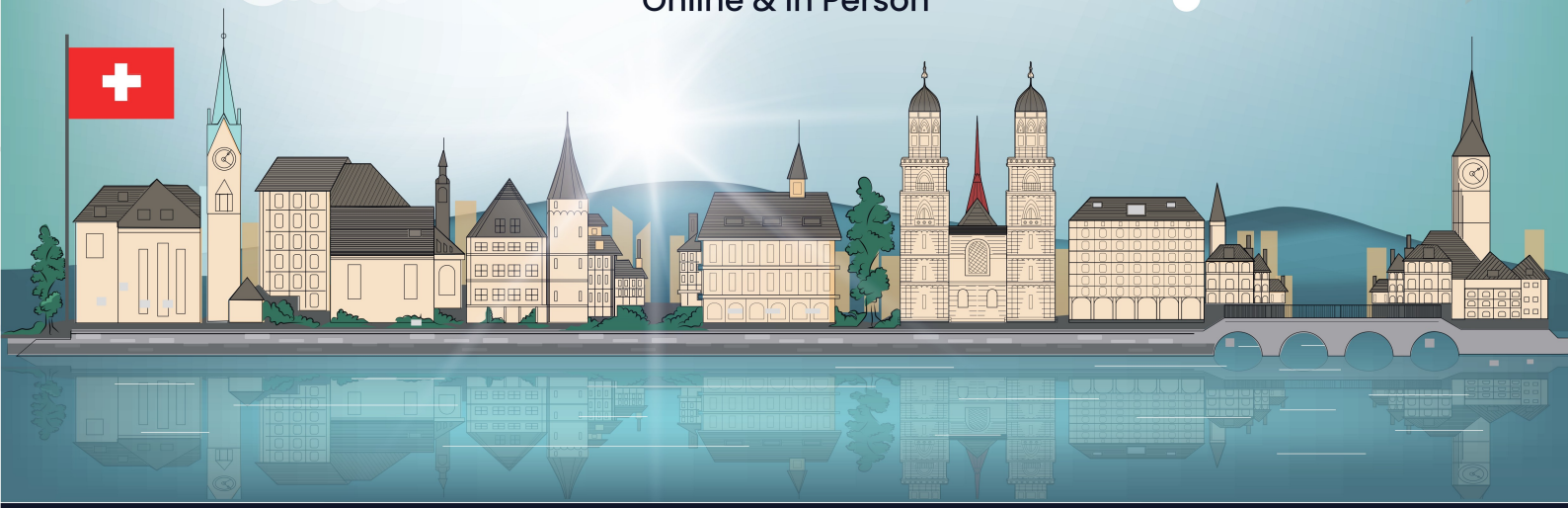
# 10th International European Conference on Interdisciplinary Scientific Research

August 27-29, 2024 / Zurich, Switzerland
Online & in Person



# FULL TEXT BOOK-I

**Editors**
**Assoc. Prof. Dr. Mehmet Emin KALGI**

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# X-INTERNATIONAL EUROPEAN CONFERENCE ON INTERDISCIPLINARY SCIENTIFIC RESEARCH

August 27-29, 2024/Zurich, Switzerland

# FULL TEXTS BOOK-I

## Editor

**Assoc. Prof. Dr. Mehmet Emin KALGI**

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# CONFERENCE ID

## CONFERENCE TITLE

10th INTERNATIONAL EUROPEAN CONFERENCE ON INTERDISCIPLINARY SCIENTIFIC RESEARCH

## DATE and PLACE

August 27-29, 2024 / Zurich, Switzerland

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**August 18, 2024**
Conference Program Announcement Date

**August 28, 2024**
In Person Presentations in Switzerland

**August 27-29, 2024**
Online Presentations via Zoom

**September 1, 2024**
Deadline for Full Text Submission

**September 20, 2024**
Proceedings Book Publication Date

# CONFERENCE PROGRAM

# ONLINE

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## 27.08.2024 / HALL-1, SESSION-1

