United Nations Office for Disaster Risk Reduction (UNDRR)

Topic(beginner)

Addressing the Increasing Frequency and Intensity of Wildfires

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Introduction to the Committee

The United Nations Office for Disaster Risk Reduction (UNDRR), established in 1999 and restructured through UN General Assembly Resolution 69/283 in 2015 [1], coordinates global efforts to reduce disaster risks and build resilient communities. UNDRR leads the implementation of the Sendai Framework for Disaster Risk Reduction. [1] This framework focuses on three main things: being prepared, preventing disasters, and making institutions stronger so they can handle natural disasters and human-made hazards. [2] Wildfires are one major risk that UNDRR works on, and these fires are becoming more severe. UNDRR works with many partners, including governments, local authorities, scientists, and civil society groups. Together, they promote better planning that uses data and evidence. This includes creating early warning systems, adapting to climate change, and improving how governments manage disasters. [2] Its strategic framework focuses on 4 key priorities: generating evidence, mobilizing financing, advancing public advocacy, and integrating disaster risk reduction with climate agendas. [2] With extreme wildfires projected to increase significantly in the coming decades, UNDRR's work provides essential guidance for informed international cooperation and effective risk mitigation. [1]

Background to the Issue

Chapter A: The historical timeline of wildfire

Pre-1950

Indigenous peoples used fire to manage their lands long before Europeans arrived. North American Indigenous communities found more than 700 different ways to use fire in their daily lives. [3] For over 65,000 years, they burned land to create diverse habitats, which made hunting easier, travel routes stayed clear, and certain plants they needed would grow better. [4]
Aboriginal Australians lit small fires throughout the year to keep the land healthier. Scientists recently studied 4,824 trees that showed fire scars from 1500 to 1900 CE. [5] The evidence was clear: Indigenous burning helped forests resist the effects of changing weather, which made the landscape stronger.
When European colonizers arrived, they saw Indigenous burning as irresponsible and dangerous acts. In 1793, Spain banned "Indian burning" in California. [6]
Two massive fires changed how America thought about wildfires forever. The Peshtigo Fire killed over 1,500 people in Wisconsin in 1871, making it the deadliest in U.S. history. [7] But the 1910 Great Fire, called the "Big Blowup", had an even bigger impact on policy. [8] Three million acres burned across Montana, Idaho, and Washington. Two days. That's all it took. Eighty-six people died, including 78 firefighters who perished in a single day. The Forest Service mobilized 10,000 firefighters and had to call in the Army Reserves. The fire cost the agency $1.1 million, creating a massive deficit. [8]
After the horrific effects of those fires, total suppression became the only acceptable approach for over fifty years. When Indigenous communities continued "light burning," officials dismissed it as "Paiute forestry" and did everything in their power to stop those actions. [9] The systematic suppression of Indigenous burning coincided with many Indigenous peoples dying in huge numbers during colonization. As colonial authorities forcibly stopped their practices, traditional knowledge about managing fire vanished from the landscape. Without regular burns that had kept forests healthy for millennia, fuel accumulated in dangerous quantities. [9]

1950-1990

After World War II, firefighting became a military operation. The 1935 "10 a.m. policy" mandated that every fire had to be out by 10 a.m. the day after it was spotted. At first glance, the numbers looked impressive: annual burned area dropped from 30 million acres in the 1930s to just 2-5 million acres by the 1960s. [10] Yet beneath the surface, the success was deceptive. Back in 1924, ecologist Aldo Leopold argued that wildfires actually helped ecosystems and were necessary for natural renewal, but such perspectives were largely overlooked until the 1960s.
The suppression strategy failed globally. Australia's 1967 "Black Tuesday" fires killed 64 people

