

# Politics of Forest Fires: An Analysis of Australian Bushfires

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**Abstract:** *This research paper seek to examine the politics of forest fires; an analysis of Australian bushfires. This paper is transcendently divided into three parts. The first part of the paper provides a brief introduction about the international forest regimes and why and how forests became an issue at the international level. The second part of the paper analyzes the cause and impacts of bushfires in Australia. The third part of the study understands the major strategies adopted by the government of Australia in preventing the forest fires in the region. The last part of the paper would conclude the findings of the study.*

**Keywords:** Forest Regimes, Forest Fires, Bushfires, United Nations Forum on Forests

## 1. International Forests Regimes

Forests play a vital role in the existence and development of human beings. According to Food and Agriculture around 30.6 percent of the total geographical area of the world is covered by forest (Food and Agriculture Organization, 2015). Forest is directly connected with our civilization, culture, myths, and traditions. Forest support humans in various ways including maintaining the quality of air, provide food, wood, and medicines, maintain the fertility of the soil, help to prevent soil erosion, flood, and droughts, etc. Furthermore, forests and their resources are the main sources of income for many actors namely - individuals, nation - states, business groups, and several indigenous communities. However, we can identify a tremendous loss of world forests and their resources from centuries. The over usage and exploitation of forests and their resources by human beings for their survival and developmental purposes is the most important reason behind the decline of forests and its resource. Besides it, the unprecedented fires due to climate change also a cause for the decrease of world forests. The statistical data given by Food and Agriculture Organization emphasized that the world geographical area covered by forests in 1990 was 4128 million ha, but it was decreased to 3999 million ha in 2015. It is mainly because of overconsumption and exploitation of forests by various actors operating at international, national, and local levels.

Conservation of forests and its resources has become an important agenda at the international level since 1970's. The debates and discourse for the protection of forests were started from the United Nations Conference on Human and Environment (the Stockholm Conference) in 1972 which emphasized the magnitude of environmental problems. The main conventions including, first, Ramsar Convention on wetlands adopted in 1971 and came into force in 1975. The main objective of this convention was to nominate the international greatness of promoting wetlands reserves and usages. Second, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), was established because of the growing exploitation of various species of plants and animals through international trade. This convention was signed in 1973 and came into force in 1975. The aim of CITES is to protect vulnerable species by enforcing trade restrictions. International Tropical Timber

Agreement (ITTA) in 1983, recognized as the first commodity agreement where the special concern of the protection of forests. International Tropical Timber Organization (ITTO), as an outcome of the agreement vested the responsibility to conserve and sustainable management of tropical forests and trade (Kumar, 2018).

Later in the 1990s forests became an important topic at the United Nations Conference on Environment and Development (UNCED) where a juncture for growing wide range of demands by the international community for the conservation and management of world forests. Along with it the UNCED was a juncture for the growth of two other International Environmental Agreements (IEAs) namely United Nations Framework Convention on Climate Change (UNFCCC) and Convention on Biological Diversity (CBD) is emphasized forests as a natural locality for a large number of plants and animals and the conservation of biological species as an important task of CBD (Kumar, 2018). "Two other intergovernmental bodies also emerged after the Rio summit to oversee the forest conservation and management. These were the 'Intergovernmental Panel on Forests (IPF) and the Intergovernmental Forum on Forests (IFF). Those two institutional mechanisms worked on formulating international and national programmes encouraging countries to transfer financial and technological support for sustainable management of forests. However both these were ad hoc can in course of time, a consensus emerged on replacing them by a more permanent body the 'United Nations Forum on Forests' (UNFF) " (Kumar, 2018). In October 2000, the Economic and Social Council of the United Nations (ECOSOC), in its Resolution 2000/35 established the United Nations Forum on Forests (UNFF), a subsidiary body rested with the main objective to promote.... the management, conservation, and sustainable development of all types of forests and to strengthen long - term political commitment to this end".... based on the Rio Declaration, the Forest principles, Chapter 11 of Agenda 21 and the outcome of the IPF/IFF processes and other key milestone of international forest policy (United Nations, 2000).

At the international level, the United Nations Forum on Forests (UNFF) working to conserve the world forest area. The UN Forum on Forests used brings various policies and programmes through studies in different continents and those

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study report provides various strategies and mechanisms to nation states regarding the conservation of forests and its resources. The nature of UNFF is to guide the member nations of the United Nations to adopt eco and environmental - friendly policies and execute those policies into their local levels. The universal fact is that environment and its resources including forests come under the sovereign rights of the nation states. That means the nation - states can utilize forest and its resources for developmental and other purposes. Therefore the UNFF can only frame normative and institutional frameworks for the nation - states to conserve and maintain their forest.