| ZURICH LOCAL TIME | ANKARA LOCAL TIME |
|---|---|
| 09 00 : 11 00 | 10 00 : 12 00 |

**HEAD OF SESSION: Assoc. Prof. Dr. Semra TETİK**

| AUTHORS | AFFILIATION | TOPIC TITLE |
|---|---|---|
| Assoc. Prof. Dr. Aslı KARATAŞ | Muğla Sıtkı Koçman University (TÜRKİYE) | AN EVALUATION ON DEVELOPMENT, GENDER EQUALITY AND TELEVISION SERIES |
| Vasila ABASLI | Baku State University (AZERBAIJAN) | TAX POLICY IN THE FOREIGN ECONOMIC ACTIVITY OF AZERBAIJAN |
| Assoc. Prof. Dr. Semra TETİK | Manisa Celal Bayar University (TÜRKİYE) | EXAMINATION OF UNIVERSITY STUDENTS' INTERPERSONAL RELATIONSHIP DIMENSIONS IN TERMS OF GENDER VARIABLE |
| Assoc. Prof. Dr. Semra TETİK | Manisa Celal Bayar University (TÜRKİYE) | A STUDY ON THE RELATIONSHIP BETWEEN SELF-CONFIDENCE AND CREATIVITY |
| Lect. Hale Tuğçe ALTUNAY<br>Dilan ALKAÇ | Isparta University of Applied Sciences (TÜRKİYE)<br>Akdeniz University (TÜRKİYE) | THE EFFECT OF SOCIAL MEDIA CRISIS ON BRAND IMAGE: THE PATISWISS CHOCOLATE EXAMPLE |
| Dilan ALKAÇ | Akdeniz University (TÜRKİYE) | BIBLIYOMETRIC ANALYSIS OF GRADUATE THESIS WRITTEN ON TAX EVASION IN TURKEY |

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# ONLINE PRESENTATIONS

## 27.08.2024 / HALL-2, SESSION-1

| ZURICH LOCAL TIME | ANKARA LOCAL TIME |
|---|---|
| 09 00 : 11 00 | 10 00 : 12 00 |

**HEAD OF SESSION: Dr. Mehmet MUTLU**

| AUTHORS | AFFILIATION | TOPIC TITLE |
|---|---|---|
| Dr. Mehmet MUTLU | Karabuk University (TÜRKİYE) | OUR VANISHING ARCHITECTURAL HERITAGE: KONYA LAUNDRY HOUSES |
| Mustafa Şafak BULUT<br>Assist. Prof. Dr. Ömer Fatih SAK | Doğuş University (TÜRKİYE)<br>Doğuş University (TÜRKİYE) | INVESTIGATION OF THE RELATIONSHIP BETWEEN NUMBER OF FLOOR AND COST IN THE USE OF SEISMIC ISOLATOR |
| S. Reyhan İLERİ<br>Semra ARSLAN SELÇUK | Gazi University (TÜRKİYE)<br>Gazi University (TÜRKİYE) | GREEN DESIGN IN INDUSTRIAL BUILDINGS: AN EVALUATION ON LEED CERTIFIED BUILDINGS |
| Lect. Neriman Gül ÇELEBİ<br>Assoc. Prof. Dr. Ümit ARPACIOĞLU | Istanbul Nişantaşı University (TÜRKİYE)<br>Mimar Sinan Fine Arts University (TÜRKİYE) | WASTE MANAGEMENT FROM THE LOAD-BEARING SYSTEMS' LIFE CYCLE ENVIRONMENTAL IMPACT PERSPECTIVE |
| Bashar BADAWİ<br>Assoc. Prof. Dr. Zülal AKBAY ARAMA | Istanbul University-Cerrahpaşa (TÜRKİYE)<br>Istanbul University-Cerrahpaşa (TÜRKİYE) | THE BEHAVIOR OF ADJACENT SHALLOW FOUNDATIONS LOCATED ON SLOPES |
| Assist. Prof. Dr. Tolga YILMAZ | Konya Technical University (TÜRKİYE) | DEVELOPING PRACTICAL SOFTWARE TO CALCULATE LATERAL-TORSIONAL BUCKLING LOAD OF WEB TAPERED BEAMS WITH I-SECTION |
| Prof. Dr. Arın YILMAZ<br>Alperen KAMAN<br>Eylül Deniz ACAR | Balıkesir University (TÜRKİYE)<br>Balıkesir University (TÜRKİYE)<br>Balıkesir University (TÜRKİYE) | INVESTIGATION OF THE MECHANICAL AND DURABILITY PERFORMANCE OF PET WASTE SUBSTITUTED FOR AGGREGATE |
| Prof. Dr. Arın YILMAZ<br>Hatice AYDIN | Balıkesir University (TÜRKİYE)<br>Balıkesir University (TÜRKİYE) | OĞUL PAŞA TOMB REPAIR AND STRENGTHENING WORKS |
| Dr. H S ABDULRAHMAN<br>Dr. Ali ALMUSAWI<br>Dr. Syed Shah Sultan Mohiuddin QADRI<br>Mustafa ALBDAIRI | Federal University of Technology (NIGERIA)<br>Çankaya University University (TÜRKİYE)<br>Çankaya University University (TÜRKİYE)<br>AL-Qalam University College (IRAQ) | QUANTIFYING THE IMPACT OF TRAFFIC VOLUME ON TRAVEL TIME IN MALAYSIA USING THE BPR MODEL A STUDY IN SKUDAI |

