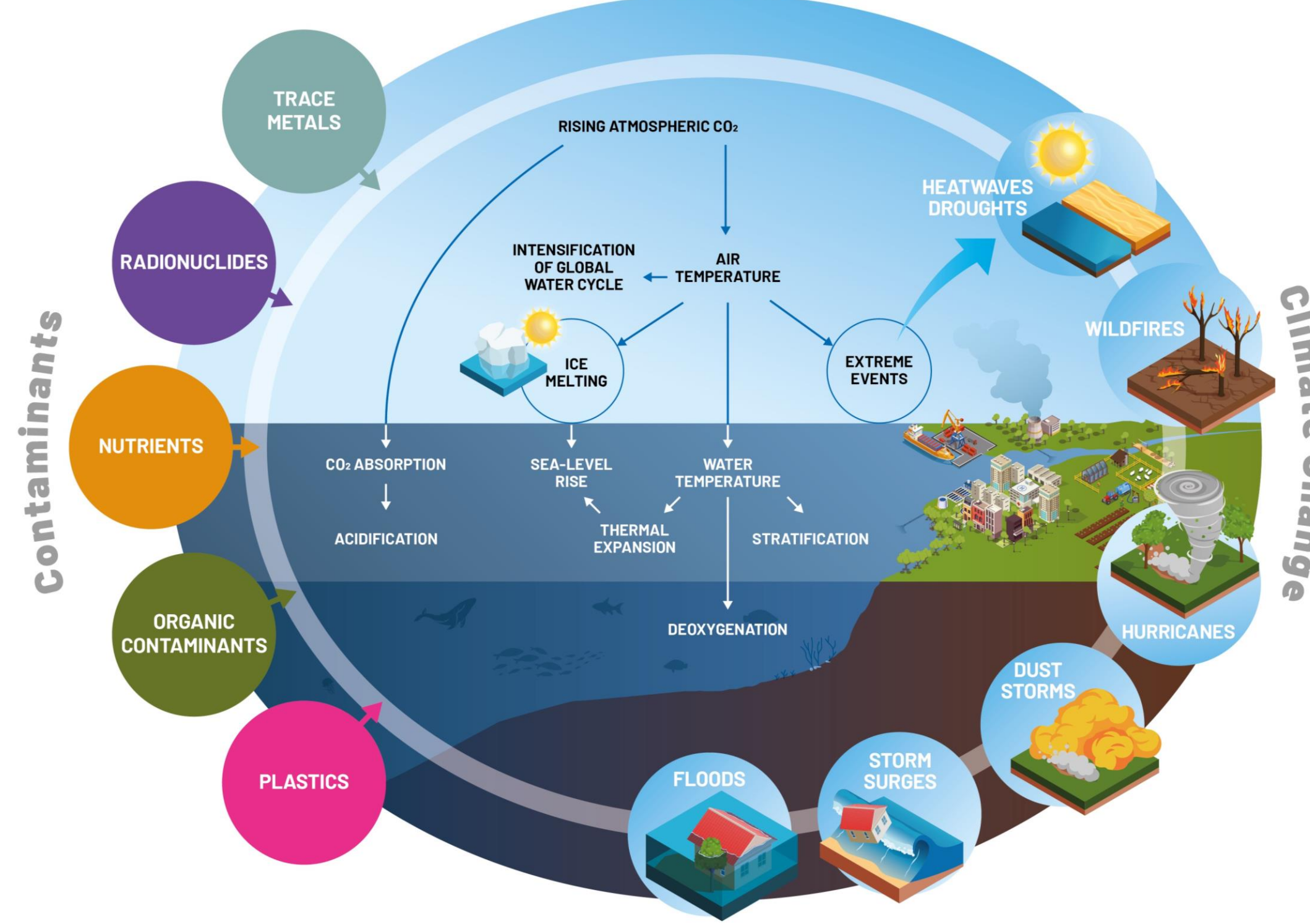


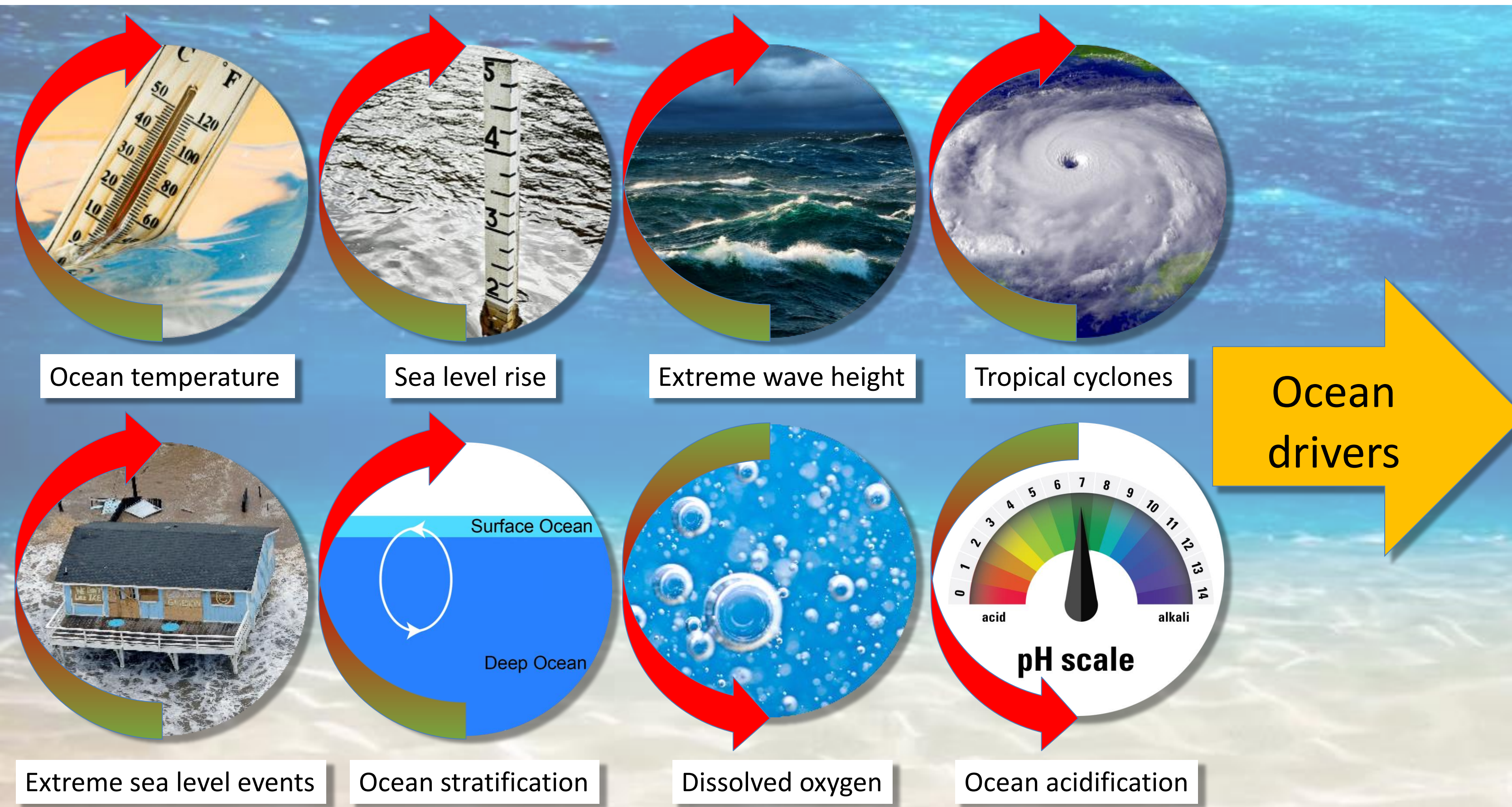
What's the issue?

Climate impacts on the oceans, land and cryosphere, will have consequences for the behaviour, fate and impact of contaminants (e.g. metals, organic compounds and radionuclides) in marine ecosystems. Climate impacts, will interact with contaminants in a complex manner that is currently poorly understood.



