



7th International Wildland Fire Conference

Regional Statement of the Eurasia Region – An Input Paper to the Conference Statement

30 October 2019

Introductory Remarks

The UNDRR Regional Eurasia Wildland Fire Network is one of seven Regional / Subregional Wildland Fire Networks, which cover the 47 Member States of the Council of Europe (CoE), 55 Participating States of the Organization for Security and Cooperation in Europe (OSCE) (out of the total of 57 Participating States that include the U.S.A. and Canada) and 56 Member States of the United Nations Economic Commission for Europe (UNECE).¹ The Eurasia Wildland Fire Network emerged from the core region of engagement of the UNECE/FAO Team of Specialists on Forest Fire, mandated, among other, to provide guidance to the UNECE Member States on forest fire management and forest fire policies, including on governance in bilateral and international cooperation. Between 1993 and 2014, the activities of the UNECE Team of Specialists and the Regional Network, under the lead of the Global Fire Monitoring Center (GFMC), focused on countries of the temperate-boreal regions of Central, Southeast and East Europe (including the Russian Federation), the Caucasus and Central Asia.²

In following-up the work of the UNECE/FAO Team of Specialists on Forest Fire the Regional Networks of Eurasia, Southeast Europe / Caucasus, Central Asia and the Euro-Alpine Subregional Wildland Fire Networks continued to cooperate. Consequently, fire management experts proposed to re-establish a Regional Team of Specialists, which would serve the Member States of the Council of Europe and foster cooperation with the UN Office for Disaster Risk Reduction (UNDRR) and the UNDRR *Global Wildland Fire Network / Wildland Fire Advisory Group*. Furthermore, in following up and implementation of the *OSCE Ministerial Council Decision 6/2014 on Wildfire Disaster Risk Reduction*, the Team would serve the OSCE Participating States of Europe through the OSCE Secretariat.

In 2017, the GFMC submitted a formal proposal to the Council of Europe to establish the *Eurasian Team of Specialists on Landscape Fire Management*. This Team would take advantage of the experiences and would address the underlying causes of fires affecting the natural, cultural, industrial and urban landscapes of Europe, which are becoming increasingly vulnerable to wildfires. The Team would work under the auspices of the GFMC – a Specialized Center of the European and Mediterranean Major Hazards Agreement (EUR-OPA). In a Joint Meeting of the Committee of Permanent Correspondents and Directors of Specialized Centers of EUR-OPA in November 2017 endorsed the proposal. More details: See section “Main Advances”.

The GFMC has a dual role in serving as secretariat and coordinator of the Regional Eurasia Wildland Fire Network and the Global Wildland Fire Network as well. Thus, this Statement includes a number of activities at international level beyond the Eurasia region.

Specific landscape fire problems of the region

The Statements of the Regional Networks of Southeast Europe / Caucasus, Euro-Alpine and the Mediterranean (the latter including activities of the European Commission) – all part of geographic Eurasia but focusing networking activities on the countries of their specific regions – highlight the particular fire problems and recommended solutions in the areas concerned. During the reporting period 2015-2019 the Eurasia Regional Wildland Fire Network, however, had been involved as a motor of projects and

¹ The Eurasian part of the CoE/OSCE/UNECE is covered by the following networks: (1) Eurasia; (2) Mediterranean; (3) Euro-Alpine; (4) Southeast Europe / Caucasus; (5) Central Asia, and (6) Northeast Asia. The North American Member States of the UNECE are organized through the Fire Management Working Group, North American Forestry Commission – see: <http://www.fire.uni-freiburg.de/GlobalNetworks/globalNet.html>

² <https://gfmcc.online/intro/team.html>



processes in building fire management capacities and furthering transboundary cooperation in fire management in the regions of Southeast Europe / Caucasus, Euro-Alpine and the Mediterranean.

During the quadrennium 2015-2019, the Eurasian region experienced the consequences of land-use changes and climate change on changing landscape characteristics and fire regimes. Southern European Union (EU) Member States were confronted with extremely severe wildfires – especially in Portugal in 2017 and Greece in 2018. The extreme drought of 2018 resulted in widespread desiccation of soils, forests, agricultural lands and other open land ecosystems in Central and Northern Member States of the EU, notably in Sweden and in Germany. Forest management and fire and rescue services became overwhelmed with multiple and extended wildfires in a magnitude unprecedented over the last decades. Likewise, Western Atlantic Europe experienced a continuing occurrence of wildfires in Ireland and the United Kingdom.

Eastern Europe continued to battle with the problem of agricultural burnings and – in particular in Ukraine, Belarus and Russia – with fires burning on ecosystems contaminated by radioactivity. Likewise, Central Europe and the Western Balkans are confronted with the heritage of armed conflicts, i.e. wildfires burning on terrain contaminated by unexploded explosive ordnance (UXO).

