As described in The Mercury news article below, University of Cape Town's Prof. William Bond has drawn timely attention to the UNFCCC's short-sighted plans to allow the ongoing destruction of even more carbon-rich and biodiverse grasslands, mainly in so-called 'developing countries' around the world.

Smothering grasslands with ecologically destructive and usually invasive tree plantations, thinly disguised as "reforestation", is just a crude self-serving attempt to offset the excessive greenhouse gas emissions of dirty industries in the North, at the expense of ecosystems and communities in the South. But to add insult to injury, there is no intention whatsoever that the trees planted would be allowed to grow to maturity, and remain in place permanently so as to possibly sequestrate some carbon. Instead they have been earmarked to be cut down when still relatively young, and turned into 'biofuels' that can be burned after coal and petroleum runs out!

However this kind of false, cock-eyed, climate change solution also has enormous negative implications for local communities who would be displaced and impoverished a result of their land being recklessly misappropriated, and then permanently and irreversibly damaged by alien tree plantations that degrade and acidify the soil, whilst also depleting precious water reserves that have accumulated underground over hundreds of years.

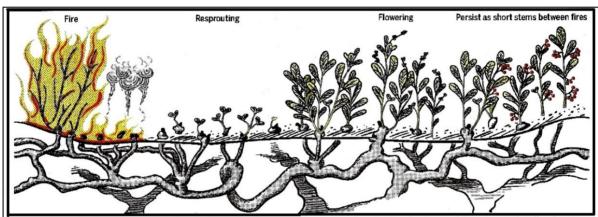
Such tree plantations also impact severely on wetlands and streams that would normally have provided sufficient surface water to sustain people and animals all year round, but are then left without water during the dry season due to the high all-year-round water consumption of the evergreen, mostly non-indigenous tree species normally used.

The rich diversity of grassland species has since before human memory been a major source of sustenance, traditional medicine, building material, clothing and livelihoods for local communities and indigenous peoples. However, the underground roots, stems and bulbs of grassland plants also store considerable amounts of carbon, but after being deprived of light and water by the 'green blanket of death' of alien eucalyptus or pine trees, the original vegetation soon dies and decomposes, releasing methane, a far more potent global warming gas than CO2, into the atmosphere.

As with forcing people to starve being used as a military tactic in Syria, so too should the deliberate destruction of grasslands be viewed as an atrocity against people (and our planet). If what has been happening in Madaya should be treated as a "war crime", as stated yesterday by Ban Ki-moon, then establishing 'fake forests' deviously misnamed "re-forestation", on the land of displaced grassland communities, also be considered a crime.

The full article "Ancient grasslands at risk" by William Bond is available at http://science.sciencemag.org/content/351/6269/120.full

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To survive the scorching heat and destruction of regular fires on the African savannah, some trees have developed underground storage organs that allow them to regenerate quickly once the flames have passed. They include 'underground trees' with massive branches below ground level, with short stems and leaves that

## Reforestation needs a rethink, says botany prof

Tony Carnie

A RICH reservoir of plant and A RICH reservoir of plant and animal species – including strange trees that grow almost completely underground – could be under threat from global plans to suck up carbon emissions by growing new tree

Writing in the latest issue of the international journal Sci-ence, University of Cape Town botany professor William J Bond says grasslands are often seen as sterile or "degraded" landscapes shaped by centuries of deforestation or fires lit by humans.

However, recent research suggests that many grassland environments have much more ancient origins, predating human deforestation and firemanagement by millions of

Because grassland ecosystems were highly flammable, several plant and animals species had evolved strategies to survive the devastating heat and flames caused by lightning and other naturally induced

Examples include the peculiar "underground trees" of Africa and South America that have massive branches that grow beneath the soil.

With their main branches protected from surface fires, the trees are able to sprout new

stems and leaves rapidly after a

fire.
These "underground trees' (known as geoxylic suffrutices) also have close relatives in Africa that originated between 6 million and 2.5 millions years ago – predating human deforestation by millions of years.

Other plants had also devel-oped fire-survival strategies such as thick bark or underground storage organs that re-sprout rapidly after the fire burns out.

More recently, said Bond, oncern about the rapid rate of deforestation in many parts of the world had spurred efforts to indentify suitable land for reforestation.

The World Resources Institute had also developed a map linked to global plans to "reforest" degraded lands to offset the rising levels of human-induced carbon dioxide emissions.

"The immediate target is the reforestation of 1.5 million square kilometres by 2020. Vast areas of open grassy vegeta-tion have been identified as suitable for reforestation. But are all these grasslands prod-ucts of deforestations?" asked Bond, who is also chief scientist of the South African Enviital Observation Net-

He argued that the rich biological variety of grasslands had been ignored by many researchers until quite recently, partly because of myths and misconceptions that fires could only he started by humans.

Far from being sterile or de-graded, grasslands were often biodiversity "hot spots" and there were several unanswered questions about the origin, function and age of grassland

In South Africa, grassland biomes supported nearly 3 800 different plant species. In North America, grasslands supported nearly one third of

the total plant species. "It would be a travesty if an cient grasslands are replaced with ill-conceived forest plantation projects