We are beginning to grasp the scale and complexity of global change, in which multiple systems interact in feedback mechanisms involving change to the atmosphere, hydrosphere, cryosphere, lithosphere and asthenosphere. The last global deglaciation caused: isostasy lasting over 10ka and exceeding 30mm/a uplift; 2-3 orders of magnitude more seismicity; magmatic activity increase by 30-fold; vertical stresses of 1MPa/m water depth and up to 6 times that in the horizontal; rifting; and massive slump-induced tsunamis. Anthropogenic climate change is creating differential water pore pressure slip planes and/or weakening of previous fault planes, whilst altering hydrology and reservoir mass which induce isostasy and further pore pressure change. Loss of plant biomass and diversity alters hydrology, precipitation, transpiration and cooling and leads to isostasy and further sediment and plant loss. Elevated gas hydrate production and destabilisation will occur with anthropogenically increased sea level mass, temperatures and acidity; reduced oceanic oxygenation; and increased (especially organic) sediment transport. Concurrently, isostasy and altered asthenosphere viscosity bend and stretch the lithosphere increasing seismicity, slope and faulting which are the prime triggers for slumping and tsunamis. Altered asthenosphere flows also hasten subduction and rifting landward of subduction, enhancing volcanism. All of these processes coincide in the coasts and continental margins, and the Pacific ring of fire. Seismic and volcanic activity in and about Iceland is explained by depleted magma reserves on the north western side of the boundary. This is caused by asthenosphere movement from the constructive boundary to under Greenland compensating for uplift as it deglaciates.