and consumed 264,270 hectares within five hours, and 110 separate fires near Hobart.
The Mediterranean told the same story, only clearer. Fires kept climbing. [11] Around 25,000 per year in the 1970s. By 1990? Closer to 50,000. The burned area doubled. Spain's numbers were worse. Fire numbers shot up 321%. The burned area increased by 316 percent. What happened? People left. After the war, mountain villages emptied as families moved to cities. The old agricultural patterns, those patchwork fields and grazing lands that acted like natural firebreaks, all grew over. Continuous forest replaced them. Mediterranean countries threw money at the problem. [12] Over $1 billion annually on suppression by the late 1980s. Greece built the world's highest per-hectare aerial fleet. Helicopters, waterbombers, the works. The fuel just kept piling up. When extreme weather hit, nothing could stop the fires. [13]
The Soviet Union's approach to fire was no different, and allowing fires to burn was considered "anti-Soviet behavior." The 1987 Black Dragon Fire burned 13-15 million hectares on the Soviet side, yet authorities deliberately chose not to suppress; total suppression had led to massive fuel accumulation. In contrast, China deployed 60,000+ personnel, suffering 211-266 deaths.
Indonesia's 1982-83 fires broke another assumption. Tropical rainforests were supposed to be naturally fire-free. Over 5 million hectares burned in Borneo alone. [14] The research afterward revealed the pattern. Logged-over forests burned far more easily than untouched forests. 3-5 times more fire-prone. Logging had made them vulnerable.
In the U.S., the Forest Service officially abandoned the 10 a.m. policy in 1978. [15] The 1988 Yellowstone fires, consuming 562,310 hectares, demonstrated suppression-only approaches' limitations. By 1994, when expenditures approached $1 billion, and 34 firefighters perished,a comprehensive review became inevitable. [13]

1990-Present

The 1997-1998 global fire crisis, featuring severe fires across Indonesia, Brazil, and Mexico, focused international attention beyond emergency response toward comprehensive policy frameworks. The Food and Agriculture Organization (FAO) convened 71 participants from 33 countries at an October 1998 Rome meeting on "Public Policies Affecting Forest Fires," presenting recommendations to forestry ministers in March 1999. The FAO began defining global fire effects systematically, establishing baseline data for future tracking. [16]

Contemporary catastrophes have demonstrated the inadequacy of existing approaches. Australia's 2019-2020 "Black Summer" fires burned 24 million hectares, an area equivalent to the United Kingdom. [17] 450 people died, some in the flames, others from breathing the smoke. 3,000 homes are gone. 3 billion vertebrates displaced or killed. The fires released 306 million

tonnes of carbon dioxide. 3,000 people ended up in hospitals with heart and lung problems. Mediterranean fires in 2021 consumed over 800,000 hectares across multiple EU nations. The

second-worst season since 2000. More than 100 people died. Decades of preparation and coordination still fell apart.[18]

Canada's 2023 wildfire season broke all records, 15 million hectares burned (4% of the nation's forests), representing seven times the annual mean from 1983-2022. The fires generated 480-640 million metric tons of carbon, comparable to Russia's entire annual fossil fuel emissions. Smoke crossed borders. 82,100-87,000 premature deaths globally from pollution. Air quality collapsed across North America and Europe. [19] The 2024 season is even worse. It surpassed 2023's forest fire destruction, and right now, it doesn't look like the situation is going to improve in recent years.

Chapter B: Key definitions

Prescribed or controlled burning is a planned fire set by trained experts under specific weather conditions to manage land safely. [20] Each burn is carefully planned, taking into account temperature, humidity, wind, and smoke patterns. Prescribed burns are used to reduce dangerous fuels near communities, restore ecosystems, improve wildlife habitats, and manage farmland. In the U.S., federal agencies conduct 4,000–5,000 burns each year, with a 99% success rate. [21] Although most burns succeed, escapes can happen if conditions change unexpectedly, requiring investigations and adjustments. Overall, prescribed burning is a key tool for preventing catastrophic wildfires, protecting communities, and maintaining natural fire cycles disrupted by suppression. [22]

Fire suppression and fire management are two very different approaches. Fire suppression focuses on stopping fires through direct actions like using water, fire retardants, creating firebreaks, and removing fuel. Fire management takes a broader approach, combining suppression, prescribed burns, prevention, and allowing beneficial fires to burn safely. It treats fire as a natural part of ecosystems, needing careful management rather than total elimination. Policies that only suppress fires have allowed high-intensity fires to build up, a problem called "regressive suppression." Modern disaster planning recognizes that a century of suppression-only policies has contributed to today's megafire crisis, requiring a balance between controlling fires and using fire beneficially. [23][24]

