Tourism ⇄ Climate change

- With its close connections to the environment and climate itself, tourism is considered to be a **highly climate-sensitive** sector.
- Climate change is **not a remote future event** for tourism, as the varied impacts are becoming evident at destinations.
- Changing climate patterns might **alter major tourism flows**.
- **Least developed countries** and **small island developing states** might be particularly affected.
- Impacts of climate change on the tourism sector are expected to steadily **intensify**.
- At the same time, the tourism sector is a **contributor** to climate change; GHG emissions from transport and accommodation.

Categories of climate change impacts that will affect tourism destinations

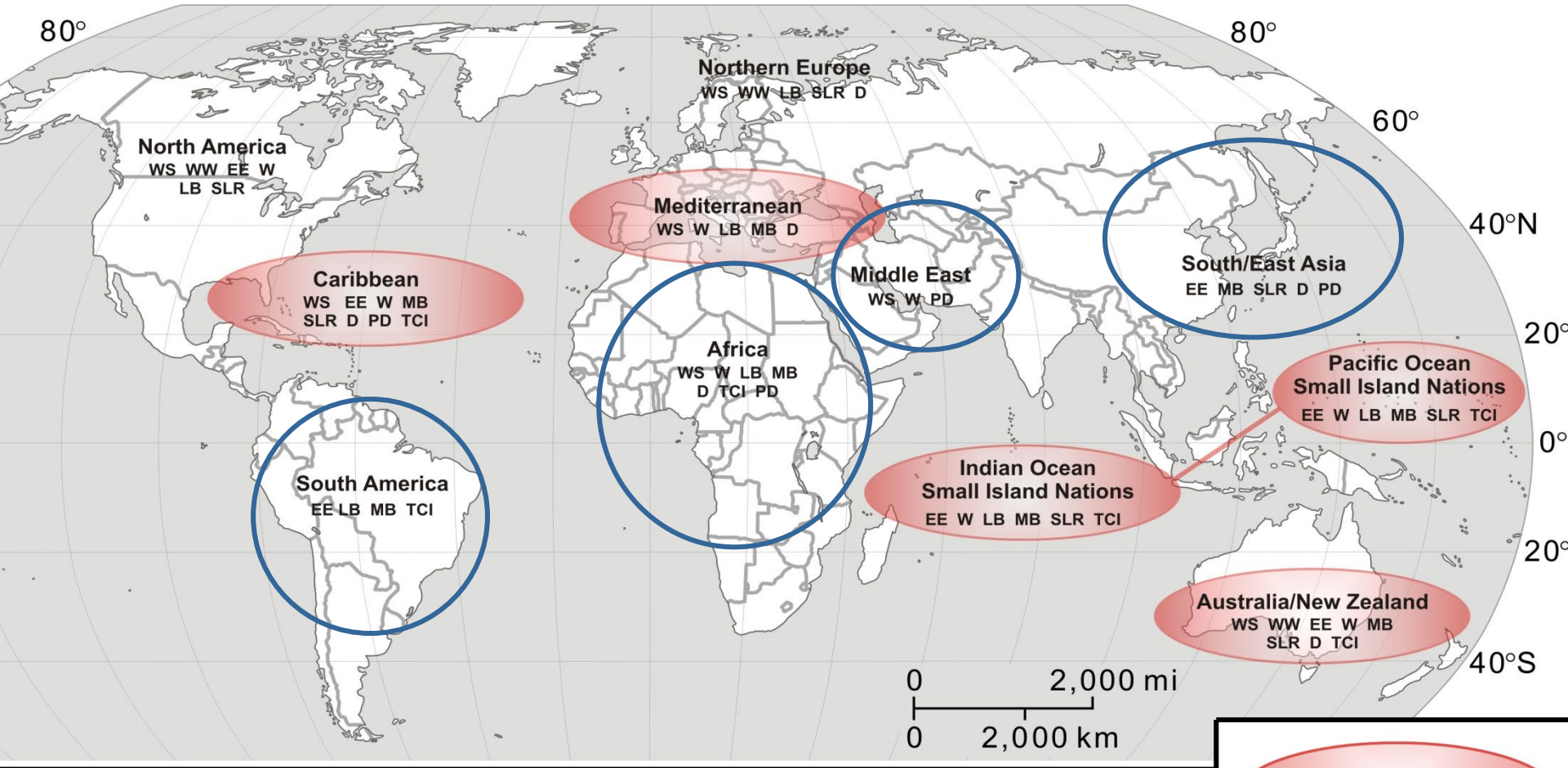
1. **Direct climatic impacts**
   - Warmer Summer
   - Warmer winters
   - Precipitation change (water supply)
   - Increased extreme events