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The forests in Albania play role in production and protection, to meet the needs of consumers for logs (wood industry, construction, etc.), and firewood and to perform other functions (erosion control, biodiversity conservation, relaxation, tourism, hunting, sports, etc.). Coastal forests even perform a protective function, preventing salty sea winds from penetrating inland. In 2022, forests cover an area of 1,146,725 hectares, representing 66.2% of the forest and pasture fund. Pastures and meadows have an area of 449,175 hectares or 25.9% of the forest and pasture fund. Areas with forest vegetation and unproductive vegetation that are part of the forest have occupied 136,002 hectares or 7.9% of this fund. In 2022, the total forest volume was 54,063,000 $m^3$, 94.0% of which consisted of public forests and 6.0% of which were from private forests. In 2022, according to the forestry fund by species, the largest surface area is covered by deciduous plants (49.8%), followed by shrubs (35.9%) and coniferous plants (14.3%). Protected natural and tourist areas in our country are considered protected land and water areas due to the biodiversity of the natural and cultural assets they offer. Protected areas in 2022, occupy a general area of 608,684 hectares, equivalent to 35.1% of the forest and pasture found approximately 21.2% of the total area of the country. In 2022, after the process of reviewing the borders and evaluating the environmental protection areas, the network of Pas was determined in 4 (four) categories from 6 (six) that were in 2021, as the results of this evaluation revealed changes in the number and surface area of PAs. In 2022, the largest surface of PAs is occupied by national parks (49.5% of the total surface area), followed by habitat/species management area with (36.8%), protected landscape/seascape (13.45%) and natural monuments (0.25%).

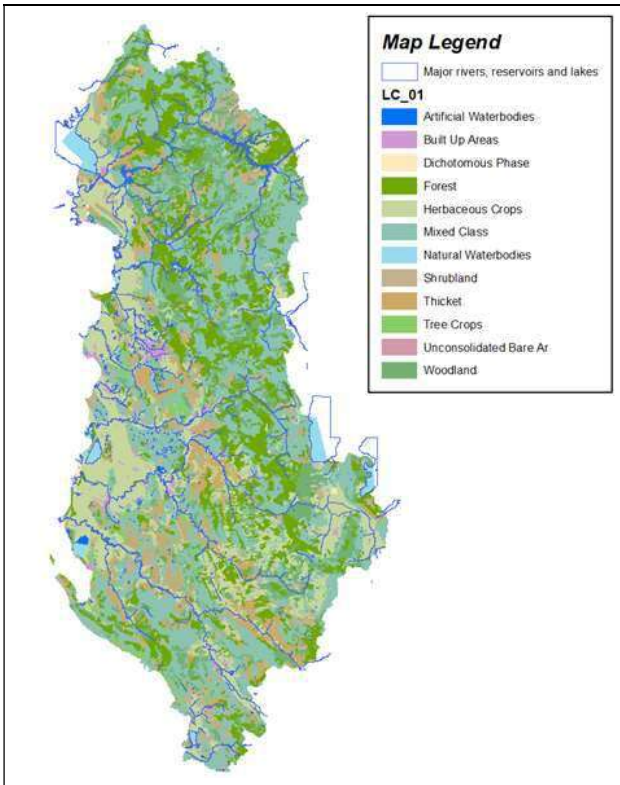



**Figure 2:** Forest map of Albania (Source: the author., 2023)

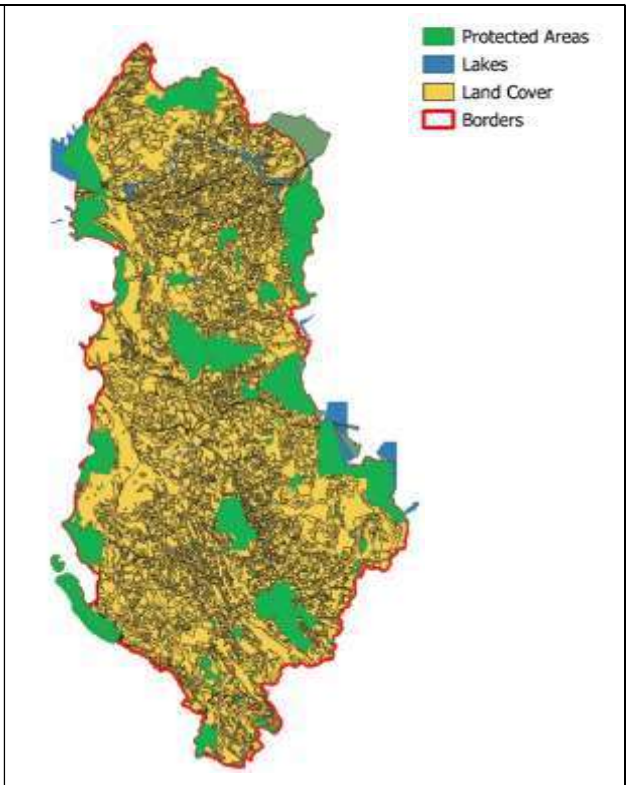
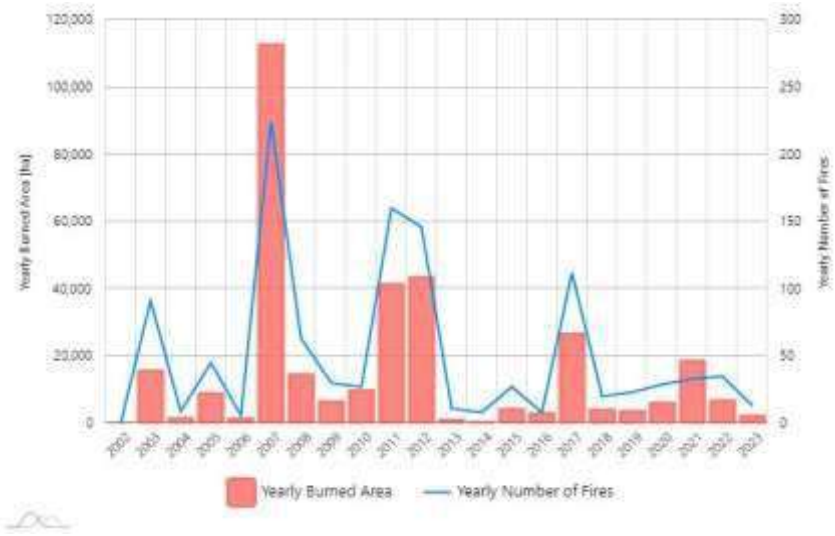