Further East – notably in Central and Northeast Asia – the consequences of climate change on the natural environment and fire regimes are accelerating dramatically. The increase of average annual temperatures in this region has triggered widespread changes of permafrost regimes and the spread of wildfires further into the Northern parts of the region.

Main advances achieved since the last International Wildland Fire Conference: Action taken between the 6th and 7th International Wildland Fire Conferences

In response to the increasing vulnerability of the natural, cultural and urban-industrial landscapes of the Eurasian countries, the members of the Regional Eurasia Network continued to support capacity building in fire management, notably through the Global Fire Monitoring Center (GFMC) and its associated Regional Fire Monitoring Centers. Selected highlights of activities and advances are given for the following sub-regions:³

Eastern Europe: Ukraine and Belarus

In Ukraine the series of *International Fire Management Weeks* (IFMW), organized by the Regional Eastern Europe Fire Monitoring Center (REEFMC), continued between 2016 and 2019. In April 2016 the *Third Eastern European Prescribed Fire Demonstration and Long-term Observation Experiment* addressed the use of prescribed fire for enhancing regeneration of Scots pine stands was a major activity.⁴

Starting in April 2018, REEFMC cooperation included the active participation in the UNEP-GEF Project *Conserving, Enhancing and Managing Carbon Stocks and Biodiversity in the Chernobyl Exclusion Zone* with the fire management component.⁵ This activity was complemented by a *National Coordination Meeting on Enhancing Fire Management Capacity in the Chernobyl Exclusion Zone*, a cooperative meeting organized by the Regional Eastern European Fire Monitoring Center (REEFMC), the U.S. Forest Service and the GFMC (September 2016).⁶

Under lead and sponsorship of the OSCE, the REEFMC and GFMC started the project *Improving Radiological and Environmental Awareness in Territories affected by the Chernobyl Accident in Belarus*

³ For more details on the Southern European / Mediterranean and the SE European activities: See statements of the Mediterranean, Euro-Alpine and SE Europe / Caucasus networks.

⁴ 7th IFMW: <https://gfmc.online/intro/VII-Ukraine-Fire-Management-Week-2016-Program-ENG.pdf>;

8th IFMW: <https://gfmc.online/globalnetworks/balticregion/ukrainefiremanagementweek2019.htm>

⁵ <https://gfmc.online/globalnetworks/seeurope/GEF-UNEP-Chernobyl-Launch-Workshop-18-April-2016-Agenda-ENG.pdf>

⁶ <https://gfmc.online/intro/Ukraine-ChEZ-NCM-22-23-Sep-2016-Agenda.pdf>



and Ukraine with a Focus on Wildfire Management in 2016.⁷ Preparatory materials included the development of a *Belarussian-Ukrainian-English Fire Management Terminology for Coordinated Response to Forest Fires across National Borders*⁸, and the *Ukrainian-Belarussian Guidelines on Fire Management in Contaminated Terrain*.⁹ In May 2018, a bilateral fire emergency response exercise between Belarus and Ukraine was held in Gomel, Belarus, in the frame of the project, jointly organized by the OSCE, REEFMC, GFMC and the Ministry of Emergency Situations of the Republic of Belarus, Gomel Oblast Department.¹⁰

The OSCE-sponsored project was accompanied and coordinated with the project *Enhancing the National Interagency and International Cross-boundary Dialogue and Interoperability in Fire Management in Southeast Europe and Eastern Europe*. This multi-year project is an activity of the GFMC in its function as Specialized Center of the European and Mediterranean Major Hazards Agreement (EUR-OPA) of the Council of Europe.¹¹ The project initiated the process of developing a national fire management policy by convening two national round tables entitled *Fires in the Natural and Cultural Landscapes of Ukraine: Developing a National Policy for Fire Management*. These two consultations held at REEFMC in 2017¹² and 2019¹³ were the major milestones for drafting the Law of Ukraine *On Amendments to Certain Legislative Acts of Ukraine Concerning the Immediate Elimination of the Crisis Situation due to Forest Fires*, which will be submitted to the parliament and government of Ukraine respectively in late 2019.