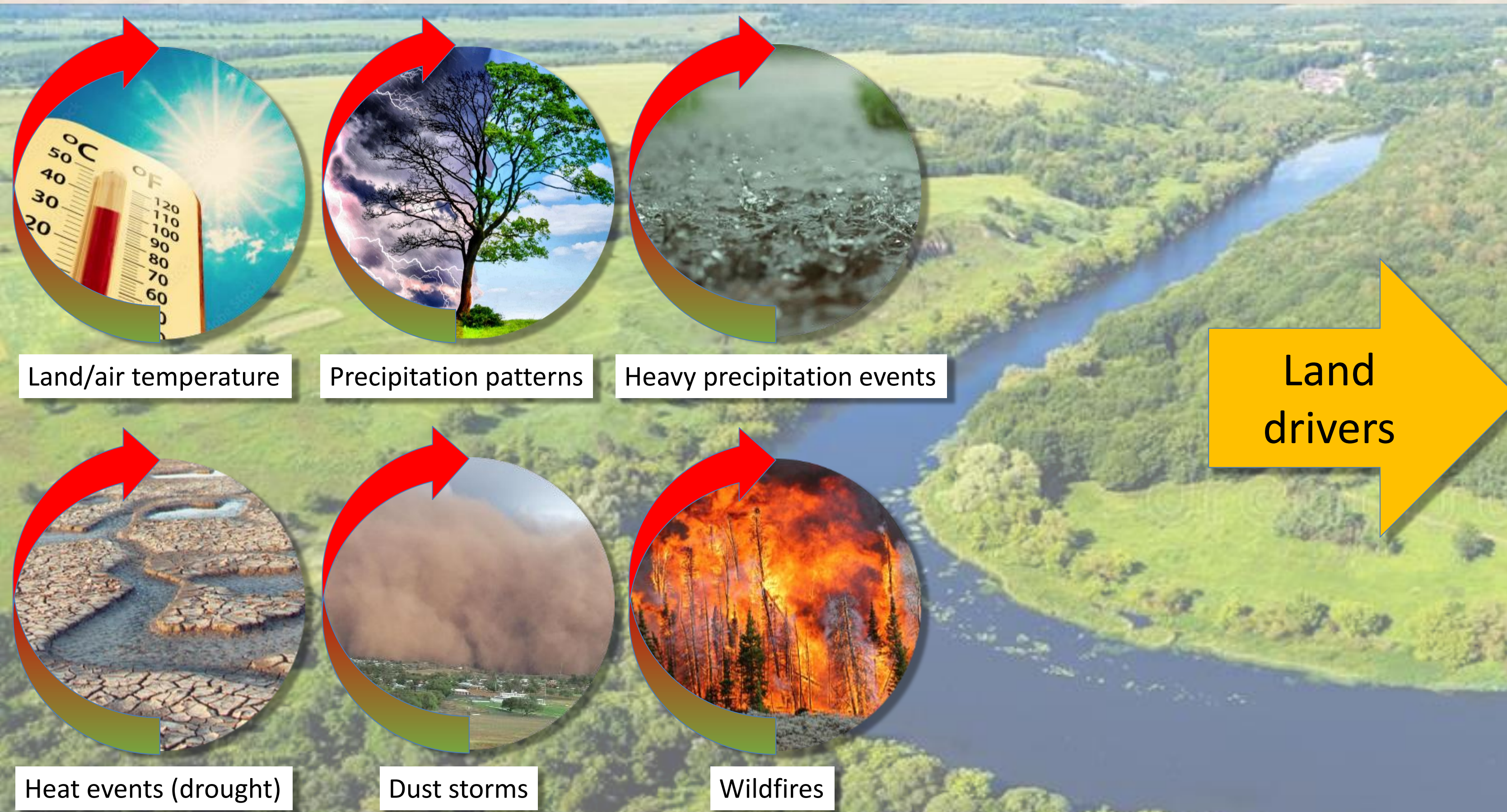
What's being done?

GESAMP WG45 aims to critically review existing research on the effects of climate change and greenhouse gases on the speciation, toxicity, bioaccumulation, mobilization and transport of contaminants to and within the oceans and to identify knowledge gaps and make recommendations for future research.



