

## 3.5 WHAT ARE THE RECENT TRENDS IN WILDFIRES AROUND THE WORLD?

### Aim

To better understand the current state of wildfire occurrences around the globe.

### Description

If you live in a fire-prone ecosystem, you may have the impression that the whole world is on fire. In contrast, if you live in a fire-independent ecosystem, you might think wildfires are a myth. Which case is true? Did you know that there is plenty of wildfire data freely available online? Let's explore this!

### Linked units

- Unit 1: Understanding your environment and connecting it to climate change impacts.
- Unit 2: History of fire
- Unit 3: Fire Ecology 1
- Unit 4: Fire Ecology 2
- Unit 9: Wildfires in the future

### Type of results

- Presentation
- Classroom discussion

### Material you may need

- Computer with internet and/or access to a library
- Projector

### Scope of impact

- Classroom
- Household
- Community

### Activity: Understanding recent wildfire trends.

Let's understand more about wildfire evolution and trends around the globe and the data resources available about them. We invite you to search online for the search string "wildfire data" and see what comes up. Attention! Look for official data sources, like EFFIS, UN, NASA, etc.

### Tasks

1. In small groups in the classroom, brainstorm about wildfires. What types of variables influence their occurrence (temperature, humidity, wind, vegetation, etc.)? What resources are necessary to control them (people, training, equipment, etc.)? After a wildfire has occurred, what data should be collected for management and research purposes (ignition location, meteorological conditions, burnt area, infrastructure damage, property damage, etc.)? (group)

2. Share your discussion with the classroom. Which are the variables you consider should be registered regarding a wildfire occurrence (during and after the fire)? Why are these variables the most relevant? From which standpoint (socioeconomic or environmental)? (group)

3. Each of the groups will now search for official governmental platforms that freely provide wildfire data. A few suggestions to start with are the European Forest Fire Information System (EFFIS), National Interagency Fire Center (NIFC), and Fire Information for Resource Management System (FIRMS - NASA). Once the group has searched at least two different platforms, answer the following questions: (i) Which are the variables available? (ii) How is it spatially organized (cities, states, countries)? (iii) What type of variables are they (social, economic or environmental)? (iv) Is there any important variable you would have liked to have seen on the databases? (group)

### 3.5 WHAT ARE THE RECENT TRENDS IN WILDFIRES AROUND THE WORLD?

#### Professions related to the topic

- Data analyst
- Biologist
- Ecologist
- Geographer
- Forest engineer
- Meteorologist
- Environmental scientist
- Scientific journalist

4. Now, go to the EFFIS Statistics Portal and access the EFFIS Estimates. You now have two analyses to do. (1) Using the available data, calculate the total burned area for the previous year in the European Union countries. Now, repeat the process and calculate the total burned area 11 years ago (so you will have a 10 year interval to compare). Register the data and calculations you made, and answer the following question: Has the burned area increased or decreased in the ten years analyzed? (2) Now, choose two different countries of the European Union. For the previous year, calculate the proportion of the country that burned regarding its total area. Now do the same for the data available from 11 years ago (so you will have a 10 year interval to compare). Register the data and calculations you made, and answer the following question: Has the burned area proportionately increased or decreased in the ten years analyzed? Cross-check your results talking to your elders and analyzing local news reports. Do they convey the same perception as your calculations indicate? if not, what conclusions do you draw? (group)

5. The results of the research can be presented in many different ways. Editing a video, doing a poster, visual presentation, creating a documentary with your elders or using news excerpts, use of spreadsheets, calculations on the board, graphics etc. (group)

6. (Optional) Share your research results with your classmates and discuss them. In light of all the evidence that was presented, are wildfires definitely increasing in terms of burned area in the European Union countries? If so, do we have any theories on the reasons? Talk to your elders. Do they believe wildfires got worse in their lifetime? (group)