2. **Indirect environmental change impacts**
   - Biodiversity loss (terrestrial and marine)
   - Sea Level Rise
   - Disease

3. **Impact of mitigation policies on tourist mobility**
   - Travel costs and destination choice (less long haul?/less plane?)

4. **Indirect societal change impacts**
   - Global/regional economic impacts
   - Increase security risks (social/governance disruption)

Tourism Vulnerability 'Hotspots'



WS = warmer summers

WW = warmer winters

EE = increase in extreme events

SLR = sea level rise

LB = land biodiversity loss

MB = marine biodiversity loss

W = water scarcity

PD = political destabilization

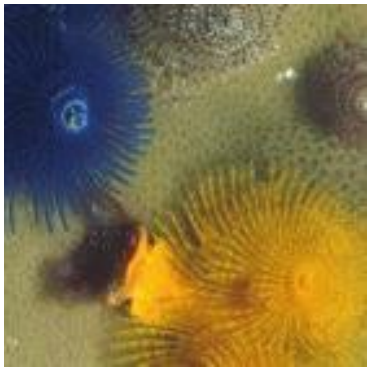
D = increase in disease outbreaks

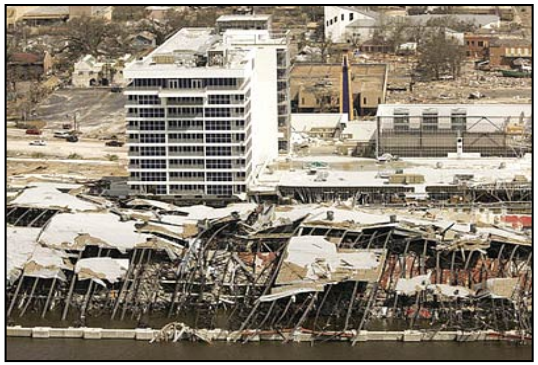
TCI = travel cost increase from mitigation policy