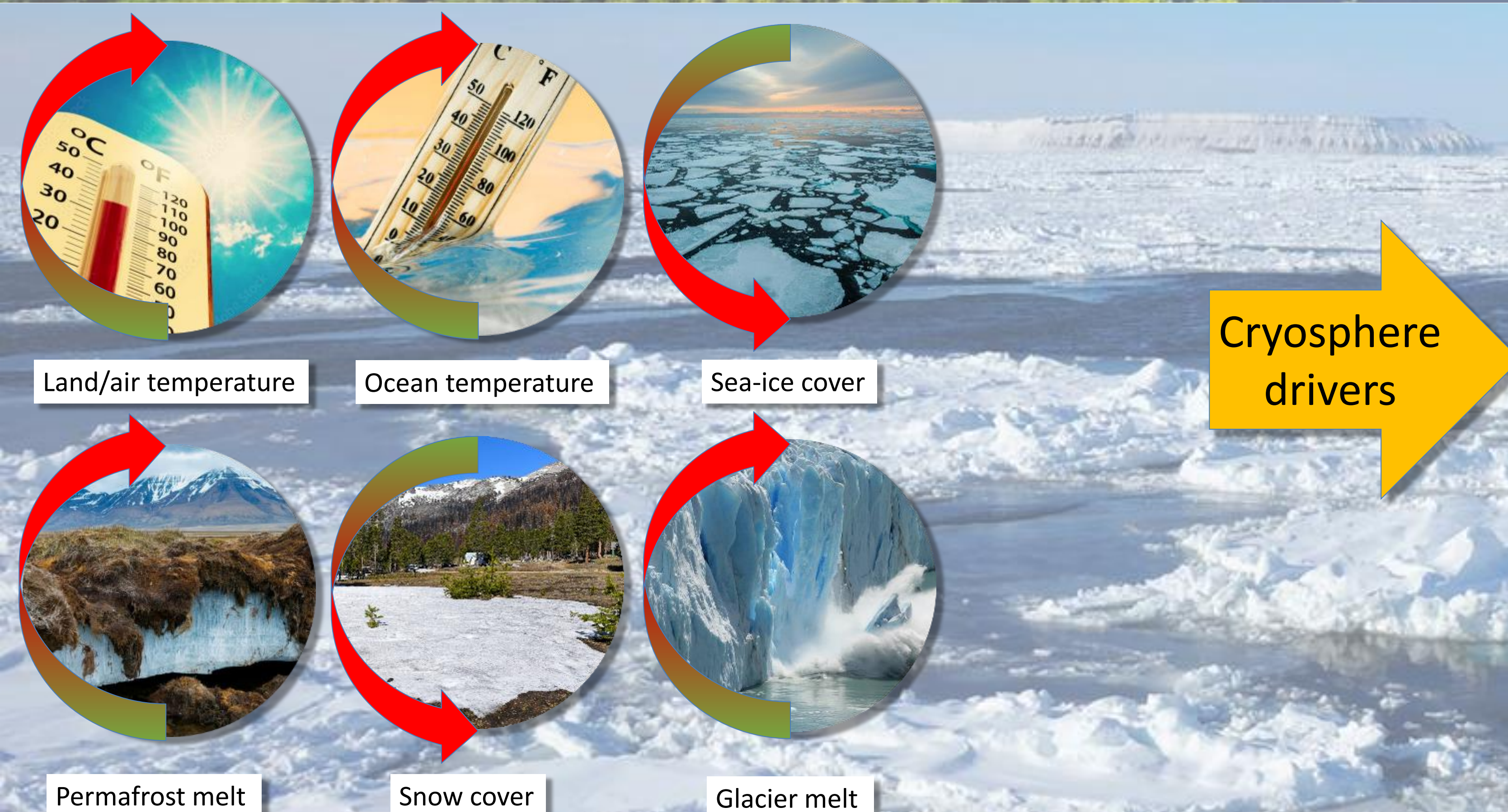
Expected relevant ocean impacts

- Increased physical resuspension of contaminated coastal sediments
- Increased remobilization of contaminants due to salinization impacts on estuaries, groundwater and soils
- Impacts on physical and chemical speciation of contaminants
- Impacts on ocean transport of contaminants
- Increased risk of contaminant releases from coastal waste storage sites
- Impacts on uptake and food chain transfer of contaminants
- Changes in adaptive capacities and resilience of species and populations to contaminants



Expected relevant land impacts

- Increased or decreased runoff of contaminants
- Increased washout of contaminants bound to soils in flood runoff
- Increased atmospheric transport of contaminants to oceans via dust storms and wildfires
- Increased post-fire washout of contaminants in runoff
- Changes in vegetation coverage on contaminant mobilization
- Increased risk of erosion of contaminated land
- Increased risk of contaminant releases from waste storage sites in land



Expected relevant cryosphere impacts

- Reduced role of sea-ice and seasonal coastal ice in contaminant transport
- Changes in the role of riverine ice in erosion of contaminated sediments
- Increased release of contaminants from glaciers
- Increased mobilization of contaminants in tundra soils
- Changes in seasonal snow melt runoff

