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What causes massive forest fires : greed or poverty?

Over the last weeks, the media have been full of reports of massive forest fires, the most frequently mentioned being those occurring in Brazil (and the Amazon at large) and in Madagascar. However, other areas in the world are also affected such as Borneo, Canada, Russia and Central Africa, among others.

Partial indications suggest that 2019 will be a record year: In Brazil, for example, according to the Brazilian National Institute for Spatial Research ([INPE](#)) “forest fires increased by 84 % since the beginning of the year ... compared to the same period of 2018” [[read in French](#)]. Unfortunately, there are no reliable statistics that would help to have a better perception of the importance of this phenomenon and its evolution over time worldwide. In the past, FAO had estimated that around 67 million hectares of forest land had burned annually between 2003 and 2012 [[read](#)], but since then, estimates were unfortunately interrupted.



For sure, forest fires are not new, nor is the concern they raise. For example, a major [meeting](#) had been organised by the FAO back in 1998 to look into public policies affecting this phenomenon and make recommendations to governments who, apparently, have only followed them in part.

Causes of these fires differ from place to place, some are voluntary, others are caused by meteorological events, and public policies can help control them if not stop them from happening altogether.

Poverty

Burning down forests has been for thousands of years a simple way of clearing land. "Slash and burn" is an age-old technique that is still being used by resource-poor farmers towards the end of the dry season to clear land before establishing a crop when the rainy season starts. It is the major cause of the forest fires observed in Madagascar where it is being used both by farmers and herders, the latter to prevent pastures from being invaded by non palatable woody plants [\[read\]](#). In some cases, fire may be started in protest or for hiding criminal activities [\[read in French\]](#).

Greed

Forest fires have also been used by private companies to clear land in order to establish mines or plantations, in particular oil palm plantations in Borneo and in Central Africa [\[see satellite photos here and here\]](#) where fire has been followed by large scale land grabbing made to the detriment of indigenous people. Sometimes fire also occurs when plantations are already established, particularly on peatland, in Borneo, when excessive drainage imposed by plantation managers dries out peat and thus increases the risk of spontaneous fire, causing considerable social, environmental and health damage [\[read\]](#).

In Indonesia, appropriate policies were passed years ago, but laws are not enforced, as large oil palm companies are being supported by local administration and the political personnel, largely because of massive bribing.



In Brazil, the new far-right government led by climate change negationist Jair Bolsonaro has been accused by local leaders and activists, as well as

internationally, to support loggers and agricultural companies wanting to develop soybean and livestock production. A recent report by Human Rights Watch shows that loggers have for long relied on the services of criminal organisations who threaten and kill local leaders, indigenous people and activists who are trying to protect the forest. According to this report, the Brazilian president's words and action in favour of developing the Amazonian region with the declared objective of reducing poverty, have been interpreted by these criminal organisations and their patrons as an encouragement to intensify violent activities. By scaling back enforcement of environmental laws, weakening federal environmental agencies and by harshly criticizing organizations and individuals working to preserve the rainforest, J. Bolsonaro has, if only indirectly, contributed to spur violence and the burning of forests in the region.

Meteorological conditions

Scientists explain particularly high occurrence of forest fires some years by a stronger El-Niño that creates dry conditions [read here on the case of Central Africa]). They also believe that with climate change and more frequent excessive droughts, forests will be drier (even intertropical moist forests) and therefore become more vulnerable to fire, whether voluntary or natural (e.g. lightning). It is not possible, for the time being, to measure the specific weight of this cause in observations, but it is believed to be particularly relevant to fires observed in the Northern hemisphere (e.g. in Canada and in Russia).

Conclusion

It is a combination of poverty, greed, policies in place and meteorological conditions that explain the forest fires observed throughout the world. Consequences of these massive forests fires on the environment, biodiversity, health and the living conditions of local indigenous people are immense.

Responsibilities for these fires are shared by all, from policy makers to consumers living thousands of miles away from these fires, the former because they do not take appropriate decisions and/do not ensure a proper law enforcement, the latter because they are ready to buy goods who motivate a large proportion of these fires (e.g. palm oil, meat and others).

Important remark:

Forest fires threaten what is usually improperly labelled as the being the “planet's lungs”. This is inappropriate, as contrarily to lungs that absorb oxygen to release carbon dioxide (process of respiration), forests – and plants in general – absorb carbon dioxide and release oxygen (process of photosynthesis). Forests, rather than “lungs” should be qualified as “the planet's oxygen factory”.

To know more :

On forest fires:

- Phillips, D., Amazon deforestation is driven by criminal networks, report finds, The Guardian, 2019.
- Acebes, C.M. et al., Rainforest Mafias – How Violence and Impunity Fuel Deforestation in Brazil's Amazon, Human Rights Watch, 2019.
- Neighbour, J., Fighting the threat of forest fires in Madagascar with reforestation and... fire? National Geographic, 2019.
- Andreoni, M. et al., With Amazon Rain Forest Ablaze, Brazil Faces Global Backlash, The New York Times, 2019.
- Erickson-Davis, M., Massive wildfire rips through Congo rainforest – is logging to blame? Mongabay News, 2016.
- Fires across Madagascar, NASA Earth Observatory, 2015.

On oil palm in Indonesia:

- Nnoko-Mewanu, J. et al., “When We Lost the Forest, We Lost Everything” – Oil Palm Plantations and Rights Violations in Indonesia, Human Rights Watch, 2019.

Selection of recent articles on hungerexplained.org related to the topic:

- Obstacles to transition – Why is it so difficult to make our food system more sustainable and climate-friendly? 2019.
- Ensuring world food security in a changing climate will require us to modify our diet, develop appropriate technologies and implement conducive policies, 2019.
- Fire in South-East Asia: a highly visible consequence of our failing food system, 2015.
- Forests: rural communities caught between markets and the objective of conserving the planet, 2013.