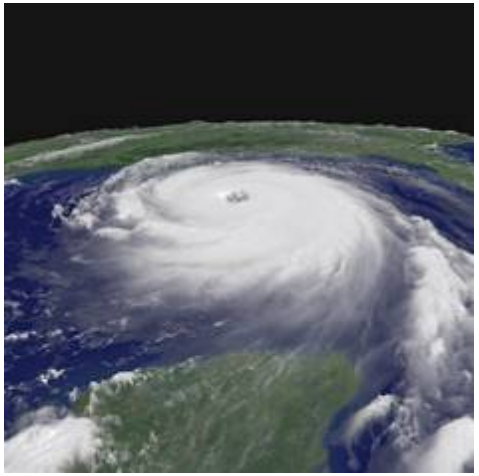
Hotspot

Regional Knowledge Gaps

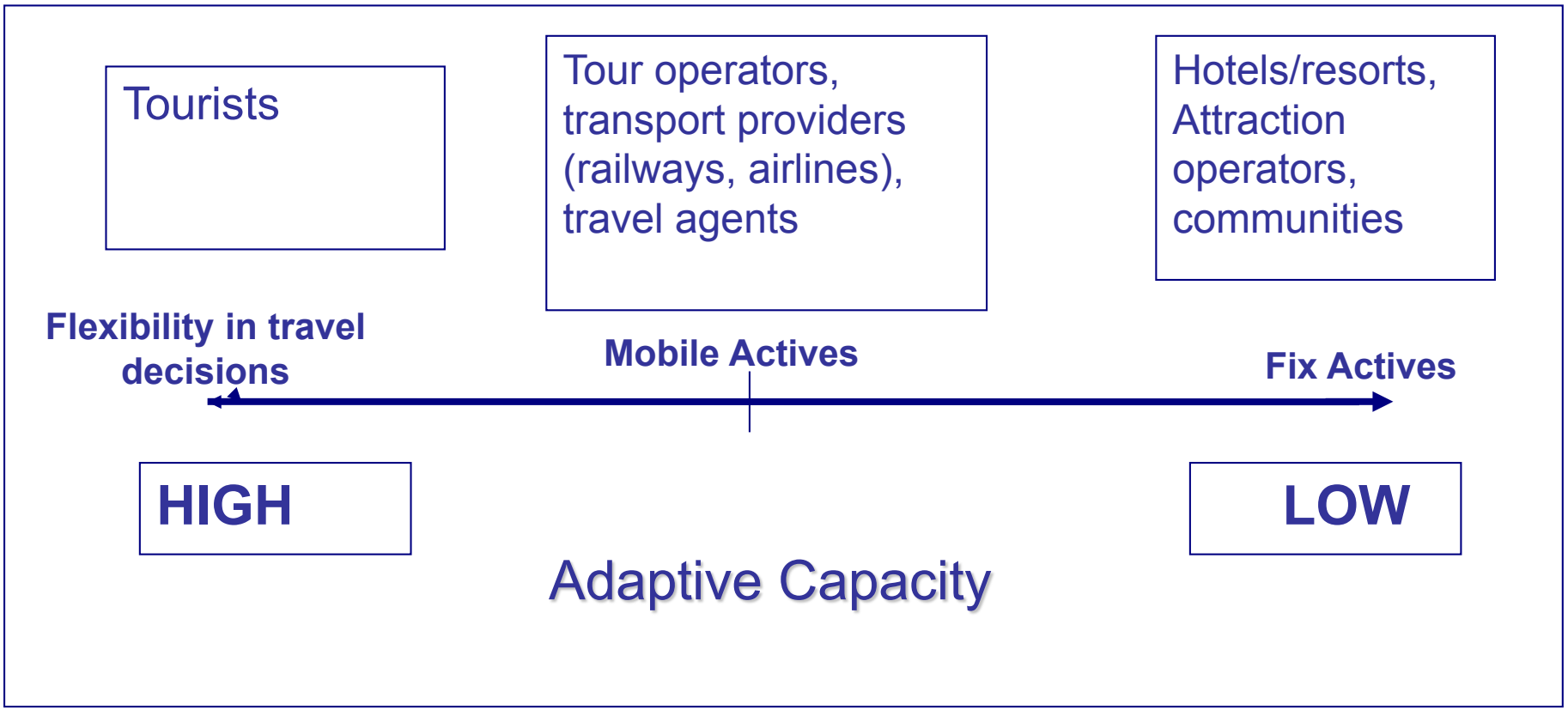
Climate Change Impacts at Tourism Destinations