In addition to the activities in transboundary cooperation between Ukraine and Belarus, which is focusing on fire management on radioactively contaminated terrain, the REEFMC and GFMC convened a *Regional Consultation on Cross-Boundary Cooperation in Landscape Fire Management*, sponsored by the Council of Europe, EUR-OPA Secretariat. Besides Ukrainian authorities, representatives of government institutions of Belarus, Hungary, Moldova and the Regional Fire Monitoring Center for Southeast Europe / Caucasus attended the consultation.¹⁴

Russian Federation

Between 2016 and 2019 a series of cooperative conferences and consultations were hosted by the Russian Federation. In September 2016 an International Scientific Workshop “Ecology of Forest Fires” was held by the Siberian Federal University, Krasnoyarsk, Russian Federation, with contributions by the Regional Fire Management Resource Center – Central Asia Region (RFMRC-CAR) and GFMC.¹⁵ This event was followed-up by consultations on continuing cooperation between the Russian Aerial Forest Fire Center *Avialesookhrana* and the GFMC at the occasion of the 85th Anniversary of *Avialesookhrana* and the 25th Anniversary of cooperation between GFMC and *Avialesookhrana* (September 2016)¹⁶ and the All-Russian Scientific Conference with International Participation “Intensification of Russian Forestry: Problems and Innovative Solutions”, with GFMC contribution “Need for the development of pragmatic and science-based solutions for forest management and fire management for the Russian Federation”.¹⁷

⁷ Inception meeting on 2 September 2017: <https://gfmco.online/wp-content/uploads/OSCE-UKR-BEL-Radioactive-Fire-Mgmt-Inception-Meeting-07-Sep-2017-Agenda-ENG.pdf>

⁸ <https://gfmco.online/wp-content/uploads/BEL-RUS-ENG-Fire-Management-Terminology-OSCE-GFMC-2017.pdf>

⁹ <https://gfmco.online/wp-content/uploads/BEL-RUS-Chernobyl-Fire-Management-Guidelines-OSCE-GFMC-2017.pdf>

¹⁰ <https://gfmco.online/wp-content/uploads/OSCE-UKR-BEL-Fire-Exercise-17-18-May-2018-Agenda-ENG.pdf>; and <https://gfmco.online/wp-content/uploads/OSCE-UKR-BEL-Fire-Exercise-17-18-May-2018-Press-Release-382273.pdf>

¹¹ <https://europa-projects.ext.coe.int/en/centre/18-global-fire-monitoring-center.html>

¹² <https://nubip.edu.ua/en/node/38408> and <https://gfmco.online/wp-content/uploads/REEFMC-GFMC-National-Round-Table-Fire-Management-26-Oct-2017-Statement-ENG.pdf>

¹³ <https://gfmco.online/globalnetworks/balticregion/ukrainefiremanagementweek2019.html>

¹⁴ <https://gfmco.online/wp-content/uploads/REEFMC-GFMC-National-Round-Table-Fire-Management-26-Oct-2017-Statement-ENG.pdf>

¹⁵ https://gfmco.online/intro/Krasnoyarsk-Fire_Workshop_Program.pdf

¹⁶ See also International Fire Management Weeks of 2012 and 2013:

<https://gfmco.online/globalnetworks/BalticRegion/KrasnoyarskFireManagementWeek.html>

¹⁷ <https://gfmco.online/intro/Sukachev-Inst-RAS-Krasnoyarsk-Forestry-Russia-Conference-2016-Agenda-ENG.pdf>



In November 2017, a major international conference *Protection of Human Settlements and Social Infrastructure from Wildfires* was hosted by EMERCOM of Russia in cooperation with UNISDR and supported by the Secretariat of the EUR-OPA Major Hazards Agreement Meeting (EUR-OPA) and GFMC.^{18 19} The conference statement – among other – recommended:

*National authorities concerned with agriculture, forestry, protected areas / nature conservation, public health and security, and other agencies (are recommended) to develop coordinated and holistic policies and pragmatic approaches in landscape fire management based on advanced technological achievements and recommendations of the scientific and research community.*²⁰

In August 2019 two events of the network were organized in conjunction with the All-Russian / International Conference “Forest Ecosystems of Boreal Zone: Biodiversity, Bioeconomy, Ecological Risks”, an event held at the occasion of the 75th anniversary of V.N. Sukachev Institute of Forest SB RAS²¹:

- Interagency round table “Evaluation of achievements in nature-based fire management and development of future cooperative approaches at the science-policy interface in Siberia and adjoining regions of Central Asia”. In this round table the representatives of Russian agencies at Federal and Regional (Krasnoyarsk Krai) levels and representatives from the Regional networks Eurasia and Central Asia discussed the situation of the 2019 fire season in Siberia and the lessons identified.
- On 27 August 2019, the Regional Eurasia Fire Monitoring Center (REFMC) was opened as the fifth Regional Fire Monitoring Center under the auspices of the Global Fire Monitoring Center (GFMC) and the Global Wildland Fire Network, with support of the Council of Europe (EUR-OPA Major Hazards Agreement).

European Union

During the quadrennium, EU Member States experienced an increasing occurrence of large and extremely severe wildfires in the South – especially in Portugal in 2017 and Greece in 2018 – and an increase of wildfires in the Central and Northern regions. The GFMC and partners of the Eurasia Network provided advisory services to a number of countries – the following examples include Portugal, Greece and Germany.

