



## The Global Fire Monitoring Center (GFMC)

Secretariat of  
Global Wildland Fire Network (GWFN) and UNDRR Wildland Fire Advisory Group (WFAG)  
International Fire Aviation Working Group (IFAWG)  
International Wildfire Preparedness Mechanism (IWPM)  
Eurasian Team of Specialists on Landscape Fires – Council of Europe  
Sendai Voluntary Commitment (SVC) – International Wildfire Preparedness Mechanism

### GFMC Profile – Status: January 2024<sup>1</sup>

In the light of increasing vulnerability of the global environment and societies to the adverse impacts of vegetation fires (landscape fires) and the recognized need and utility of sharing scientific, conceptual and pragmatic solutions and resources in fire management, the UNECE/FAO/ILO Seminar *Forest, Fire and Global Change*, held in 1996 in Russia, and a number of international conferences (notably the Second International Wildland Fire Conference, Vancouver, Canada, 1996), the UNECE/FAO *Team of Specialists on Forest Fire* proposed the establishment of a *Global Fire Management Facility*. Based on these recommendations the Government of Germany through the Ministry of Foreign Affairs, Office for the Coordination of Humanitarian Assistance, provided the seed funding for the establishment of the *Global Fire Monitoring Center (GFMC)*. In 1998, the GFMC was established at the Fire Ecology Research Group of the Max Planck Institute for Chemistry, Max Planck Society for the Advancement of Science, hosted by Freiburg University, Germany. In 2005, the United Nations University and the Max Planck Society signed an agreement, which gave GFMC the status of an UNU Associated Institute.<sup>2</sup>

Initiated in 2022, Food and Agriculture Organization (FAO) and UN Environment (UNEP) are co-developing the *Global Fire Management Hub*. The aim of the “Fire Hub” is to strengthen countries’ capacities to implement integrated fire management with the major impact of reducing the many negative effects of wildfires on people, landscapes, and global climate. At a first technical workshop, held at the FAO (Rome, 13-15 November 2023), the concept / *modus operandi* and the roadmap with key partners were discussed, along with integration and transition of the 25-year work experience of the Global Fire Monitoring Center (GFMC) and the Global Wildland Fire Network and the Regional Fire Management Resource Centers into the Fire Hub.<sup>3</sup>

### Serving the Framework and Mandates of the United Nations and Multilateral Organizations

Initially the GFMC operated in the framework of the *International Decade for Natural Hazard Reduction (IDNDR)* and transited in 2001 to its successor arrangement, the *UN International Strategy for Disaster Reduction (UNISDR)*. Mandated by the UN Undersecretary General for Humanitarian Affairs, the GFMC in 2002 was appointed as member of the *Interagency Task Force on Disaster Reduction (IATF)* and convener / leader of the *Working Group on Wildland Fire* – one of four IATF Working Groups.<sup>4</sup>

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The GFMC is associated with – mandated by – cooperating with



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<sup>2</sup> <http://gfmc.online/programmes/un/unu/unu.html> (2006-2014)

<sup>3</sup> <https://gfmc.online/programmes/un/fao/fao.html>

<sup>4</sup> <https://www.unisdr.org/2005/task-force/working-groups4-eng.htm>

Since 2002, GFMC has served as coordinator and secretariat of the *UNISDR (UNDRR) Wildland Fire Advisory Group* and the *Global Wildland Fire Network*<sup>5</sup>, a global voluntary network that provides advice for the development of fire management policies, and science and technology transfer to enable nations and international organizations to:

- *Reduce the negative impacts of landscape fires on the environment and humanity; and*
- *Advance the knowledge and application of the ecologically and environmentally benign role of natural fire in fire-dependent ecosystems, and sustainable application of fire in land-use systems.*

Until 2015, the GWFN served as a *Thematic Platform* under the *UNISDR Global Platform for Disaster Risk Reduction*. Since then, the GFMC is a member of the UNISDR Science & Technology Partnership and contributes to the implementation of the *Sendai Framework for Disaster Risk Reduction 2015-2030* through a Voluntary Commitment.<sup>6</sup>

The GFMC provides a global portal for wildland fire documentation, information and monitoring and is publicly accessible through the Internet.<sup>7</sup> The regularly updated national to global wildland fire products of the GFMC are generated by a worldwide network of cooperating institutions. Web-based information and GFMC services include:

