global warming

"Every forest fire means a setback for climate protection"

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Hundreds of firefighters fought a forest fire near Lisbon in Portugal in mid-July. (Photo: Armando Franca/dpa)

Portugal, Spain or recently Rhodes: In the summer months, forest fires make the headlines. What does that mean for the climate? And what can be done about it? A conversation with Felix Finkbeiner from Plant-for-the-Planet.

Interview by Linus Freymark , Tutzing

In 2007, at the age of nine, Felix Finkbeiner founded the organization "Plant for the Planet" and planted his first tree at the Munich International School in the Buchhof district of Starnberg. After three years, the initiative planted its millionth tree. In addition to many awards, Finkbeiner was now considered one of the hundred most influential Germans. In 2018 he graduated with a BA in International Relations from the School of Oriental and African Studies, University of London. Since then he has been doing his doctorate in the Department of Environmental Systems Science at ETH Zurich. The topic of climate protection occupies the 25-year-old more than ever in view of summers with record heat and countless forest fires. Finkbeiner relies on a "Fire Alert App" that could be used worldwide.

SZ: Mr. Finkbeiner, forests are burning down more and more often in Portugal, Italy, Greece and here too. Do we have to get used to the fact that wildfires are an integral part of our summers?

Felix Finkbeiner: Partially yes. The United Nations, for example, assumes that the number of forest fires could increase by half by the end of the century. Due to the climate crisis and the associated changes in vegetation, there are now many more areas with a high risk of forest fires than there were a few decades ago. That means we need to change too: we need to get better at spotting fires early and fighting fires more effectively. This also applies to Europe - but in particular, of course, to the tropics. There are often no functioning early warning systems.

What options do we have to better arm ourselves against forest fires?

Clearly, we need to improve prevention. This does not begin with the early warning systems, but with the planting of new forests. We must pay more attention to planting mixed forests and not monocultures. And especially in the tropics we have to rely more on firebreaks. The fire cannot spread further through these corridors, and the method is also relatively cheap. You sacrifice trees for this, but it is extremely important. And training is needed for emergency services, but also for the residents of the areas. In Mexico, for example, there are already very good courses that prepare local people for forest fires.

In addition to the immediate consequences, forest fires also have devastating consequences for the climate in the long term. Do forest fires fuel climate change ?

That's the problem. A forest fire releases incredibly large amounts of CO_2. In addition, the fire will destroy the carbon sinks in the long term. It is precisely this domino effect that is accelerating the climate crisis. This means that every forest fire means a setback for climate protection. Also in our project areas in Ghana, Mexico or Spain. There is actually no project that is not at least related to smaller fires. In order to be able to react to this more quickly, we have now developed the "Fire Alert App". The application should be used as an early warning system, so to speak, where these structures do not otherwise exist.

How does your app differ from the classic warning system?

Local sensors are the best way to detect a forest fire. In Germany we have quite a lot of them. If you have that, that's great - but installing such a system across the board is extremely expensive. That's why it doesn't exist in many parts of the world. Mexico and Brazil are such examples, where this technology is largely not used at all.

"Local sensors are the best way to detect a forest fire," says Felix Finkbeiner. But if this technology does not exist, other means must be found. (Photo: Arlet Ulfers)

It would be of great importance there to detect fires early - after all, that's where the large rainforests are.

That's correct. But as I said, the technology is expensive. Most of the areas are also uninhabited.

Does this mean that forest fires remain undetected as long as no people are harmed?

No. There are definitely ways to check for sources of fire even in less developed areas. For this purpose, satellite images from the US space agency Nasa are used. This makes it relatively easy to spot forest fires. This and all the other data you need is actually freely available on the internet. Nevertheless, many renaturation and forest protection projects do not use this data.

Why not?

The problem is: The data is there - but it is not easy to get warnings for the respective areas, especially in regions with a poor internet connection. This is exactly where we are starting with the "Fire Alert App": We have now prepared the data in such a way that it is user-friendly and quickly accessible and want to help other plant and forest protection projects to monitor their stocks. Incidentally, Fire-Alert is just another system in our toolbox. We also offer free renaturation advice, have an app that tracks plantings and a donation platform that ensures transparency.