Portugal

On 10 November 2017, Prime Minister of Portugal António Costa convened a National Round Table and consultation on the Future of Fire Management in Portugal. International experts provided the experiences and recommendations for the future strategy.²² On 16 February 2018 the Decree 12/2018 (*Decreto-lei*, a decree having the character of a law) enacted the establishment of the Agency for Integrated Wildfire Management (Agência para a Gestão Integrada de Fogos Rurais – AGIF).²³ AGIF provides an Integrated System of Rural Fire Management (SGIFR) tasked to conduct integrated analysis, planning, evaluation and strategic coordination of the SGIFR, including qualified intervention at high-risk events. AGIF coordinates in a strategic and transversal way, the implementation of the SGIFR by the responsible entities, namely the National Civil Protection Authority, the Republican National Guard and the Institute for the Conservation of Nature and Forests. AGIF operates under the authority of the Prime Minister.

¹⁸ <https://gfmco.online/wp-content/uploads/EMERCOM-UNISDR-Wildfire-Conference-2017-Agenda-1.pdf>

¹⁹ <https://gfmco.online/wp-content/uploads/EMERCOM-UNISDR-Wildfire-Conference-2017-GFMC-Presentation-1.pdf>

²⁰ <https://gfmco.online/wp-content/uploads/EMERCOM-UNISDR-Wildfire-Conference-2017-Statement-1.pdf>

²¹ <https://gfmco.online/wp-content/uploads/Sukachev-IF-75-Conference-Forest-Ecosystems-24-28-August-2019-Agenda.pdf>

²² <https://gfmco.online/wp-content/uploads/GFMC-Portugal-Prime-Minister-Fire-Management-Meeting-10-November-2017.pdf>

²³ <https://www.agif.pt/pt>



Greece

On 23 July 2018, fast-moving wildfires near Athens affected the resorts Kineta and Mati and resulted in the death of 102 people, numerous injuries and the loss of critical infrastructures, houses, and private assets. In August 2019, the Prime Minister of Greece, Alexis Tsipras, asked the head of GFMC to set up and lead a committee under the aegis of GFMC. The aim of the committee was to investigate the underlying causes of the wildfire risks in the country and to develop recommendations for required reforms and policy measures in order to increase the resilience of the natural, cultural and urban-industrial landscapes of Greece and the people living therein against wildfires, and to prevent such disastrous events in the future. An agreement about further procedures and the modus operandi of the “Committee on Perspectives of Landscape Fire Management in Greece” was reached, in which members of the Global Wildland Fire Network formed the core group of scientific advisors. The head of GFMC also consulted with the parliamentary opposition leader, Mr. Kyriakos Mitsotakis, to reach an agreement of multi-partisan support of the work of the Committee in the Hellenic Parliament.²⁴ In February 2019, the “Report of the Independent Committee tasked to analyse the Underlying Causes and Explore the Perspectives for the Future Management of Landscape Fires in Greece” was handed over to Prime Minister Tsipras, the President of the Hellenic Parliament, the Standing Committees on the Protection of the Environment, Production and Commerce and Public Administration, Public Order and Justice, all Parliamentary Groups and to the President of the Hellenic Republic.²⁵ The Committee recommended the establishment of a Landscape Fire Management Organization, which would operate in a supervisory and co-operative manner with the other competent bodies having an advisory, coordinative and supervisory role in landscape fire management in the country with the mission to develop a national, interagency fire management plan and monitoring and follow up its application. The modus operandi of the organization would be based on the principles of Transdisciplinary and innovation, holism, integration and inclusion, coherence, cohesiveness and coordination. The implementation of the proposals of the National Committee is pending.

Germany

With the onset of extreme droughts in 2018 – a consequence of climate change – the number of wildfires and area burned in Germany increased significantly. One of the reasons for the larger area burned since 2018 is the problem of fires in forests and open landscapes, which are contaminated by unexploded ordnance (UXO). In Germany, more than 630 active and decommissioned military training areas cover around 685,000 hectares (ha), i.e. ca. 0.2% of the German territory; about 250,000 ha of which are contaminated by UXO. In addition, armed conflict sites of WW II like those around Berlin (ca. 400,000 ha) are suspected to be contaminated by UXO. During the wildfires, which affected UXO-contaminated sites near Lübtheen in Mecklenburg-Vorpommern State in July 2019, the GFMC provided advisory support based on the experience of the Regional Network in fire management on UXO-contaminated terrain.^{26 27}

In a thematic conference “Impacts of Climate Change on Landscape Fires: Challenges and Solutions for Germany and the European Union” in the German Parliament (Bundestag) in October 2019, co-organized by the GFMC, landscape fire crisis preparedness and mitigation at national level was discussed.²⁸

