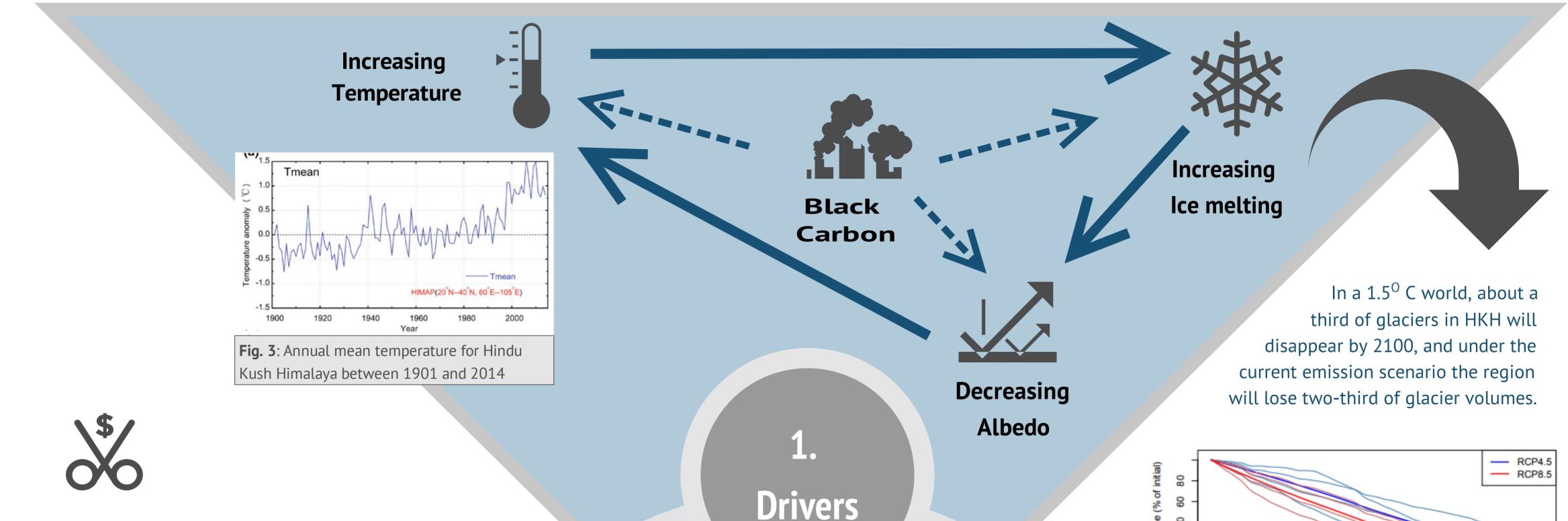


Hindu Kush Himalaya (HKH) Melting and Its Devastating Consequences **Theresia Ebert & Robert Mahara**





Mitigation Measures

The only way to mitigate the problem would be to **cool the** planet's temperature !



Adaptation Techniques

Stronger actions urgently needed in HKH:

- Regional and national cooperations
- Enhancing socio-economic resilience
- Sustainable production systems

Mitigation Å Adaptation

7.7 billion tons of ice lost in over 19 years (2000-2019) from the Hindu Kush Himalaya region !

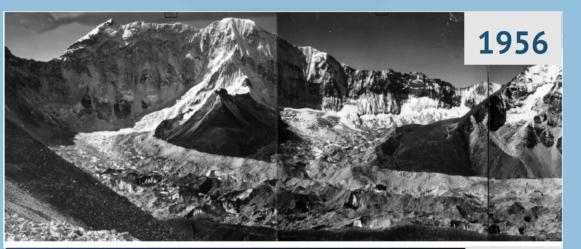




Fig 2: Panorama of Imja Glacier (1956) and Emergence of Imja lake (2012) (2500*600*100)m³

We can not prevent the melting of the HKH but we can contribute to a lower warming and therefore maintain the important ecosystem HKH !



Impacts

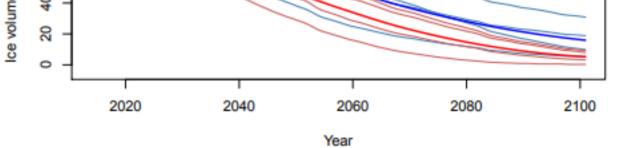
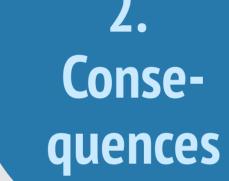


Fig. 4: Projected future loss of glacier volume in the Mount Everest region through the 21st century for different emission scenarios



Increases mass loss as well as velocity of flash floods

- Glacial Lake Outburst Floods
- Avalanches
- Flash Floods

Change on glacial hydrology and River Discharge

- Altering
- hydrological
- systems
- River discharge increase over

Environmental Impacts



- Change in entire ecobalance of river systems • Loss of Biodiversity and
- ecosystems
- Water loss in excessive volume

 Mountain livelihoods are highly affected

Socioeconomic Impacts

- Leading to millions of "climate refugees"
- Clash over water supplies

Take Home message

- If global warming will stay at 1.5°C, warming at HKH will likely be at least 0.3°C higher
- At worst case glacier volumes are predicted to decline by up to 90% through the 21st century
- The entire region is headed for an immense socioeconomic climate crisis by 2100!

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