global warming. Hot and cold conditions also have an impact on carbon stores, transfers and climate change.

Climate change is the result of the fluxes in the carbon cycle. Throughout the Quaternary period, from 2.6 millions years ago to present day, global climates have fluctuated considerably between warm and cold periods. The trend for temperature and carbon dioxide mirror each other, the higher temperature the higher the amount of carbon dioxde. It is the same for cold temperatures and the amount of carbon dioxide. This is a consequence from natural and human processes affecting the carbon cycle. Currently the carbon dioxide levels have surpassed 400 parts per million by volume, this has resulted in a further increase in temperature and could lead to a significant drop into a glacial period. The spike in carbon dioxide however is mainly because of human factors affecting the carbon cycle such as the extraction and burning of fossil fuels. This adds to the carbon emissions being released and contributing to the quantity of carbon in the atmosphere, therefore helping the carbon dioxide levels surpassing 400ppmv.

Overall most factors causing a change in the carbon cycle are natural, however human activity affects the natural processes such as speeding up glacial retreat as temperatures increase. This causes more bare rock to be exposed, increasing vegetation succession in the lithosere. This has now caused a positive feedback loop speeding up the natural occurrence of global warming potentially have negative effects on the environment over time.