**Figure 3:** Protected Areas of Albania (Source: the author., 2023)

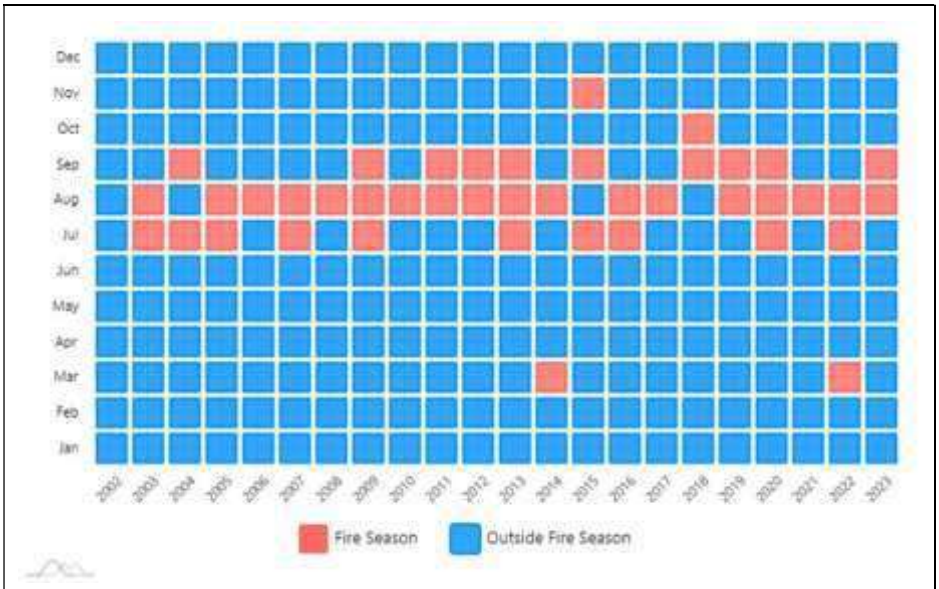
Forest fires are essential for many ecosystems, for instance, for forest renewal, to help control insect and disease damage, and to reduce the buildup of fuel and thus future fire intensity. However, frequent and large-scale fires have negative impacts on air and water quality, biodiversity, soil and landscape aesthetics. Forest fires also threaten climate change mitigation, as they release large amounts of greenhouse gases, and can cause economic damage and loss of human life in populated areas. Between the 9th of August 2021 and the 5th of August 2024 Albania experienced a total of 2,661 VIIRS alerts of fire. In the case of Albania, the greatest risk of forest fires occurs at the end of spring, and during the dry summer periods. From 2002 to 2023, Albania lost 46.4 kha of tree cover, equivalent to a 7.2% decrease in tree cover since 2000. In Albania, there are 146 VIIRS fire alerts reported thus far in 2024, considering only high confidence alerts. This total is normal compared to the total for previous years going back to 2012. The greatest number of fires recorded in a year was 2012, with 786. According to the Global Forest Watch (GFW) data, Albania lost a total of 40163.3 (ha) in the period from 2000 to 2020 due to diverse drivers. Wildfires are the second main driver of forest loss in Albania, with approximately 13503.4 ha, and this process was associated with gross emissions of all gases equivalent to 4488644.5 Mg (331.75 Mg for a 1 ha burnt forest area).