Fuel load management is the careful control or removal of wildland fuels to reduce dangerous buildup, restore ecosystems, and lower wildfire risk. Fuels include all combustible vegetation, live and dead, classified in layers: surface fuels (grass, litter, small debris), ladder fuels (shrubs and small trees connecting ground to canopy), and canopy fuels (tree crowns). Managers use mechanical clearing, chemicals, biological controls, and prescribed burns. Of the fire behavior triangle (fuel, weather, topography), fuel is the only factor humans can control, making fuel management key for reducing risk. Proper fuel management creates defensible space, gives firefighters safer access, lowers fire intensity and ember production near communities, and is more cost-effective than suppression alone. However, because past fire suppression allowed fuels to accumulate, today's management must address this "fuel accumulation paradox," tackling risks that would not exist under natural fire cycles. [25]

Transboundary haze pollution happens when smoke and harmful gases from fires or land clearing in one country drift into neighboring countries. This affects air quality, visibility, health, and the environment. It mostly comes from peatland fires and slash-and-burn farming, showing that wildfires can have impacts beyond national borders.

Chapter C: Vulnerable populations

Wildfire disasters disproportionately affect populations already experiencing systemic vulnerabilities, creating compounding disadvantages across health, economic, and social dimensions.

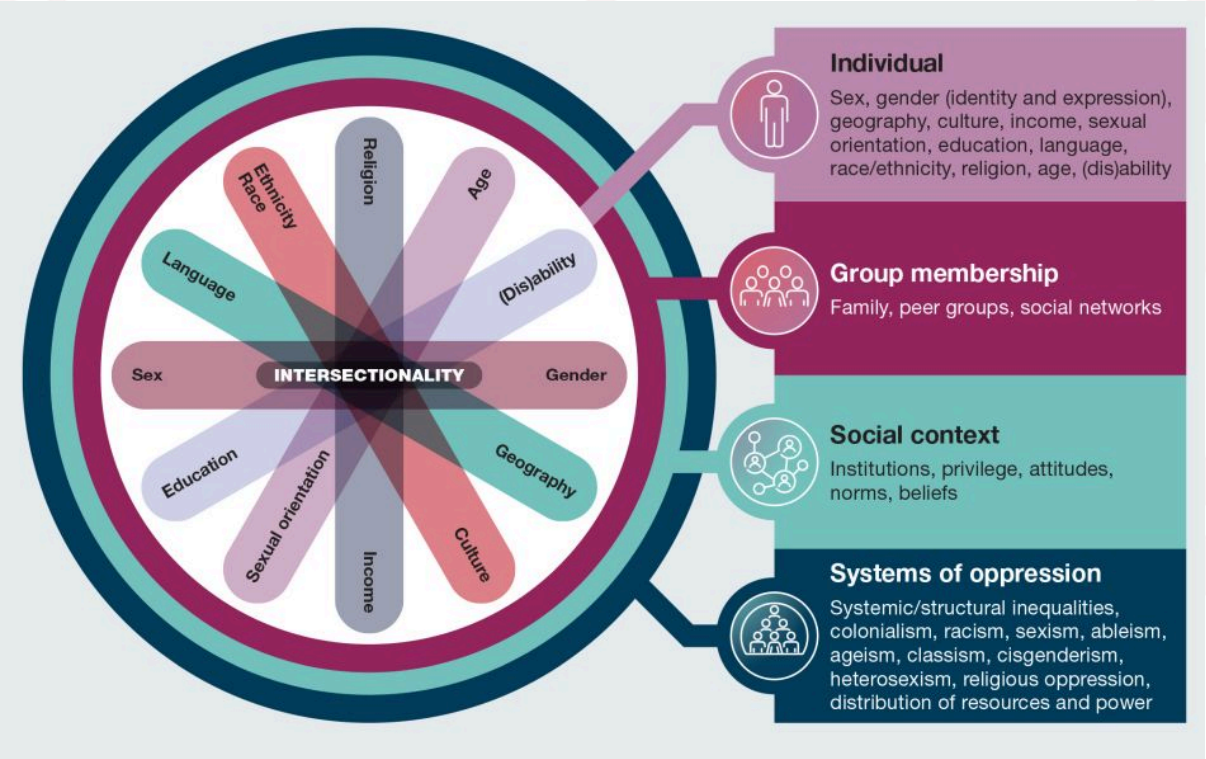
Indigenous peoples face wildfire impacts made worse by historical injustices. These communities are six times more likely to inhabit areas where wildfires occur, often a direct consequence of historical displacement from traditional territories to flood-prone and fire-prone marginal lands. Beyond physical displacement, fires destroy traditional foods, hunting and gathering areas, medicinal plants, and cultural sites, severing intergenerational knowledge transfer and compounding historical trauma. Over 2.3 million hectares of forests on Indigenous land burned across the analyzed regions during the recent study periods, representing irreplaceable cultural losses. [26]

