

The study showed that higher temperatures led to more peat carbon loss, although increased precipitation slightly enhanced the build-up of peat carbon over long timescales. Ecosystems like oceans and forests may stop absorbing carbon from the atmosphere but start emitting it due to the human-induced climate change, according to a research.

Those systems are known as natural carbon sinks that could suck carbon dioxide out of the atmosphere. Among them, the peatlands with a carbon dioxide rich type of soil called peat are the most efficient natural carbon sink on the planet.

When undisturbed, they store more carbon dioxide than all other vegetation types on Earth combined. But when the peatlands are drained and deforested, they can release nearly six per cent of global carbon dioxide emissions each year, according to the researchers, Xinhua news agency reported.

“Global peatlands cover only about three per cent of the global land area but hold around 30 per cent of the earth’s soil organic carbon,” said author Zhuang Qianlai, Professor at Purdue University.

For the study, published in the journal Proceedings of the National Academy of Sciences, the team looked at peatlands in the Peruvian Amazon to try to find out if the large amount of peat carbon can be released under a warmer climate.

According to an earth systems model spanning from 12,000 years ago to 2100 AD, the relatively small basin could lose up to 500 million tonnes of carbon by the end of this century.

That’s about five per cent of current global annual fossil fuel carbon emissions or 10 per cent of US emissions that are spit back out into the atmosphere, the researchers noted.

The study showed that higher temperatures led to more peat carbon loss, although increased precipitation slightly enhanced the build-up of peat carbon over long timescales. Together, the carbon loss from peatlands to the atmosphere would be increased.

“If the area we looked at could represent the whole Amazonia or tropical peatlands, the loss of peat carbon to the atmosphere under future climate scenarios should be of great concern to our society,” Zhuang said.

Source: devdiscourse