European Commission / European Union

Members of the network supported and participated in thematic research and development projects commissioned by the European Commission

- The *FIRE-IN – Fire and Rescue Innovation Network*, a project conducted in the frame of the EU Horizon 2020 Work Programme 2016-2017 *Secured societies – Protecting freedom and security of Europe and its citizens* (SEC-21-GM-2016-2017 – Pan-European Networks of

²⁴ <https://gfmco.online/allgemein/press-release.html>

²⁵ Download of the report on the website of the Prime Minister: <https://government.gov.gr/report-on-landscape-fires-in-greece>; GFMC repository: <https://gfmco.online/allgemein/press-release.html>

²⁶ https://gfmco.online/globalnetworks/seeurope/SEEurope_1_radio.html

²⁷ <https://gfmco.online/wp-content/uploads/GFMC-Feuerwehr-0620-66-73-GFMC-Reportage-I.pdf>

²⁸ <https://gfmco.online/wp-content/uploads/Bundestag-Fachkonferenz-Landschaftsbraende-Berlin-25-Oktober-2019-Programm.pdf>



Practitioners and other Actors in the Field of Security), with GFMC lead in the Thematic Working Group “Landscape Fire Crisis Mitigation” (project duration: 2017-2022)²⁹

- Implementation of the project “Network of European hubs for civil protection and crisis management”, with pilot hub “Wildfire Risk Management” (2019-2020).³⁰

A European meeting of the Forest Fires Commission of the International Association of Fire and Rescue Services (Comité Technique International de prevention et d'extinction de Feu – CTIF) on 17-19 September 2018 in Sessa (Ticino, Switzerland) the GFMC – an Associated Member of CTIF – informed the CTIF specialists participation; Sessa, Ticino, Switzerland.

In June 2019 the 19th Round Table of the European Fire Academy *How to deal with major Disasters – What should be the best European response?*, held in June 2019 at the Directorate General Security and Prevention, Brussels, Belgium, included a contribution of the Regional Network on *Landscape Fires*.³¹

Transboundary cooperation with countries bordering the Eurasia Network Region

The following activities in countries and regions adjoining the region of the Regional Network were organized or supported by the GFMC:

- **09 November 2016:** National Round Table on Fire Management, Republic of North Macedonia, held under sponsorship of the Council of Europe (CoE), Secretariat of the Euro-Mediterranean Major Hazards Agreement (EUR-OPA) (facilitator: GFMC); Skopje, Republic of North Macedonia.³²
- **11 November 2016:** Regional Consultation on Cross-boundary Cooperation in Fire Management, held under sponsorship of the Council of Europe (CoE), Secretariat of the Euro-Mediterranean Major Hazards Agreement (EUR-OPA) (facilitator: GFMC); Skopje, Republic of North Macedonia.³³
- **9-12 May 2016:** First International Fire Management Week, Islamic Republic of Iran: National Round Table on Fire Management and Training Course for on Integrated Fire Management, conducted by GFMC, the Regional SE Europe / Caucasus Fire Monitoring Center (RFMC) and the Fire Management Resource Center-Central Asia Region (FMRC-CAR); Mazandaran, Kelarabad, Islamic Republic of Iran.³⁴
- **03-06 July 2018:** Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR), with joint presentations of the GFMC, the Regional Fire Management Resource Center – Central Asia Region (RFMRC-CAR) and the Regional Fire Management Resource Center – South East Central Asia (RFMRC-SEA); Ulaanbaatar, Mongolia.³⁵

Implementation of the Agendas of Multilateral European Organizations: The Council of Europe through its Euro-Mediterranean Major Hazard Agreement (EUR-OPA) and the Organization for Security and Cooperation in Europe (OSCE)

The GFMC and the two regional centers in Eastern Europe (REEFMC) and SE Europe / Caucasus RFMC) continued serving the Council of Europe through its Euro-Mediterranean Major Hazard Agreement (EUR-OPA), through the function of GFMC as EUR-OPA Specialized Center.³⁶ The Organization for

²⁹ <http://fire-in.eu/>, <https://fire-in.eu/de/groupes-de-travail/feux-de-forets-et-de-milieus-ouverts>

³⁰ https://infoeuropa.euroid.pt/files/database/000079001-000080000/000079758_2.pdf

³¹ <https://gfmcc.org/wp-content/uploads/European-Fire-Academy-19th-Round-Table-4-5-June-2018-Agenda.pdf>

³² <https://gfmcc.org/intro/CoE-RFMC-GFMC-National-RT-Fire-Mgmt-2016-Recommendations.pdf>

³³ <https://gfmcc.org/intro/CoE-RFMC-GFMC-Regional-Fire-Mgmt-Consultation-2016-Recommendations.pdf>