**Graphic 1:** Yearly Burned Area & Number of Fires in Albania (2002-2023) (Source: EFFIS, https://forest-fire.emergency.copernicus.eu/apps/effis.statistics/estimates)

Extreme weather conditions characterized by increased peak temperatures and stretched draught seasons are expected to boost wildfire vulnerability in Mediterranean countries such as Albania. Fires are present during the summer season in Albania and become a serious threat when hectares are burned annually. The population is largely unaware of the risks and how to act in case of fire, and in turn, the need to protect people and infrastructures may compromise the resources available for fire prevention and suppression, especially near houses situated close to forested areas. Fire risk is expected to increase, mainly as a

consequence of an increase in fire hazard, defined as the Fire Weather Index in summer. Exposure, defined as forest area, is expected to increase slightly as a consequence of active afforestation and abandonment of marginal agricultural areas. Adaptation options to fire risk should therefore aim to decrease vulnerability, where a change in tree species from conifers to broadleaves has the greatest effect. The risk of wind damage in forests is expected to increase mainly as a consequence of increases in exposure (total growing stock) and vulnerability (defined by age class and tree species distribution). The fire seasonality in Albania, as shown by graph below, starts from January to December, but the most severe period occurs from July to September, when the highest burnt area values are recorded for the period from 2002 to 2023.




**Graphic 2:** Yearly Burned Area Seasonality in Albania (2002-2023) (Source: EFFIS, https://forest-fire.emergency.copernicus.eu/apps/effis.statistics/estimates)

There has been a remarkable increase in the incidence of large forest wildfires in some of the countries in southeastern Europe since the early 2000s. Understanding the factors behind such increases in forest wildfire activity is key to understanding the recent trends and interannual variability in forest wildfires. According to (Westerling et al. 2006b), the length of the average season completely free of snow cover is highly sensitive to variability in regional temperature, increasing by approximately 30% in the last third of snowmelt years, and this change has a positive effect on wildfire incidence. In years with early spring snowmelt, spring and early summer temperatures were higher than average, winter precipitation was below average, the dry soil moistures typical of summer in the region came sooner and were more intense, and the vegetation was drier. Both the frequency and suppression expenditure of large fires appear to increase with the average temperature in spring and summer in a highly nonlinear fashion. In the case of Albania, (Hoxhaj, 2005), suppression expenditures in particular appeared to undergo a shift near 15°C during 2007. The year 2007 was used as a reference year due to the significant increase in wildfire, and this year is known to have experienced heat waves.

## FOREST FIRE RISK IN ALBANIA AND THEIR IMPACT ON THE TERRITORY

This territorial analysis of the wildfire situation showed that wildfire risk in Albania, varies from low to high. The risk of wildfire increased in those areas where agricultural lands were adjacent to forest stands and where pasture lands were interfaced with forestlands. Referring to the locations, we concluded that protected areas valued for their biodiversity and ecotourism have been subject to forest fires, mainly caused by people negligence. The wildfire risk in Albania was analyzed from 2007 to 2023, depending on the exposure risk at different locations. The Copernicus Emergency Management Service (Copernicus EMS) provides timely and accurate geospatial information derived from satellite remote sensing and completed by available in situ or open data sources. It consists of two components-maps based on satellite images on request, including after a disaster, and early warning for forest fires and droughts based on short-term predictions. Even though, the Albanian Government and AKMC are not on the list of authorized users for Copernicus services, they can still trigger them and obtain rapid disaster maps. Since 1992, the risk of forest fires in Albania has considerably increased in terms of both frequency and size of the areas affected. The increase reached its peak in 2007 due to unfavorable conditions of high summer temperatures and dead and dry vegetation cover. Albania was the 3rd country most severely affected by forest fires in 2007. The total burnt area mapped in Albania via satellite imagery was 127943.71 ha. This represented unusually high damage for the country. Table 1 presents the distribution of the mapped burned area by land cover type using the CLC 2000 map. A total of 122311.03 ha were burned in forest and seminatural areas. The remaining burned area was distributed in agriculture (5279.58 ha), and artificial surfaces, i.e. urban, industrial or social areas (292.30 ha), and other land cover types (60.80 ha). Figure 4 shows the burnt scars resulting from forest fires in the Albanian territory.

| Land cover | Area burned (ha) | % of total burned |
|---|---|---|
| Agricultural Areas | 5279.58 | 4.13% |
| Artificial Surface | 292.30 | 0.23% |
| Forest and Semi-natural | 122311.03 | 95.60% |
| Other Land Types | 60.80 | 0.04% |
| Total | 127943.71 | 100.00% |

**Table 1:** Distribution of burned area (ha) in Albania by land covers type year 2007. (Source: Annual Fire Reports., 2007. https://forest-fire.emergency.copernicus.eu/reports-and-publications/annual-fire-reports)