When we look at the contemporary international scenario, there are several countries in the world loss their forests cover through the outbreak of unprecedented fires. Predominantly forests in the regions namely - Amazon, Indonesia and Australia are under the threats of unprecedented forest fire. Among these regions Australia is continuously facing forest fires in every year. Australia is no stranger to wildfires, however, increasing drought conditions due to global warming is leading to more and more bushfires and the 2019 - 20 bushfire was one of the worst in its modern history (India Today, 2021). The recent bush fires in Australia killed many people and created a tremendous loss in the public sector. The bushfires in Australia affects the biodiversity of the region and a cause for the degradation of many animals (Hastings river mouse, yellow - bellied glider, kangaroo etc.) and native fishes (Australian bass, eels, bullhead mullet etc.). The bushfires in Australia disproportionally affect the lives of several aboriginal people in the region. While the response from the Australian government is cold, especially the Prime Minister Scott Morrison's center right government is not taking the seriousness of the issue.

### Forest Fires

Forest fire constitutes a serious problem in the world. 'Forest fires are a result of complex interactions between environmental factors such as weather, fuel type, forest structure, and topography as well as socio - economic factors' (Muller M et. al, 2012). The story of forest fires is originated from our ancestors who stayed in forests for many decades and used forest fires for their survival and existence. History says that early human beings use fire for many reasons includes preventing and protecting them from the attacks of wild animals, for cooking purpose, protecting them from winter and cold, etc. 'The oldest evidence of forest fires has been found inside coal seams, which consist of charcoal created during large millions of years ago. The burned forests later sank into swamps and formed coal beds. These fires that happened up to over 300 million years ago were caused by lightning or volcanism. Fires in coal seams and their effects on surrounding forest landscapes have been verified even for prehistoric times' (World Wide Fund, 2017). "Forest fires are a natural element of many, but not of all forest ecosystems. In cold or dry climates with limited decomposition of litter and accumulation of humus through soil microorganisms, forest fires ensures that future generations of trees are supplied with nutrients" (ibid, 2017).

But when we analyze the contemporary forest fires are the results of natural phenomena like climate change or drought and manmade or accidental. In many cases, forest fire helps

the ecosystems and trees for their existence and development. For instance, the tree species like North American lodgepole pine and the sequoias in California require the heat from forest fire for producing seeds for new tree generations, the African savannahs, eucalyptus forests of Australia, pine forests from the taiga to the subtropics developed with fire. But on another side, the forest fires have negatively impacted the existence of many ecosystems in the world. Several wild edible plants and their species and animals are destroyed due to these forest fires. A statement given by the United Nations says that "Environment devastation wildfire release harmful pollutant including particular matter and toxic gases such as carbon monoxide, nitrogen oxide and other organic compounds into the atmosphere". In addition that forest fires create several damages and losses in the lives and property of human beings. The forest dwellers or the indigenous community suffer unspeakable problems in the wake of a fire.

### Australian Bushfires

The Commonwealth of Australia's national territory covers 7, 617, 930km reaching from the subtropics too deep into the southern temperature climate zone (World Wide Fund, 2018). Bushes in Australia are connected with the culture and lifestyle of the Australian people. The bush is the source of one of Australia's most enduring myths - that of the bush worker - representing traditional Australian values of mateship, egalitarianism, and irreverence towards authority the robust pioneer in a harsh, unforgiving land (Pinnington and Lafferty, 2004& 2011). The bushes in Australia play an important role in managing and sustaining the biodiversity and ecosystem of the region, promoting economic development for the aboriginal communities of the region. The Australian film 'Lantana' is one of the best examples that describe how it connected with the progress of one's life. Wildfires, or bushfires as they are commonly known in Australia, are naturally occurring phenomena in the Australian environment. Before the arrival of humans on the Australian continent, bushfires were often started as a result of lightning strikes or volcanic eruptions. While lightning continues to provide the spark for bushfires, the actions of people also contribute to the many bushfires that occur in Australia each year (www.unisdr. org). Bushfires and grassfires are common throughout Australia. Grassfires are fast moving, passing in five to ten seconds and smouldering for minutes. They have a low to medium intensity and primarily damage crops, livestock and farming infrastructure, such as fences. Bushfires are generally slower moving, but have a higher heat output. This means they pass in two to five minutes, but they can smoulder for days. Fire in the crown of the tree canopy can move rapidly (www.australiangovernmnet. geoscienceaustralia. com, 2022). A study conducted by 'Nature Communications' in 2018 says that the number of extreme positive dipole events goes up as climate heating continues. The mining and export of coal industries also contribute the greenhouse gases and it leads to one of the factors of the rise of temperature in the region.

