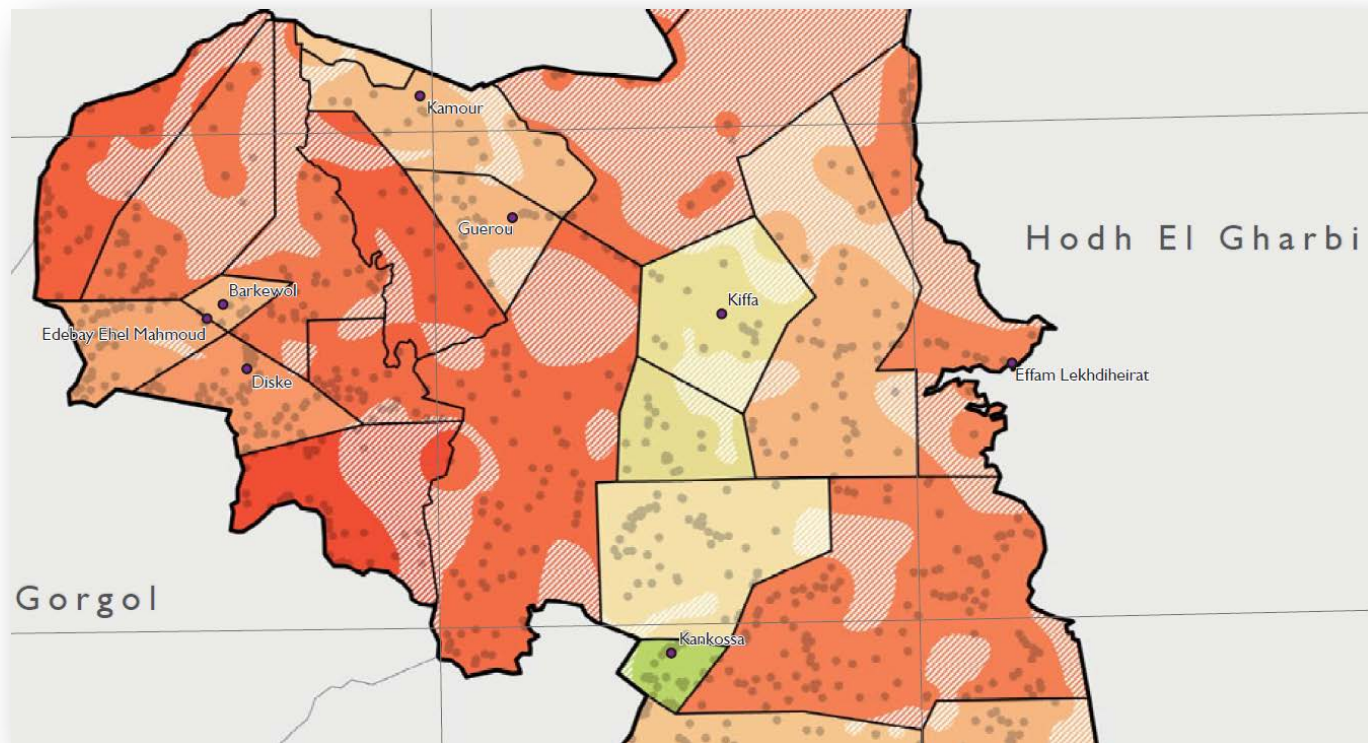
Ernteerträge | Starker Ökosystem Wandel | Malaria



■ 2 overlapping sectors ■ 3 overlapping sectors

Piontek et al 2013





Kernpunkte

- Gegenwärtiges und zukünftiges Risiko im Kontext des Klimawandels, wird durch klimatische UND sozio-ökonomische Faktoren bestimmt (Multi-dimensional)
- Hot Spots sind unterschiedlich verteilt; global, aber auch regional; bzw. innerhalb unterschiedlicher Bevölkerungsgruppen
- Komplexe Thematik. Die Übersetzungsarbeit aber auch gleichzeitige Einbindung der Akteure (Verwaltung, Zivilgesellschaft, etc.) verlangt