- Support of nations and international organizations to develop long-term strategies or policies for wildland fire management, including community-based fire management approaches and advanced wildland fire management training for decision makers, especially in the prevention and preparedness of wildfire disasters<sup>8</sup>
- Serve as advisory body to the UN system through the coordination of the UNISDR Wildland Fire Advisory Group and the UNISDR Global Wildland Fire Network<sup>9</sup>
- Emergency hotline and liaison capabilities for providing assistance for rapid assessment and decision support in response to wildland fire emergencies under cooperative agreements with UN-OCHA, Emergency Services Branch, and the WSSD Environmental Emergencies Partnership.<sup>10</sup>

Working at the interface between the science community and the user community, the research and development work of the GFMC focuses on capacity building and delivering problem-oriented products and solutions. The GFMC portfolio includes advisory support for the development of concepts for capacity building in advanced wildland fire management. Depending on projects and requests by countries or international / multilateral organizations, the GFMC services include:

- Methods of science and technology transfer for application in local fire management (landscape fire prevention, preparedness, suppression, rehabilitation) under different cultural, socio-economic and ecological environments
- Methods and application of people-centered participatory fire management (Community-Based Fire Management)<sup>11</sup>
- Development of national strategies and policies for landscape fire management, including legislation
- Development of standards for international cooperation in landscape fire management (fire management guidelines, common terminology, standard procedures for cooperation in wildland fire emergencies)<sup>12</sup>
- Training courses for international landscape fire management specialists, including experts for assessment and intervention missions
- Global fire assessments (e.g., for FAO in 2000 and 2006)<sup>13</sup>

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<sup>5</sup> <http://gfmc.online/globalnetworks/globalnet.html>

<sup>6</sup> The Sendai Voluntary Commitment (SVC), which was formulated and submitted by GFMC in 2015, aims at delivering concrete results towards implementation of the Sendai Framework: <http://gfmc.online/globalnetworks/GFMC-Voluntary-Commitment-WCDRR-2015.pdf>. In 2019 the UNDRR officially recognized the SVC: [https://sendaicommitments.unisdr.org/commitments/20190222\\_001](https://sendaicommitments.unisdr.org/commitments/20190222_001)

<sup>7</sup> <http://gfmc.online/>

<sup>8</sup> The GFMC offers a number of tools that may either be used directly online or be requested for implementation: <https://gfmc.online/iwpm/tools-3.html> (mirrored by the UN Environment / OCHA EES: <https://www.eecentre.org/?s=GFMC>)

<sup>9</sup> <http://gfmc.online/globalnetworks/Rationale-and-Introduction-1.html>

<sup>10</sup> [http://gfmc.online/emergency/un\\_gfmc.html](http://gfmc.online/emergency/un_gfmc.html)

<sup>11</sup> <http://gfmc.online/manag/cbfim.html>

<sup>12</sup> <http://gfmc.online/literature/fire-management.html> and <http://gfmc.online/literature/glossary.html>

<sup>13</sup> <http://gfmc.online/programmes/un/fao/fao.html>

Apart of the UN system, the Council of Europe (CoE) has mandated the GFMC to serve as *Specialized Euro-Mediterranean Centre of the European and Mediterranean Major Hazards Agreement (EUR-OPA)*.<sup>14</sup> Since 2006, the *Organization for Security and Cooperation in Europe (OSCE)* has entrusted the GFMC to implement fire management projects in the Eastern Europe, Caucasus and Central Asia (EECCA) region and in Southeast Europe.<sup>15</sup> One of the main aims of the work of GFMC in the EECCA region is to focus on reducing threats to human health and security caused by vegetation fire smoke and by fires burning on terrain contaminated by unexploded ordnance, land mines and radioactivity, and wildfires occurring as collateral damages of armed conflicts. In this regard, the GFMC is assisting the mandates of the UN, CoE and OSCE to address peace and development, confidence-building and post-crisis humanitarian and environmental problems.

Between 1993 and 2014, the GFMC coordinated the thematic work under the UN Economic Commission for Europe (UNECE) by leading *UNECE/FAO Team of Specialists on Forest Fire*. The work of the Team focused on providing guidance to member states through transboundary cooperation in fire management. In November 2017, the Council of Europe through the European and Mediterranean Major Hazards Agreement (EUR-OPA) accepted the proposal to reactivate a regional team of specialists by the establishment of the *Eurasian Team of Specialists on Landscape Fire Management* (inauguration and start of operations: 2018).