Firefighters and emergency responders carry heavy responsibilities at work. About 20% of firefighters and paramedics meet post-traumatic stress disorder criteria during their careers, nearly three times the 6.8% lifetime risk for the general population. Firefighter suicide rate reaches 18 per 100,000 compared to 13 per 100,000 for the general public. Mental health disorders appear at 2.5-4 times higher rates. Physical risks include heat-related illnesses, burns, respiratory damage from smoke, and cardiovascular stress. The system itself creates problems. Long hours, limited access to culturally competent mental health services, and stigma around seeking support. Increasing wildfire intensity strains workforce capacity. [27]

Low-income and elderly populations face severe recovery gaps. Almost two-thirds of homeowners in fire-prone areas don't have enough insurance, with low-income households hit the hardest. Of 402 families who lost homes in one 2017 fire event, only one family had rebuilt and returned within months, illustrating reconstruction barriers for communities without financial reserves. Elderly and disabled populations experience profoundly elevated mortality rates: individuals aged 85-plus have fire death rates of 39.5 per million, 2.6 times higher than the total population, and in one catastrophic 2018 fire that killed 85 people, 80 percent of the victims were aged 65 or older. [28] People with disabilities face death rates 2 to 4 times higher than the general population during disasters, as mobility, hearing, cognitive, and equipment challenges create evacuation barriers. Despite this heightened risk, emergency responses often overlook these populations, leaving them vulnerable and disrupting community ties during events such as nursing home evacuations of over 2,500 people. [29]

Agricultural workers face immediate danger and economic precarity. Smoke exposure destroys crops, which makes annual labor income drop by an estimated $125 billion per year in affected

regions. Individual farm losses are estimated at $34,000 for one week of smoke in a single field. Regional losses add up to hundreds of millions. Workers face workplace air pollution levels 10 times as harmful as typical air pollution, yet financial pressure forces them to keep working. Safety rules are still too weak, many workers lack proper masks, and existing regulations are poorly enforced. [30]