³⁴ <https://gfmcc.org/intro/CoE-RFMC-GFMC-Regional-Fire-Mgmt-Consultation-2016-Recommendations.pdf>

³⁵ <https://gfmcc.org/wp-content/uploads/FMRC-CAR-SEA-GFMC-UNISDR-AMCDRR-Statement-Landscape-Fires-Brief.pdf>

³⁶ <https://gfmcc.org/programmes/europe-org/coe.html>



Security and Cooperation in Europe (OSCE) has entrusted GFMC, RFMC and REEFMC in the Implementation of OSCE Ministerial Council Decision 6/14 on Enhancing Disaster Risk Reduction.³⁷

Significant events took place in the quadrennium 2015-2019, among other

- **16-17 October 2017:** 2017 OSCE Economic and Environmental Dimension Implementation Meeting with GFMC / REEFMC contribution “Supporting the Implementation of OSCE Ministerial Council Decision 6/14 on Enhancing Disaster Risk Reduction: Enhancing National and Regional Capacities in Wildfire Disaster Risk Reduction” (Session I: Strengthening Disaster Risk Reduction and Management at all Levels); Vienna, Austria.³⁸
- **28-29 September 2018:** International Conference on Culture against Disasters: Protecting Cultural Landscapes as Prevention of Natural Disasters, with GFMC contribution “Wildfire Risks and Fire Use in Changing Cultural Landscapes: Underlying Causes, Challenges and Options for Integrated Landscape Fire Management in a Green Economy” on behalf the European Major Hazards Agreement EUR-OPA; Ravello, Italy.³⁹
- **12 October 2018:** Inauguration meeting of the Eurasia Team of Specialists on Landscape Fire Management at GFMC; Freiburg, Germany.
- **04-07 November 2018:** Joint Meeting of the Committee of Permanent Correspondents and Directors of Specialised Centres, European and Mediterranean Major Hazards Agreement (EUR-OPA), with GFMC report on the 2018 achievements in the establishment and launching of work of the Eurasia Team of Specialists on Landscape Fire Management; Zagreb, Croatia.⁴⁰
- **17-19 December 2018:** Regional Workshop Landscape Fire Management in South Eastern Europe, organized by the Regional Fire Monitoring Center For SE Europe / Caucasus (RFMC) and GFMC, on behalf of the Office of the Coordinator of OSCE Economic and Environmental Activities; Skopje, Republic of North Macedonia.⁴¹
- **01-05 July 2019:** Toxic Industrial Material Reconnaissance & Assessment Course (TIMRAC) 2019 under the auspices of the Organization for Security and Cooperation in Europe (OSCE), with GFMC Contribution on “Wildfire Hazards Resulting from Collateral Damages of Armed Conflicts and Post-Conflict Threats by Unexploded Ordnance (UXO) and Land Mines”; Vienna, Austria.⁴²
- **Design of a thematic EUR-OPA website BeSafeNet:** Communication of basics in landscape fires for the use in schools (as a part of a multi-hazard website).⁴³

On 3 September 2018 a joint meeting “Streamlining International Cooperation in Landscape Fire Management: Development of a Joint Agenda between UNISDR, Council of Europe (EUR-OPA), OSCE and the GFMC)” was held with the Secretariats of the OSCE), the Council of Europe’s European and Mediterranean Major Hazards Agreement (EUR-OPA), the UN Office for Disaster Risk Reduction (UNDRR) and the Global Wildland Fire Network / Global Fire Monitoring Center (GFMC). “Streamlining International Cooperation in Landscape Fire Management: Development of a Joint Agenda between UNISDR, Council of Europe (EUR-OPA), OSCE and the GFMC)”. The meeting was held at the Office of the Co-ordinator of OSCE Economic and Environmental Activities (OCEEA) in Vienna and came up with a set of basic conclusions and recommendations:

- The international organizations participating in the meeting will continue and intensify (depending on demands / requests and needs) to utilize the advisory services of the GFMC and the Regional Fire Monitoring Centers (RFMCs) and the Regional Fire Management Resource Centers (RFMRCs)
- Within Europe, the international organizations will utilize the advisory services of the Eurasian Team of Specialists on Landscape Fires, especially in the context of developing holistic

³⁷ https://gfmco.org/globalnetworks/seeurope/SEEurope_8.html

³⁸ <https://gfmco.org/wp-content/uploads/OSCE-EEDIM-2017-Session-I-GFMC-Statement.pdf>

³⁹ <https://gfmco.org/wp-content/uploads/EUR-OPA-Conference-Culture-Against-Disasters-Ravello-28-29-Sep-2018-Agenda.pdf>

⁴⁰ <https://gfmco.org/wp-content/uploads/EUR-OPA-Joint-Meeting-Correspondents-Specialized-Centers-2018-Report.pdf>

⁴¹ <https://gfmco.org/wp-content/uploads/OSCE-GFMC-RFMC-PR-407309-19-December-2018.pdf>

⁴² http://gfmco.org/globalnetworks/seeurope/SEEurope_8.html

⁴³ <http://www.besafenet.net/en-gb/natural-hazards-landscape-fires#faq494>



approaches in landscape fire management, addressing fire management as confidence building measure in conflict and post-conflict regions, including fire management on territories contaminated by remnants of conflicts and radioactivity.

