WORLD ON FIRE

Top 100 jurisdictions with wildfires

According to the United Nations Food and Agriculture Organization (UNFAO, 2015), the livelihood of over 1.6 billion people depends on the vital resources forests ecosystems provide. Extreme climate events and wildfires are already impacting forest lands across the globe, triggering unprecedented changes in all aspects of society (IPCC, 2018).

In late 2019 and early 2020, successive mesoscale forest fires in Brazil and Australia triggered a global debate about the effectiveness of international cooperation to protect biodiversity. Additionally, the ongoing pandemic has drawn unprecedented levels of concern about the role of forest degradation on the spread of zoonotic-related diseases.

The World on Fire is a 3D visualization developed to identify the 100 jurisdictions most impacted by wildfires and to serve as a tool for policy makers to better allocate resources to prevent and combat wildfires at the jurisdictional level in both developed and developing countries. Particular attention should be given to the top 100 jurisdictions, registering more fires in the last two decades in Angola, Australia, Brazil, Central Republic of Africa, Democratic Republic of Congo, Guinea, India, Madagascar, Mali, Mozambique, Republic of Congo, Russia, Tanzania and Zambia. This 3D visualization project uses 13.3 million individual fire (ignitions) locations derived by the Global Fire Atlas from observations from NASA’s 500-meter Moderate Resolution Imaging Spectroradiometer (MODIS) for the 2003-2016 period (Andela, Morton, Giglio, and Randerson, 2019). GAMD.org provided the global jurisdictional boundaries. TNC’s terrestrial ecoregions of the world serves as an underlaying proxy to confirm regions with biomass ignition capabilities. NASA’s Visible Earth provided the non-terrestrial GeoTIFF layers. Ignition locations were organized, processed, and analyzed using Arcgis Pro® 2.5. The feature fire topography was created using Blender 2.82, and the layout of the feature infographics was finalized using Illustrator.

Data Source

- NASA's Visible Earth
- TNC's Terrestrial Ecoregions
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- TNC Terrestrial Ecoregions
- GeoTIFF layers
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Number of fires per jurisdiction

Total fires per jurisdiction 2003-2016
(Top 100 Jurisdictions)

Jurisdictions (state, province, region or prefecture)