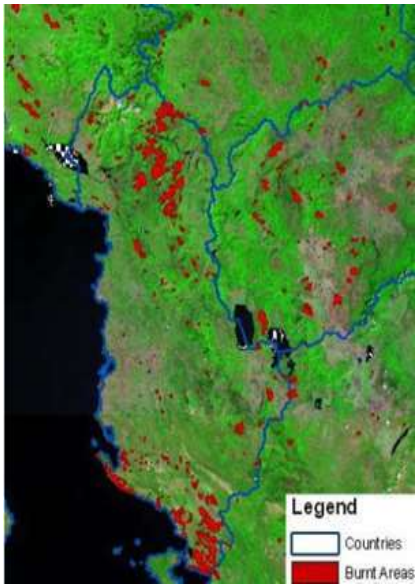



**Figure 4:** Forest fires in Albania year 2007 (Source: Annual Fire Reports., 2007)

Albania was the 4th country most severely affected by forest fires in 2008. The total burnt area mapped in Albania via satellite imagery was 19254,33 ha, which represented a noticeable decrease in the area affected by fires, compared to that in the 2007 fire season (over 127.000 ha). Table 2 presents the distribution of the mapped burned area by land cover type using the CLC 2000 database. A total of 11389,45 ha were burned in forests and other wooded lands. The remaining burned area was distributed in agriculture (2080.55 ha), other natural lands (5765.84 ha), artificial surfaces, i.e. urban, industrial or social areas (13.53 ha), and other land cover types (4.96 ha). Figure 5 shows the burnt scars resulting from forest fires in the Albanian territory.

| Land cover | Area burned (ha) | % of total burned |
|---|---|---|
| Agricultural Areas | 2080.55 | 0.07% |
| Artificial Surface | 13.53 | 10.81% |
| Forest and Semi-natural | 11389.45 | 59.15% |
| Other Natural Lands | 5765.84 | 29.95% |
| Other Land Cover | 4.96 | 0.03% |
| Total | 19254.33 | 100.00% |

**Table 2:** Distribution of burned area (ha) in Albania by land covers type year 2008. (Source: Annual Fire Reports., 2008. https://forest-fire.emergency.copernicus.eu/reports-and-publications/annual-fire-reports)


**Figure 5:** Forest fires in Albania year 2008 (Source: Annual Fire Reports., 2008)

The total burnt area mapped in Albania during the year 2009, measured from satellite imagery, was 7606.86 ha, which represented a significant decrease in areas affected by fires compared to the 2007 and 2008 fire seasons (127943.71 and 19254.33 ha respectively). Table 3 presents the distribution of the mapped burned area by land cover type using the CLC 2000 database. A total of 4790.37 ha were burned in forests and other wooded lands. The remaining burned area was distributed in other natural lands (2309.70 ha), agricultural areas (352.02 ha), artificial surfaces, i.e. urban, industrial or social areas (78.99 ha), and other land cover types (75.78 ha). Figure 6 shows the burnt scars resulting from forest fires in the Albanian territory.

| Land cover | Area burned (ha) | % of total burned |
|---|---|---|
| Agricultural Areas | 352.02 | 4.63% |
| Artificial Surface | 78.99 | 1.04% |
| Forest/Other Wooded | 4790.37 | 62.97% |
| Other Natural Lands | 2309.70 | 30.36% |
| Other Land Cover | 75.78 | 1.00% |
| Total | 7606.86 | 100.00% |

**Table 3:** Distribution of burned area (ha) in Albania by land covers type year 2009. (Source: Annual Fire Reports., 2009. https://forest-fire.emergency.copernicus.eu/reports-and-publications/annual-fire-reports)

**Figure 6:** Forest fires in Albania year 2009 (Source: Annual Fire Reports., 2009)

The 2010 fire season was comparable to the 2009, fire season, with a small increase in the total burnt area mapped last year (8154.68 ha compared with 7606.86 ha in 2009). Table 4 presents the distribution of the mapped burnt area by land cover type using the CLC 2000 database. A total of 4835.11 ha were burned in forests and other wooded lands, 2501.28 ha in other natural lands, 740.24 ha in agricultural areas and a small amount in artificial surfaces, i.e. urban, industrial or social areas and other land cover types (75 ha). Figure 7 shows the burnt scars resulting from forest fires in the Albanian territory.

| Land cover | Area burned (ha) | % of total burned |
|---|---|---|
| Agricultural Areas | 740.24 | 9.08% |
| Artificial Surface | 44.37 | 0.54% |
| Forest/Other Wooded | 4835.11 | 59.29% |
| Other Natural Lands | 2501.28 | 30.67% |
| Other Land Cover | 33.67 | 0.41% |
| Total | 8154.68 | 100.00% |

**Table 4:** Distribution of burned area (ha) in Albania by land covers type year 2010 (Source: Annual Fire Reports., 2010. https://forest-fire.emergency.copernicus.eu/reports-and-publications/annual-fire-reports)