- At international global level, explicitly with regards to the implementation of the Paris Climate Accord, the international organizations participating in the meeting will utilize the scientific-technical advice for the role in integrated landscape fire management in reducing excessive greenhouse gas release and increasing terrestrial carbon sequestration

International / Global Level

In October 2018, the GFMC hosted the meeting of the International Liaison Committee (ILC), the Brazilian Conference Organizing Committee for IWFC-7 and the UNDRR Wildland Fire Advisory Group (WFAG) to prepare of the 7th International Wildland Fire Conference (IWFC-7); Freiburg, Germany.^{44 45}

In May 2019, the Regional Fire Management Resource Centers and the Global Wildland Fire Network reported to the UNDRR Global Platform for Disaster Risk Reduction (GPDRR) 2019, with GFMC participation; UN Geneva, Switzerland.^{46 47 48}

Thematic Focus – Aerial Firefighting

Thematic trainings and conferences were held in the Eurasia region to foster the exchange of experience and develop strategies in aerial firefighting in Europe, e.g.:

- **7-9 September 2016:** Training Course “Enhancing Ground and Aerial Forest Fire Suppression Capacities in the Republic of North Macedonia”, a joint course organized by the Regional SE Europe / Caucasus Fire Monitoring Center (RFMC), the U.S. Forest Service and the GFMC; Skopje, Republic North Macedonia.⁴⁹
- **08 August 2017:** Briefing and consultation of the use of large firefighting aircraft by the European Commission, Civil Protection Mechanism, with GFMC inputs regarding the development of the International Fire Aviation Guidelines: “Towards enhancing Safety, Effectiveness, Efficiency and Interoperability of Aerial Firefighting Resources in Ground-Air and Cross-Boundary Coordination”; European Commission, Brussels, Belgium.⁵⁰
- **15 October 2017:** Simulation Exercise in preparation of the multinational aerial firefighting demonstration with Canadair CL-415 aircraft and crews from Croatia, France (host), Italy and Spain; Sécurité Civile, Nimes, France.
- **16-17 October 2017:** Aerial Firefighting Conference Europe 2017, with GFMC contribution “Global Warming and Climate Change Research from the Air”; Sécurité Civile, Nimes, France.⁵¹
- **18 October 2017:** Interoperability Workshop held in conjunction with the Aerial Firefighting Conference Europe 2017, organized jointly by the International Fire Aviation Working Group (IFAWG) and Sécurité Civile. GFMC contribution: Report on the Second Regional Consultation on Transboundary Cooperation in Fire Management in South America; Sécurité Civile, Nimes, France.⁵²

⁴⁴ <https://gfmcc.org/wp-content/uploads/Joint-ILC-WFAG-Meeting-12-14-October-2018-Agenda.pdf>

⁴⁵ <https://gfmcc.org/course/meeting/joint-meetings-unisdr-wfag-ilc-and-brazilian-conference-committee-for-7th-iwfc.html>

⁴⁶ <https://gfmcc.org/wp-content/uploads/GPDRR-2019-Stakeholder-Declaration-.pdf>

⁴⁷ <https://gfmcc.org/wp-content/uploads/GFMC-UNISDR-GPDRR-Statement.pdf> and <https://www.youtube.com/watch?v=qriGSwt63xY>

⁴⁸ <https://www.unisdr.org/conference/2019/globalplatform/programme/ignite-stage/view?id=1004>

⁴⁹ <https://gfmcc.org/intro/2015/update-1124/RFMC-USFS-GFMC-Seminar-Fire-Mgmt-Training-Macedonia-2016-Agenda.pdf>

⁵⁰ <https://gfmcc.org/iwpm/ifawg.html>

⁵¹ https://gfmcc.org/course/meeting/2017/meet2017_05.html

⁵² <https://gfmcc.org/wp-content/uploads/AFFC-Europe-2017-IOW-Report.pdf> and <https://gfmcc.org/wp-content/uploads/AFFC-Europe-2017-IOW-Statement.pdf>



- **20 April 2018:** Working meeting to evaluate the progress of the Study on Currently Available Aerial Forest Fire Fighting Assets at the European Commission, ECHO.A – Emergency Management, A.1 – Emergency Response Coordination Centre (ERCC); European Commission, Brussels, Belgium.
- **19-21 March 2019:** Aerial Firefighting Conference Europe 2019, with GFMC / IFAWG contribution; Nimes, France.⁵³

Gaps / shortcomings in landscape fire science, management and policies

Within the greater Eurasian Region and globally, the efforts in fundamental in landscape fire science are increasing to address changing fire regimes, their causes and impacts on the environment and society. Besides an exponential increase of scientific publications, the development of innovative technologies in landscape fire early warning, monitoring and impact assessment (on land cover, vegetation recovery, carbon sequestration and release of pyrogenic emissions) have advanced considerably.