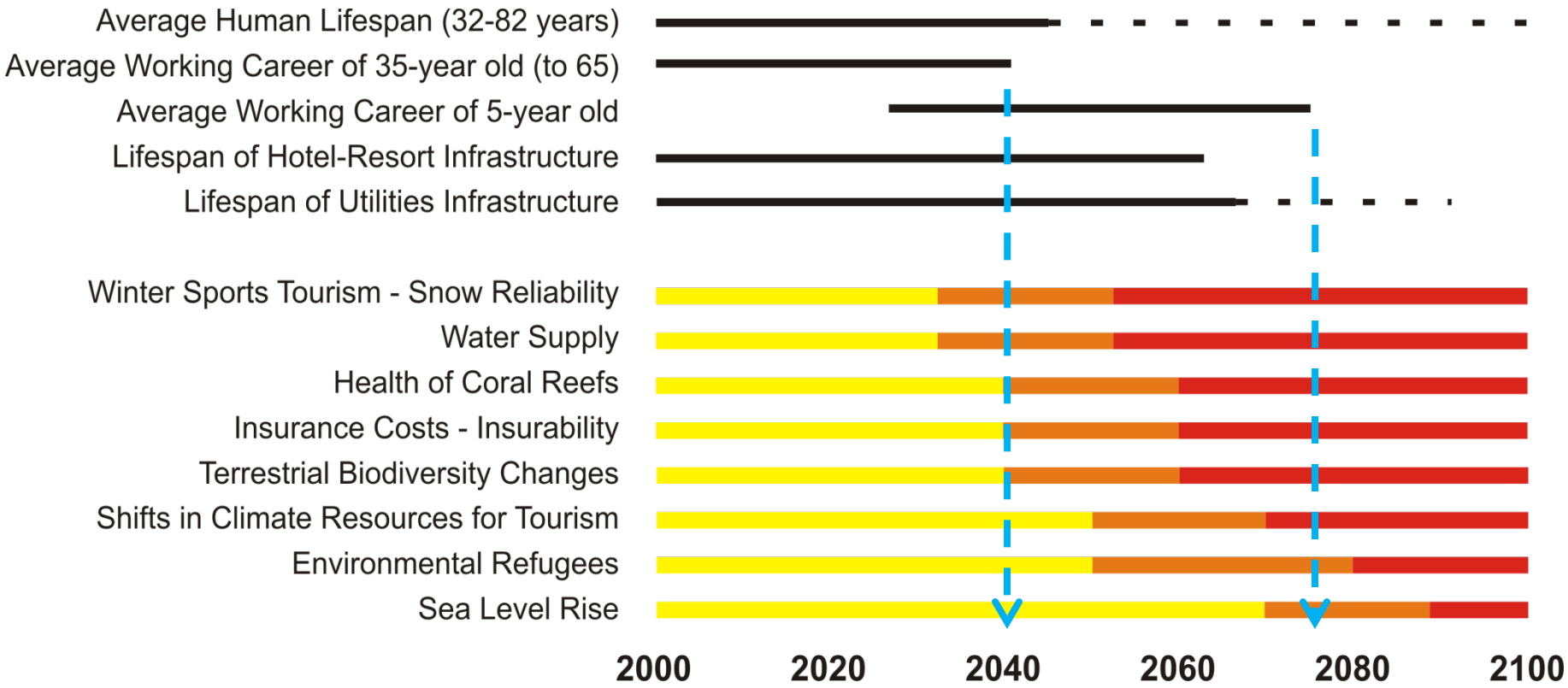




Relative Adaptive Capacity of Major Tourism Sub-Sectors



Time Horizons for Adaptation



- **The process of adaptation needs to start now**
  - ***information requirements for successful adaptation will increase substantially over the next 25 years***
  - ***Infrastructure and market transitions will take decades in some cases***

Global Tourism Emissions in 2005: CO_2 Only

Sub-Sectors		
Air transport *	**515**	40%
Car transport	**420**	32%
Other transport	**45**	3%
Accommodation	**274**	21%
Activities	**48**	4%
TOTAL	**1,307**	
Total World (IPCC 2007)	**26,400**	
Tourism Contribution	**5%**	

Transportation of Tourists = 75% of Sector Emissions

* - does not include non-CO2 emissions and impact on climate

Mitigation options

- **Reducing energy use / Conservation:**
  - changing transport behaviour (e.g. shift to rail and coach instead of car and aircraft, choosing closer destinations), changing management practices (e.g. videoconferencing for business tourism)
- **Improving energy efficiency:**
  - use technology to carrying out the same operation with a lower energy input
- **Use of renewable or carbon-neutral energy:**
  - substitute fossil fuels with energy sources that are not finite and cause lower emissions, such as biomass, hydro, wind, and solar energy
- **Sequestering CO_2 through carbon sinks:**
  - CO_2 can be stored in biomass (e.g. through afforestation), in aquifers and in geological sinks (e.g. depleted gas fields)