**Figure 7:** Forest fires in Albania year 2010 (Source: Annual Fire Reports., 2010)

The 2011 fire season was rather intense in Albania, making it the third worst country affected (after Portugal and Spain) in 2011. More than 200 fires of at least 40 ha occurred during summer (all but two during July-September), for a total of 53308.75 ha, which was greater than that in the last 3 years combined. Table 5 presents the distribution of the mapped burned area by land cover type using the CLC 2000 database. A total of 28203.23 ha were burned in forests and other wooded lands, 19 742.86 ha in other natural lands, 4986.21 ha in agricultural areas and 376 ha in artificial surfaces, i.e. urban, industrial or social areas and other land cover types. Figure 8 shows the damage caused by forest fires in the Albanian territory, particularly in the southern part of the country.

| Land cover | Area burned (ha) | % of total burned |
|---|---|---|
| Agricultural Areas | 4986.21 | 9.35% |
| Artificial Surface | 349.98 | 0.66% |
| Forest/Other Wooded | 28203.23 | 52.91% |
| Other Natural Lands | 19742.86 | 37.03% |
| Other Land Cover | 26.47 | 0.05% |
| Total | 53308.75 | 100.00% |

**Table 5:** Distribution of burned area (ha) in Albania by land covers type year 2011. (Source: Annual Fire Reports., 2011. https://forest-fire.emergency.copernicus.eu/reports-and-publications/annual-fire-reports

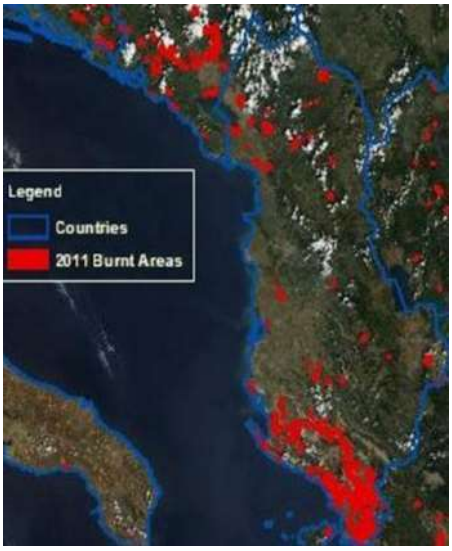



**Figure 8:** Forest fires in Albania year 2011 (Source: Annual Fire Reports., 2011)

The 2012 fire season in Albania was quite similar to that in 2011, making the country once again one of the most severely affected regions. A total of 158 fires of at least 40 ha occurred, mostly from July to September, burning a total of 54130.7 ha. A total of 43795 ha were burned in forests and other wooded lands, 9305 ha in other natural lands, 985 ha in agricultural areas and a small amount (46 ha) in artificial surfaces, i.e. urban, industrial or social areas and other land cover types. The 2013 fire season in Albania was the mildest for several years. Nine fires of more than 50 ha burned a total of 1234 ha. These events occurred relatively late in the season (August-October). The 2014 fire season in Albania was the lowest recorded since 2007. There were only 4 fires, more than 50 ha, burning a total of 457 ha, in August. Albania had a light year 2015 for fires: the total number of fires was well below the long-term average, although more burnt area was recorded than in the past 2 years. Between July and November, 19 fires of more than 30 ha burned a total of 3778 ha. The total burnt area in Albania increased during the third year, running to more than 5000 ha, although this value was still only one-tenth of the amounts recorded in 2011 and 2012. There were 21 fires of

more than 30 ha in 2016, two-thirds of which occurred in August. The largest fire of the year burned 1011 ha in Saranda Province in July, and three fires in August also affected more than 500 ha. The total burnt area of 42168 ha recorded in Albania was greater than that in the previous four years combined, although still below the amounts recorded in 2011 and 2012 (both over 50000 ha). There were 223 fires of more than 30 ha in 2017, ten times the number recorded in 2016. Most of them occurred in July and August. The largest fires of the year burnt 5609 ha in Gjirokastër Province in the southern region of the country, and 17 other fires over 500 ha were also recorded. The burnt area scars left by the 2017 fires in Albania can be seen in Figure 9.

| Land cover | Area burned (ha) | % of total burned |
|---|---|---|
| Agricultural Areas | 1639.16 | 3.89% |
| Artificial Surface | 141.09 | 0.33% |
| Forest/Other Wooded | 27082.18 | 64.22% |
| Other Natural Lands | 13297.04 | 31.53% |
| Other Land Cover | 8.57 | 0.02% |
| Total | 42168.04 | 100.00% |

**Table 6:** Distribution of burned area (ha) in Albania by land covers type year 2017. (Source: Annual Fire Reports., 2017. https://forest-fire.emergency.copernicus.eu/reports-and-publications/annual-fire-reports)