However, with a few exceptions, national policies and governance in fire management continue to be reactively and focus on fire suppression. There is a lack of integrated approaches in fire management at landscape level. Traditional sectoral and vertical institutional responsibilities and structures are impediment for a more proactive and horizontal / transversal cross-sectoral approaches in which State actors and civil society would address the underlying cause of increasing wildfire hazard and risks. The concept realized in Portugal and the strategic concept for Greece are exemptions and should be evaluated by other countries.

Conclusions and Recommendations

In continuation of the recommendations given in the Regional Statement at the 6th International Wildland Fire Conference in Korea (2015), the Regional Eurasia Wildland Fire Network concludes and recommends:

- Governments of the region and globally are warned by the scientific and the professional fire management community that the threat from wildfires in the region will become increasingly dangerous in the coming years as a consequence of climate change and socio-economic and demographic changes;
- Governments of the region and globally are urged to take all necessary measures to develop integrated fire management concepts and put in place capabilities to manage fire at landscape level by considering the potential contributions of vegetation fires to climate change, or the potential for mitigation climate change consequences; a reduction of unnecessary application of fire in land use and land-use change, and the state-of-the-art application of prescribed fire where appropriate should be considered;
- The extent of unnecessary burning of agricultural, pasture and steppe ecosystems must be halted; appropriate measures would include:
 - Review and further development of the legislation, law enforcement and management responsibilities of authorities concerning the use of fire on agricultural and pasture lands, as well as on abandoned agricultural lands;
 - Review and promotion of alternatives to agricultural burning by rural extension services;
 - Introduction of subsidies for supporting the agricultural sector to apply alternative technologies, following the examples of subsidies in the European Union.
- Rural communities must be supported in the self-defense of rural assets (farms, villages, recreational sites, infrastructures) against wildfires by the;
 - Establishment of structures for homeland defense against wildfires;
 - Provision of appropriate training, equipment and insurance of volunteers active in rural wildfire defense
- Urban and rural areas must be prepared to protect populations against the adverse effects of wildfire smoke pollution; and publish transparent and open data about people affected by smoke pollution (hospital admissions, premature deaths);

⁵³ <https://gfmc.online/course/meeting/2019-meet2019-03.html>



- Dialogue must be fostered at regional level between relevant agencies that encourages participatory approaches by inviting representatives of civil society to define fire management solutions at landscape levels (including forests, agricultural lands, abandoned agricultural lands, conservation / protected areas, and other lands);
- Consequently, national fire management policies or doctrines must be developed that take these recommendations into consideration, notably the needs for integrating the function of natural and management-set prescribed fires in stabilization and regeneration of fire-dependent and -tolerant forests and taking into consideration the needs for reducing unnecessary emissions and stabilizing or increasing terrestrial carbon;
- The policies should be based on the following five principles:
 - **1. Transdisciplinary and Innovation**
Policy and strategic planning and relevant decision-making shall be based on sound scientific knowledge and considering technological capabilities and innovation; this will include considering the revival of traditional, socio-economically sound and environmentally benign land-use practices. A multi-disciplinary scientific approach is mandatory to address the cross-sectoral nature of fire management at landscape level.
 - **2. Holisticness, Integration and Inclusion**
Policy development and strategic planning shall be holistic, i.e. address the fire problem at landscape level by including all relevant institutional mandates and the potential and capacity of contribution of the civil society.
 - **3. Coherence**
The mandates and activities in fire management of State institutions and other stakeholders shall be coherent (harmonized) and meet the overarching national fire management policy and implementation plan.
 - **4. Cohesiveness**
The National Fire Management Plan shall be considered as cohesive (obligatory) for individual institutional / sectoral planning and activities.
 - **5. Coordination**
The implementation of actions under the National Fire Management Plan shall be monitored in a permanent basis and highly coordinated
- The existing Regional Fire Monitoring / Regional Fire Management Resource Centers must be established at a regional level which will train professionals and volunteers in fire management, disseminate information to the public on early warning and real-time information for ongoing wildfires, and facilitate mutual support between neighbouring regions in wildfire emergency situations;