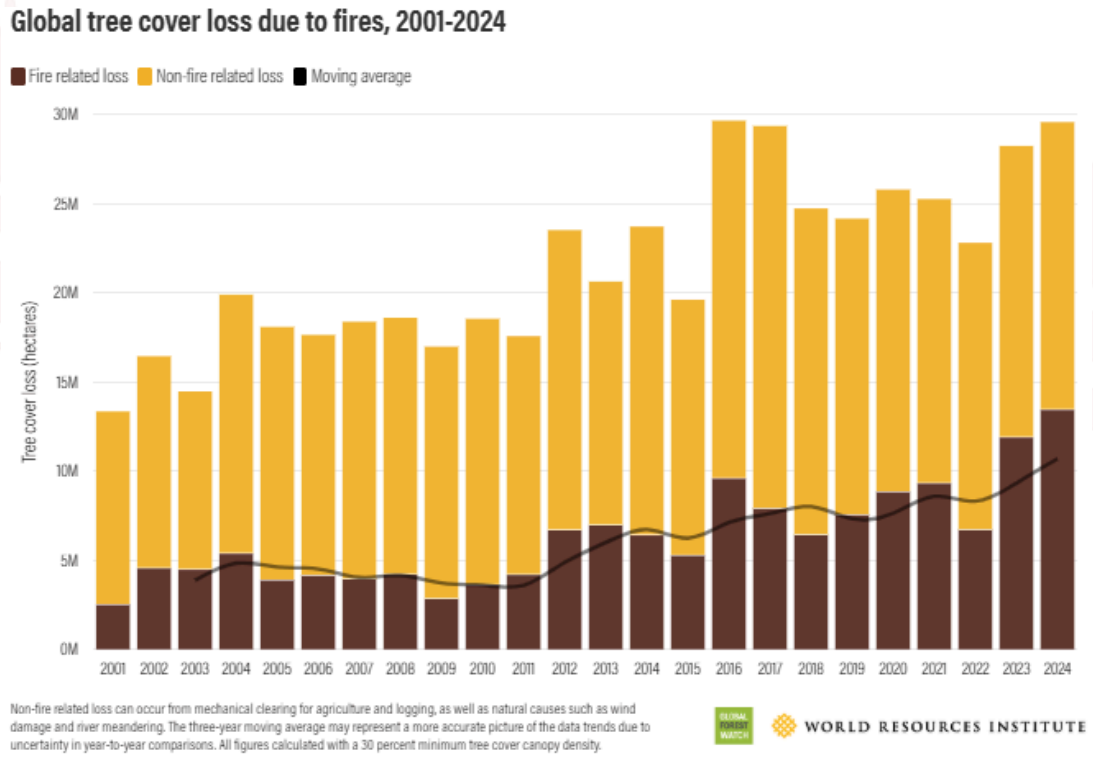


Current Situation

Chapter A: Statistics and trends

Between 2022 and 2025, wildfires changed from something that happened once in a while to a constant global problem that is causing more and more harm to people and the environment.

The 2024 fire season broke records. Forest fires consumed 13.5 million hectares worldwide, making 2024 the worst year ever recorded (World Resources Institute, 2025). This surpassed 2023's previous record by 13 percent. It marked the first time major fires burned simultaneously in both tropical and boreal forests. The annual forest fire area has increased by 188,900 hectares per year from 2001 to 2024.[31] In addition, the economic impact is just as devastating. Wildfires cost the United States between $394 and $893 billion annually. [32] These costs include property damage, health impacts, lost income, and reduced property values. Recent disasters demonstrate the scale of destruction. The January 2025 Los Angeles fires caused estimated total damages of $135-150 billion. [33] Without strong climate action, extreme fires will increase 14 percent by 2030, 30 percent by 2050, and 50 percent by 2100. [34] However, these outcomes are not inevitable. Strong emissions reductions could limit the damage. Models suggest that keeping warming below 1.5°C would constrain extreme wildfire increases to below 15 percent in most regions. Climate change has made extreme fire weather 88% to 152% more likely in global forests. [35]



Chapter B: Failed Solutions

Decades of wildfire policy trials have shown that single-approach solutions fail. The Sendai Framework for Disaster Risk Reduction[2], adopted by all UN member states, establishes 7 global targets and 4 priorities for action applicable to wildfires as explicitly recognized hazards. [2] However, the framework operates as a voluntary, non-binding agreement with no consequences for failing to meet targets. Countries self-report progress through the Sendai Framework Monitor, yet the 2017 Data Readiness Review of 87 countries found that no country possessed all the data required to report on all targets comprehensively. [36] Wildfire reporting is especially difficult. Many countries lack data on economic losses, and in some places, especially in developing regions, fires happen often and across huge areas, making detailed reporting impossible. The main responsibility rests with individual nations, depending on voluntary national actions and international cooperation that is recommended but not mandated. [2] Studies show the need for early warning satellite systems, helping countries improve their ability to predict and forecast wildfires, and giving slow-moving countries the full support and resources they need.

The ASEAN Agreement on Transboundary Haze Pollution, which began in 2003, was the first regional treaty in the world to deal with cross-border smoke pollution, but progress has been slow. The country responsible for most of the fires took 12 years to ratify the treaty, and major haze events kept happening every year until 2019, making the goal of a "Haze-Free ASEAN by 2020" unrealistic. The treaty has no real enforcement or penalties, so countries can ignore it without consequences. Funding is also weak. By 2014, the ASEAN Haze Pollution Control Fund had only raised $250,000 out of its $500,000 goal. Overall, national interests have been consistently put ahead of meaningful regional environmental action. [37]

In addition, weak and uncoordinated early-warning systems create serious dangers during fast-moving emergencies. During many fires, almost all the time, evacuation zones receive no alerts, and messages are often delayed or lost due to fragile cell towers and outdated communication networks. Poor coordination between fire managers and policy administrators, outdated infrastructure, and failing insurance markets leave millions exposed, uninsured, and vulnerable. Without stronger coordination, clear responsibilities, and binding prevention measures, both domestic and international wildfire responses remain inadequate.

Further Reading

Note on Further Research Directions
We've chosen not to include a "Further Reading" list or "Questions to Consider" here. Instead, we encourage our chair panel to explore the topic independently, find new sources, ask fresh questions, and share their unique insights. Later, we'll gather and publish these contributions as an extra resource, giving our delegates a wide range of perspectives and ideas for deeper research. This approach ensures that the final guide reflects diverse viewpoints and inspires independent, critical thinking among both our chairs and delegates.

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