**Figure 9:** Forest fires in Albania year 2017 (Source: Annual Fire Reports., 2017)

The total burnt area of 3280 ha recorded in Albania was less than 10% of the total area recorded in 2017, and was the lowest since 2014. There were 14 fires of more than 30 ha in 2018 (compared with 223 in 2017). Most of them occurred in September and October, relatively late in the year. The 2019 fire season in Albania was somewhat worse than that in 2018, although still far below the total burnt area mapped in 2017. There were 111 fires of more than 30 ha in 2019, burning a total of 11839 ha. There was considerable activity early in the season, although two- thirds of the damage occurred in August and September. During the year 2020, there were 129 fires over 30 ha burning a total of 19909 ha, with the worst damage occurring in July and September, although large fires were recorded from January to November. The mapped burnt area in Albania 2021, was significantly greater than that in recent years (apart from 2017). A total of 329 fires were mapped between February and November, burning a total of 31275 ha. The peak of the season occurred in July and August, when 90% of the damage occurred. Eight fires over 500 ha were mapped, the largest of which

occurred in Korcë Province at the end of July and covered more than 5000 ha. During the year 2022, 307 fires were mapped in Albania, resulting in a total burnt area of 19 591 ha. There were two peaks in the season: one in March and the other over the summer months. The largest fire of the year occurred at the end of July in Dropull i Poshtëm Province and affected 1633 ha, and there were five other fires over 500 ha during the season. During the year 2023, 80 fires were mapped in Albania, resulting in a total burnt area of 6012 ha, less than one third of the total mapped area in 2022 and the lowest total area since 2018. Almost all of the damage occurred in the summer months, including two fires over 500 ha. In Albania, there were 146 VIIRS fire alerts reported thus far in 2024, considering high confidence alerts only. This total is normal compared to the total for previous years, which went back to 2012. The highest number of fires recorded in a year was in 2012, with 786. In Lezhë, there were 7 VIIRS fire alerts reported thus far in 2024, considering high confidence alerts only. This total is normal compared to the total for previous years, which went back to 2012. In Vlorë, 12 VIIRS fire alerts area reported thus far in 2024, considering high confidence alerts only.

**Figure 10:** Fires in Shëngjin, Albania. July 30, 2024. (Source: the author., 2024)

## WILDFIRES RISKS MAPPING USING COPERNICUS DATA AND QGIS

QGIS can be used to analyze forest fire data by utilizing Geographic Information System (GIS) technologies. Geographic Information Systems (GIS) can be used for the integration of spatial layers of information for the identification and analysis of spatial patterns of wildfire occurrence and for deriving fire risk at different scales. Different spatial analysis techniques can be applied to answer the questions of “where” and “why” these wildfires are occurring (Morgan et al. 2001). Therefore, forest fire assessment and mapping are highly important for minimizing the effect and frequency of fire events. Monitoring forest fires over large areas has become cost, and time-effective by using remote sensing imagery (spaceborne or

airborne). Remote sensing is one of the most important tools for studying and detecting forest fires. Global and periodic coverage of remote sensing data has replaced the traditional methods of fire detection to a large extent. Remote sensing approaches help to analyze wide ranging scenarios and factors that affect forest fires (Payra et al., 2023). Wildfires can result in the loss of human life, and wildlife, and can directly, or indirectly, impact different ecological processes due to the removal of the vegetation layer. Therefore, fassessing the severity of the impacted areas is essential. This practice aims at assessing an affected area using remote sensing tools. The methodology will benefit from the use of open satellite imagery published at the Copernicus Sci-Hub. Here, using Sentinel-2 imagery, the severity of a wildfire in the Vlora area in Albania is modeled. Since mid-July 2021, Albania has been affected by wildfires, throughout several parts of its territory. Hundreds of hectares of forests, pastures and thousands of olive trees have been destroyed especially in the Vlora and Fier regions. The Copernicus EMS Rapid Mapping Service has been requested to provide delineation mapping and monitoring. Copernicus EMS Rapid Mapping is requested to provide wildfire extent damage assessment emergency mapping. This analysis focused on a wildfire event reported to have affected the Gjirokastra and Vlora regions, of Albania.

**Step 1:** Go to the CEMS - Rapid Mapping list of activations and input the querying parameters as defined in figure 11. Select the event type Wildfire (1) and Albania (2) as the affected country. The table of activations was updated with the defined parameters to search for the activation EMSR535. On the activation page, see Fig.11, select the grading product, which is named **[EMSR535] Orikum: Delineation Product, version 1, release 1, RTP Map #01**. Inside the product page you will find the preview for the delivered maps and vector datasets for the AOI for the activation. **Step 2:** Download the vector package of the datasets generated by the rapid mapping activities. Click on ZIP (1). In the following page, the disclaimer box on the data use is checked, and the process is performed to download file (2).


**Figure 11:** Copernicus Rapid Mapping List of Activations - Wildfire events in Albania (Source: https://emergency.copernicus.eu/mapping/list-of-components/EMSR535)

**Step 3:** The data provided by Copernicus Wildfire Risk were all georeferenced and can be viewed on QGIS thanks to the netCDF format, figure 12.