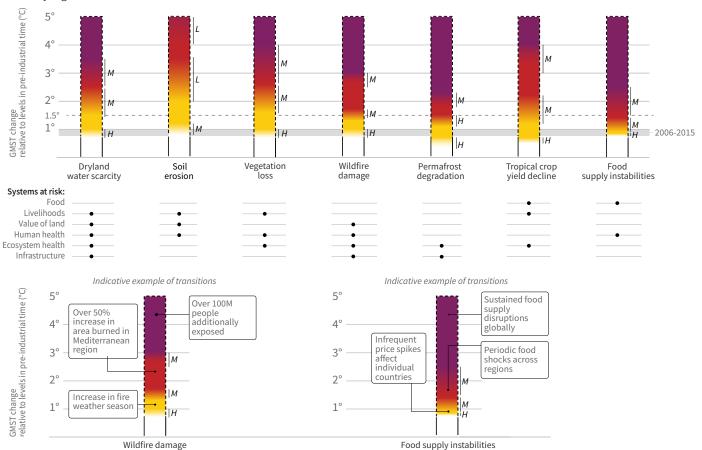
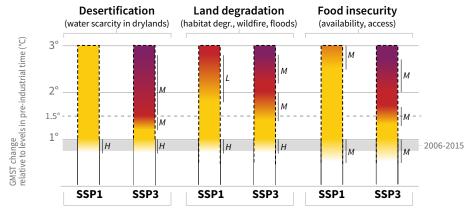
A. Risks to humans and ecosystems from changes in land-based processes as a result of climate change

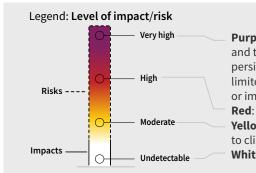
Increases in global mean surface temperature (GMST), relative to pre-industrial levels, affect processes involved in **desertification** (water scarcity), **land degradation** (soil erosion, vegetation loss, wildfire, permafrost thaw) and **food security** (crop yield and food supply instabilities). Changes in these processes drive risks to food systems, livelihoods, infrastructure, the value of land, and human and ecosystem health. Changes in one process (e.g. wildfire or water scarcity) may result in compound risks. Risks are location-specific and differ by region.



B. Different socioeconomic pathways affect levels of climate related risks



Socio-economic choices can reduce or exacerbate climate related risks as well as influence the rate of temperature increase. The SSP1 pathway illustrates a world with low population growth, high income and reduced inequalities, food produced in low GHG emission systems, effective land use regulation and high adaptive capacity. The SSP3 pathway has the opposite trends. Risks are lower in SSP1 compared with SSP3 given the same level of GMST increase.



Purple: Very high probability of severe impacts/ risks and the presence of significant irreversibility or the persistence of climate-related hazards, combined with limited ability to adapt due to the nature of the hazard or impacts/risks.

Red: Significant and widespread impacts/risks. **Yellow**: Impacts/risks are detectable and attributable to climate change with at least medium confidence. **White**: Impacts/risks are undetectable.

transition

H High

M Medium

L Low

H ←--- Example

Legend: Confidence level for