'The basic factors which determine whether a bushfire will occur include the presence of fuel, oxygen and an ignition source. The fire intensity and speed at which a bushfire spreads will depend on ambient temperature, fuel load, fuel moisture, and wind speed and slope angle'.

**Fuel load**

Fuel load portrays the sum of fallen bark, leaf more diminutive and little branches collecting within the scene. For the most part talking, the more noteworthy the fuel stack, the superior and more seriously the fire. Fuel which is concentrated but freely compacted will burn speedier than intensely compacted or scattered fuel sources. Littler pieces of fuel such as twigs, leaf litter and branches burn rapidly especially when they are dry and freely orchestrated and will burn rapidly within the fire front. Bigger powers, such as tree trunks frequently burn afterward after the fire front has passed. The normal oil inside eucalyptus trees promotes the combustion of fuel.

**Fuel Moisture**

Dry fuel will burn rapidly, but moist or damp fuel may not burn at all. As a result, the time since precipitation and the sum of rain gotten in an imperative thought in evaluating bushfire peril. Frequently a degree of the dry spell calculates, or dampness shortfall will be utilized as a marker of extraordinary bushfire climate conditions.

**Wind Speed**

Wind acts to drive by blowing the flames into fresh fuel, bringing it to ignition point and providing a continues supply of oxygen. Wind also promotes the rapid spread of fire by spotting, which is the ignition of new fires by burning embers lofted into the air by 30km downwind from the fire front. There is a threshold wind speed of around 12 to 15 km/h which makes a significant difference in the behavior of bushfires in the open. When wind speeds are below this threshold, fires with heavy fuel loads burn slowly. However, even a slight increase in wind speed above this threshold results in a significant increase in fire behavior and advancement. The width of a fire front also has an influence on the rate of spread and a wind shift can immediately widen the forward edge of a fire (www.governmentof australia.com, 2022).

**Slope Angle**

"Fires pre - heat their fuel source through radiation and convection. As a result, fires accelerate when travelling uphill and decelerate travelling downhill. The steepness of the slope plays an important role in the rate of fire spread. The speed of a fire front advancing will double with every 10 degree increase in slope, so that on a 20degree slope, its speed of advance in four times greater than of flat ground".

The 2019 bush fires in Australia killed 33 people including four firefighters and more than 11 million hectares (110, 000 sq km) of bush forests and parks across Australia have burned (British Broadcasting Channel, 2020). Australia has facing unprecedented forest fires for decades. When we look at the bush fires in Australia, the years '1974 to 1975 recognized as the biggest fire happened in the western New South Wales and across the states and Northern Territory, when 15% of the country was burned'. The latest data's regarding the loss of forest area in Australia includes between 2000 and 2015, Australia lost 5.6 million ha of forests to fire and drought. Australia's loss of forest cover is second only to Brazil's for this period. By 2015, 1.5 million ha were reforested (WWF, 2018). Australia's National Environment Science Program illustrated that 'human - caused climate change has resulted in

more dangerous weather conditions for bushfires in recent decades for many regions of Australia'. The arson accidental ignition during agricultural clearing, gracing from overhead power lines, grinding and welding activities come under the human - made events. Natural factors like lightning only cause 6% of wildfires.13% are attributable to arson and another 37% to suspect arson - together making up half of the fires. Another 35% of fires are caused by carelessness (Australian Institute of Criminology, 2009).

Australia with increased fire incidence and severity, the habitat of fire - sensitive species has decreased, and vegetation composition and structure have changed. Fire - prone grass species invaded, and animals are lacking nesting and retreat options (WWF, 2020). The unprecedented bushfires affect the biodiversity of the region and a reason for the degradation of many animals namely - Hastings river mouse, rufous scrub - bird, yellow - bellied glider, greater glide, kangaroo, etc. The mixing of bushfire produced ashes and mud from the landscape in the river water killed many native fishes namely - Australian bass, eels, bullhead mullet, yellow - eye mullet, etc. Apart from the degradation of biodiversity and ecosystems, bushfires increase the loss of human beings and their properties. The aboriginal people or the indigenous people in Australia face many constraints during the time of bushfires. Among the total population of Australia, 2% belong to the aboriginal communities. The aboriginal communities in Australia depend on bushes for their livelihood and economic independence. They used to make different artificial things and food items. These bushfires negatively impact them and their traditional knowledge and enhance them more vulnerability in terms of accessing their basic needs and rudimentary rights. Even though the Australian government has passed the 'Aboriginal Land Rights Act' in 1976 which promulgates the rights of aboriginal people in terms of claiming land rights based on their traditional occupation. In addition that toxic fumes and heavy smoke produced from bushfires can impair vision and impact on air quality and create difficulties in breathing. Due to the unpredictable nature of fast -moving fires, people are likely to be encouraged to evacuate from their homes, but the rehabilitation process required more funding and other resources (Australian Disaster Resilience Knowledge Hub, 2021).

