Burning peatlands

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Controlled burning has been used effectively as a peatland management tool in various parts of the world without any major negative effects, but events in southeast Asia in recent years have highlighted the fact that extensive and uncontrolled burning can have serious direct effects on human health. For example, the largely deliberate burning for land-clearing and local peatland management in 1997-1998 in southeast Asian peatlands affected around 70 million people in six countries. Some 200,000 people were hospitalized with respiratory, heart, and eye and nose irritations, and an estimated 12 million people required health care for respiratory problems. Significant burning events since then have continued to impact the health of large numbers of people often in neighbouring countries or even farther afield. Indeed, once peatlands have become significantly altered by fire and deforestation, they become very susceptible to repeated burning.

The effects on local communities of large-scale, uncontrolled burning are not restricted to the direct and immediate effects on health: the burning can also result in the loss of income from crops and benefits from natural resources previously available such as fish, reptiles, weaving materials, fuelwood, timber, etc., as well as the loss of income from tourism in the region. The value of these diverse services provided by peatlands are usually underestimated and may exceed the value from converted peatlands, such as for rice growing or oil palm cultivation.

Economic costs associated with damage to ecosystem services can be substantial: the damage of the 1997 southeast Asian fires to timber, tourism, transport, agriculture, and other benefits derived from or linked to the forests is estimated at US$ 4.5 billion in addition to the actual cost of fighting the fires. And that is above and beyond the direct and indirect medical costs associated with the effects of burning on the population.

In the longer term, peatland burning and drainage activities have led to massive increases in the emissions of greenhouse gases as well as contributing significantly to climate change. The burning in 1997 is estimated to have contributed an amount of carbon equivalent to 13–40% of the mean annual global carbon emissions from fossil fuels – so while the health impacts upon humans were regional, the impacts upon the Earth's health were global.

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