ECOSOC

Prevention of destructive wildfires and floods.

Topic Background:

Hazards such as earthquakes, floods, heatwaves, and wildfires, can be prevented from becoming life-threatening disasters.

From record-breaking heat waves in British Columbia, to wildfires in the Mediterranean, floods in Nigeria, and droughts in Taiwan; the period between 2021 and 2022 saw record-breaking catastrophic disasters in all corners of the world.

Some 10,000 people lost their lives, and an estimated $280 billion was incurred in damages worldwide.[1]

The latest Interconnected Disaster Risks report, from the UN University Institute for Environment and Human Security (UNU-EHS)[2], finds that many of these disasters shared root causes. At the same time, the study's authors found that the solutions to preventing or managing them are also closely linked.

"Disasters occurring in completely different parts of the world at first appear disconnected from each other. But when you start analyzing them in more detail it quickly becomes clear that they are caused by the same things, for example greenhouse gas emissions or unsustainable consumption," said Dr. Zita Sebesvari, lead author and deputy director of UNU-EHS[3].

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[1]Wildfire and floods don't need to turn into disasters

[2] Ibid
[3] Ibid

An even deeper dive shows that the drivers of disasters are formed by shared root causes which are more systemic in nature, such as through economic and political systems. Deforestation can be traced back to placing economic interests over those of the environment and to unsustainable consumption patterns.

Other common root causes found in the report include inequality of development and livelihood opportunities, human-induced greenhouse gas emissions, and legacies of colonialism. It is root causes like these that can be found in disasters around the globe.

The connections do not stop at root causes and drivers either, but also with who and what is at most risk; vulnerable groups, in both human settlements and natural ecosystems, continue to be the hardest hit by disasters.

However, the solutions are also interconnected, which means that one type of solution can be applied in several contexts to reduce the impact of disasters in different parts of the world. Additionally, there are multiple solutions to address one disaster and they are most powerful when applied in combination with each other.

“If we don't want the disasters which we are currently experiencing to become the new normal, we need to recognize that they are interconnected, as are their solutions,” says lead author Dr. Jack O’Connor.[4]

[4] Wildfires, Hurricanes, Floods and Earthquakes: How Elections are Impacted by Natural Hazards.

General History:

The presence of fire in the landscape has been one of the major evolutionary factors determining the composition of flora throughout the state and around the world. Natural causes of fire range from lightning, sparks from falling rocks, volcanic activity, and the spontaneous combustion of plant materials and other organic matter. However, of these, lightning is the most influential factor in almost all regions of the world. Generated by summer thunderstorms, lightning is responsible for much of the wildland fires that occur throughout the western United States each year.[5]

Man has also played a role in the pattern of fires in the landscape, dating back possibly as far as 30,000 years ago with the arrival of the first Americans.[6] Early Spanish explorers and missionaries documented the use of fire by Native Americans who used fire clear areas for the germination of oaks, for the production of acorns, and to create and maintain grasslands for hunting.

Three main classes of wildfire exist depending upon location in the fuel matrix and intensity. These are surface, crown, and ground fires. Surface fires are typically low intensity, rapid fires that seldom reach high temperatures. These fires consume light fuels and present little danger to basal portions, root stocks, and tubers, in the soil. Crown fires occur in the upper sections of trees and are typically the result of surface fires. During such fires surface materials and trees alike are ablaze. Ignited branches

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[5] Natural History of Fire & Flood Cycles
[6] Ibid

and embers fall to earth further spreading the fire. Ground fires, although occurring less frequently than other forms of fire, are typically very intense blazes that remove vegetation and organic matter down to bare mineral earth. The heat and intensity of such fires can destroy roots, tubers, and rhizomes, located beneath the soil surface and may devastate entire plant communities.

Bibliography:

Natural History of Fire & Flood Cycles. California Coastal Commission. https://www.coastal.ca.gov/fire/ucsbfire.html

Neale, T. N. & K. Weir, J. K. W. (2015, 28 junio). ***Navigating scientific uncertainty in wildfire and flood risk mitigation: A qualitative review***. ScienceDirect. https://www.sciencedirect.com/science/article/pii/S221242091530025X

Newsroom. (2022, 1 septiembre). ***Wildfire and floods don't need to turn into disasters***. Modern Diplomacy. Recuperado 18 de octubre de 2022, de https://moderndiplomacy.eu/2022/09/02/wildfire-and-floods-dont-need-to-turn-into-disasters/

Wildfire and floods don't need to turn into disasters: UN risk report. (2022, 2 septiembre). UN News. Recuperado 18 de octubre de 2022, de https://news.un.org/en/story/2022/08/1125692

Wildfires, Hurricanes, Floods and Earthquakes: How Elections are. (s. f.). IDEA. Recuperado 18 de octubre de 2022, de https://www.idea.int/news-media/news/wildfires-hurricanes-floods-and-earthquakes-how-elections-are-impacted-natural