**Strategies of preventing bushfires**

There are several approaches we can use to prevent bushfires in Australia, the most common strategies or approaches suggested by the international community includes land management, building management, community education, and fire danger warnings. The land management strategies are effective in; lessening the presence of fuels in forests or grassland areas, slowing down and sometimes ceasing the spread of bushfire, and providing easier access routes for firefighters to reach and extinguish fires (www.unisdr.org). The creation of fire lanes or firebreaks is one of the land management strategies that would reduce the impact of bushfires in the region. Another important approach that can reduce the impact of fire from the bushes is building management. Whenever a person builds a new house near bush forests, he/she has to take preventive measures or materials while building the house. Use the materials that can prevent forest fires while constructing homes.

Furthermore, Community education helps to create awareness about forest conservation and make them responsible to take preventive measures to protect themselves from the effects of bushfires. Preparation before the Bushfire season include; "trim branches so that they are well clear of the house, remove rubbish, leaf litter and plants that are close to the house, have water hoses available, and ensure they will reach all parts of the house and garden, Where water is not connected, obtain a high - pressure pump" etc. Fire danger warning system is another strategy used to help people to take initiatives to save their lives from the brutal consequences of forests fire all over the world. "Australia also has a fire danger rating system which forecasts the potential for a forest or grassland fire and is based on seasonal drought, recent rainfall, temperature, relative humidity, wind speed, and the amount of fuel on the ground. The rating system includes extreme fire danger, very high fire danger, high fire danger, moderate fire danger, low fire danger is used Australia - wide and is designed to control the general public's use of fire during the bush fire season to lessen the potential for fire outbreaks". All these measures will help the people who stay both in the urban and rural areas. The response from the Morrison government is very pathetic towards curbing the bushfires in the region. He is not giving any attention to adapt the mitigation programs and policies for combating climate change in the region. The cold response from the Morrison government makes the situation more complicated. The Australian government has to take effective actions to reduce its greenhouse gases. Australia must take stronger action to limit global warming to 1.5 c. But the Morrison government is lacking its interests in preventing bushfires and climate change. But the response from international institutions such as the United Nations International Children's Emergency Fund (UNICEF) has offered helps and supports to the Australian government in key areas such as relief, recovery, and rehabilitation process.

## 2. Conclusion

Forest plays a vital role for the survival and development of human beings. It is the centre of biotic and abiotic things which are necessary for the upliftment of an individual as well as a country. But when we look at the contemporary society, we can see there is a tremendous loss of forest cover and its resources. It is mainly because of the over utilization and exploitation of forests and its resources by various actors at international, regional and national levels for the development purpose. Furthermore the natural hazards and the creation of fires are also paved the way for the terrific loss of forests and its resources. Among these reasons, forests fires are identified as an important cause for the loss of world forests cover. Due to these forest fires, the world lost many endogenous species of plants, medicines, and animals and other living organisms. Furthermore the fires in the forests can destroy the biodiversity, lives of indigenous people and public properties.

The unpredicted rise of forest fires in different parts of the world became a threat to international peace and security. The United Nations Forum on Forests (UNFF), regional organizations, governments, civil society, and non - governmental organizations has to build more consensus for the conservation and management of forests and its

resources. The United Nations Forum on Forests has vested the responsibility to develop policies and programs that focus on the conservation and management of world forests. In addition to promoting guidelines to member countries for building mechanisms related to the protection of forests. But the Forum on Forests has a limited role in guiding the member countries regarding forest conservation and management. It is because of the 1962 General Assembly resolution 1830, which emphasized the sovereignty of states over natural resources. This resolution gave the sovereign right to the countries and their people to use their natural resources including forest resources for their development and survival. It means that the state has the primary responsibility to protect its forests.

When we look at the issue of Australia the government has used 'land and building management, early warning system to combat bushfires in the region. But these strategies are not successful and not effective to combat the fire Australia and the Morrison government should adopt new innovative strategies to prevent fire in the region, otherwise the fire will be a major threat to many people including the aboriginal communities in Australia. The ruling conservative coalition has long taken pride in backing business including mining giants such as BHP Group and Glencore Plc. Morrison, who famously brandished a lump of coal in parliament to show his support, frequently talks up the fossil fuel industry's importance to the economy (Scott and Thornhill, 2021). He has less interest in taking steps forward for the adaptation and mitigation process to prevent bushfires in the region. It is not only the moral imperative of Australian government, but also other stakeholders such as UN and its agencies has to take the issue in a serious way and bring more adaptive and mitigation process to prevent the bushfire in the region and conserve the wild edible plants, biodiversity and protect the lives of future generation from the horrible impact of bushfire.

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