What to do about forest fires? Felix Finkbeiner from "Plant for the Planet" has developed an app that is intended to act as an early warning system in remote regions of the world. (Photo: Arlet Ulfers)

That's very noble of you.

Why? To stop the climate crisis, in addition to massively reducing CO_2 emissions, we must restore a trillion lost trees, which will then sequester CO_2 and stop further global warming. We cannot do this alone with our projects, so many other players are needed. It would be unwise not to work with others. We try to solve the problems we have in our own project areas through our software tools. And if we have already developed the systems, we can also make them available to others. Incidentally, we now have more than 300 areas that are monitored by the "Fire Alert App".

So you could say: your application is a kind of low-threshold early warning system?

Exactly. The app is free for everyone, which means that theoretically anyone could watch a piece of forest and raise an alarm if a fire is visible in the system. This could also be interesting for many small farmers, for example, who can use it to monitor their areas. It is only important that there is also the necessary infrastructure on site to fight the forest fire. In remote areas in particular, it naturally takes time for emergency services to reach the source of the fire.

Let's talk about politics. Are the numerous forest fires proof that climate policy has failed?

The forest fires are an alarm signal. And they show unequivocally that global warming is progressing and far too little has been done about it in the past. At the same time, however, a lot has happened. The EU, for example, has just launched a regulation that stipulates that in a year and a half, not a single company will be allowed to import certain products into the EU for which the necessary agricultural land was cleared after 2020. This refers, for example, to cocoa, coffee or beef. If I want to import these products to Europe, I have to prove with satellite images that the area was cleared before 2020. That's a big step towards more forest protection and a good example of what states can achieve if they work together.

The example of the rainforests, for example in Brazil, shows that international cooperation between states on climate policy is not working. Instead of tackling the problem together, the international community is leaving the protection of the tropical forests to individual countries. Would you agree with that?

In part. On the other hand, there are already very good approaches there. Brazil is a wonderful example: under the first Lula government, the rate of deforestation in the Amazon fell by 83 percent between 2004 and 2012. That was an enormously successful time. The laws on environmental protection have been consistently implemented. Also, the Brazilian economy was growing very rapidly at the time, so there was money that could be put into protecting the rainforests. The current climate protection goals, on the other hand, are not very ambitious. By 2030, Brazil has committed to reducing its emissions by 50 percent from 2005 levels. In 2005, however, the deforestation rate was still very high, and the goals have already been achieved.

SZ Plus climate change and global warming

"Reducing emissions to zero is no longer enough"

With his organization "Plant for the Planet", Felix Finkbeiner has now planted eight million trees in Mexico alone. A conversation about new heat records, the role of capitalism in environmental protection - and criticism of his club.

Interview by Linus Freymark

But that's exactly what it is: Actually, financial support from other countries would also be needed for this. The preservation of the rainforests is a global issue.

Sometimes that has happened. Germany and Norway, for example, founded the Amazon fund and made around one billion dollars available. Although one has to say that Norway contributed most of it. But back to Brazil: Deforestation has increased again under Presidents Temer and Bolsonaro - but it is still below the level that we had before Lula was in office. This shows that stopping forest loss is not an unsolvable problem.

That sounds reassuring - but with the many forest fires at the moment, a different impression arises.

The global deforestation rate peaked in the 1980s. We lost about 30 billion trees a year there. There was still a lot of forest, but little awareness of the problem. This has changed enormously and has led to the fact that today we only have a third of the deforestation rate of that time. So we're still losing 10 billion trees a year. Although this is still very bad, it also shows that it is possible to have zero trees per year.

Why is that? Humans are unlikely to have become more frugal in the past few decades.

The most important point is the increased efficiency of agriculture. Despite the increasing world population, we now need less space. As long as this continues, I am confident that we can achieve zero global deforestation - and maybe even within the next decade. After that, we need to keep restoring forests. If we focus more on plant-based nutrition in the future, we can reclaim huge areas of rainforest. My goal is still to restore one trillion of the three trillion lost trees. Admittedly things are progressing too slowly. But I firmly believe in it.