**Annex I** provides an overview of joint activities between GFMC, the UN system and multilateral organizations expressed or mandated by MoUs, mandated tasks and collaborative projects.

### **Voluntary Initiatives addressing International Cooperation in Fire Management**

Following the International Wildland Fire Summit (2003), the GFMC cooperated with the FAO to develop an International Wildland Fire Accord.<sup>16</sup> Since the jointly developed *Framework for the Development of the International Wildland Fire Accord* was not accepted by FAO Member States, this initiative phased out in 2005.

In 2012, the United Nations Economic Commission for Europe (UNECE) entrusted the GFMC to prepare and organize the *UNECE/FAO Regional Forum on Cross-boundary Fire Management*. The Forum, sponsored by the Federal Ministry for Food and Agriculture of Germany, based on a decision by the German Bundestag, was held on 28-29 November 2013 at the United Nations in Geneva. The Forum was attended by 22 UNECE Member States and representatives from other regions, non-government organizations, regional and international organizations (ASEAN Secretariat, SADC Secretariat, Council of Europe, OSCE), and the United Nations (UNECE / FAO Forestry and Timber Section; FAO; UN Office for Disaster Risk Reduction / UNISDR; OCHA Environmental Emergencies Section, Joint UNEP/OCHA Environment Unit, Emergency Services Branch; Secretariat of the UNECE Convention on Long-Range Transboundary Air Pollution). The main objective of the Forum was to elaborate recommendations to UNECE member states and the international community to build resilience of nations and communities to wildfire emergencies and disasters by enhancing national and collective international fire management capability through exchange of expertise.<sup>17</sup>

One of the outcomes was the recommendation to set up a voluntary mechanism that would bridge the gap of time and missing formal international agreements to facilitate the exchange of experience among nations and international organizations aimed at enhancing fire management capacities globally through sharing of knowledge and expertise. In November 2014, the voluntary *International Wildfire Preparedness Mechanism (IWPM)* was launched. The IWPM, currently hosted by the Global Fire Monitoring Center (GFMC), is a non-financial instrument serving as a one-stop broker / facilitator between national and international agencies, programs and projects allowing to exchange expertise and build capacities in fire management and particularly in enhancing preparedness to large wildfire emergencies.<sup>18</sup>

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<sup>14</sup> <http://www.coe.int/en/web/europarisks/gfmc>

<sup>15</sup> [http://gfmc.online/globalnetworks/seeurope/SEEurope\\_8.html](http://gfmc.online/globalnetworks/seeurope/SEEurope_8.html)

<sup>16</sup> <http://gfmc.online/programmes/un/fao/fao.html>

<sup>17</sup> <http://gfmc.online/iwpm/background.html>

<sup>18</sup> <http://gfmc.online/iwpm/index-7.html>

The IWPM was developed in tandem with the *International Fire Aviation Working Group* (IFAWG), a dedicated group addressing wildfire emergencies by developing the voluntary *International Fire Aviation Guidelines* and the *International Manual of Common Rules for Fire Aviation*. Since 2008, the GFMC is serving as Secretariat of IFAWG, a consortium of countries with major aerial firefighting assets working under the umbrella of the UNISDR Wildland Fire Advisory Group.<sup>19</sup>

## Decentralization of the GFMC

A widely perceived positive and earnest shift in the political landscape to tackle fire and smoke problems in many countries has prompted the GFMC, through the financial support of the Council of Europe, the OSCE and the Federal Republic of Germany, to establish regional centers of excellence to perform the GFMC tasks at regional level. These centers are designated as *Regional Fire Monitoring Centers* or *Regional Fire Management Resource Centers*. Currently eight regional centers are based at universities and an academy of sciences:

- **Regional Southeast Europe / Caucasus Fire Monitoring Center** (RFMC), based in Skopje, Republic of North Macedonia (established in 2010, with financial assistance of GFMC and CoE)<sup>20</sup>
- **Regional Eastern European Fire Monitoring Center** (REEFMC), based in Kiev, Ukraine (established in 2013, with financial assistance of GFMC and CoE)<sup>21</sup>
- **Fire Management Resource Center Regional – Central Asia Region** (FMRC-CAR), based in Ulaanbaatar, Mongolia (established in 2015, with financial assistance of GFMC and OSCE)<sup>22</sup>
- **Regional Fire Management Resource Center – South East Asia** (RFMRC-SEA), based in Bogor, Indonesia (established in 2017, with financial assistance of GFMC and the Federal Ministry for Food and Agriculture of Germany)<sup>23</sup>
- **Regional Central Eurasia Fire Monitoring Center**, based in Krasnoyarsk, Russian Federation (established by contract in 2017, inaugurated with support of GFMC and CoE / EUR-OPA in August 2019)
- **Regional South America Fire Management Resource Center**, based in Gurupí (Brazil), following a concept agreed by ten South American countries in 2017 (established with the assistance of GFMC and the Federal Republic of Germany)<sup>24 25</sup>
- **Regional Eastern Africa Fire Management Resource Center**, based in Antananarivo, Madagascar (established in October 2020 with the assistance of GFMC and the Federal Republic of Germany)<sup>26</sup>
- **Regional Western Africa Fire Management Resource Center**, based in Kumasi, Ghana, established in January 2021 (further institutional support by Tropenbos, the Netherlands, underway since 2022)<sup>27</sup>

The mandates of the centers will be to function as an independent regional center of competency and excellence for fire management, operating at the interface between science, policy makers and the community of practitioners (Science-Policy-Practitioners Interface – SPPI) – with the following typical services:

- Provision of an internet-based information portal, which will include the science of landscape fires and related scientific disciplines;
- Provision of a web-based documentation and information portal on the practices that are prerequisite for the application of scientific principles in informed landscape fire management;
- Creation of an interface and promotion of the dialogue between services of specialized governmental institutions and civil society organizations;
- Provision of advisory services for sustainable forest and land management and the development landscape fire management policies;

<sup>19</sup> <http://www.ifawg.net> and <http://gfmc.online/iwpm/ifawg.html>

<sup>20</sup> [http://www.rfmc.mk/about\\_us.php](http://www.rfmc.mk/about_us.php)

<sup>21</sup> <http://nubip.edu.ua/en/reefmc>

<sup>22</sup> <http://rcafmmc.num.edu.mn/>

<sup>23</sup> <https://rfmrc-sea.org/> (online: May 2018)

<sup>24</sup> [http://gfmc.online/globalnetworks/southamerica-southamerica\\_9.html](http://gfmc.online/globalnetworks/southamerica-southamerica_9.html)

<sup>25</sup> <http://cemaf.org/>

<sup>26</sup> <https://rfmrc-ea.org/>

<sup>27</sup> The website of RWAFMRC is under construction

- Promotion of regional cooperation through networks, notably within the UNISDR Regional Wildland Fire Networks under the Global Wildland Fire Network; and
- Assistance in training and continuing vocational training in landscape fire management (main task: Information, training, training and education and the promotion of human resources and institutional capacities).

## **Annexes**

- **Annex I** – Overview of joint activities between GFMC, the UN system and Multilateral Organizations
- **Annex II** – Overview of International Tasks and Projects of GFMC
- **Annex III** – GFMC Professional Awards
- **Annex IV** – GFMC Publications

## Annex I – Overview of Joint Activities between GFMC, the UN System and Multilateral / Intergovernmental Organizations

Organization	Agency	Activity
United Nations	Secretary General	Personal representation of the Secretary-General at: <ul style="list-style-type: none"> <li>- Opening of the 5<sup>th</sup> International Wildland Fire Conference (2011): <a href="https://www.un.org/sg/en/content/sg/statement/2011-05-10/secretary-generals-message-fifth-international-wildland-fire">https://www.un.org/sg/en/content/sg/statement/2011-05-10/secretary-generals-message-fifth-international-wildland-fire</a></li> <li>- Representation at the Conference “Our Response to the Fires” (Greece, 2012): <a href="http://gfmc.online/intro/Chios-Tsakos-Foundation-Fire-Meeting-15-16-Oct-2012-Agenda-ENG.pdf">http://gfmc.online/intro/Chios-Tsakos-Foundation-Fire-Meeting-15-16-Oct-2012-Agenda-ENG.pdf</a></li> </ul>
	UN FAO	Cooperation since 1985. MoU signed 2004, with multiple tasks in the implementation of FAO’s work program in fire management. Since 2023 – initiation of transition of GFMC and the Global Wildland Fire Network and the Regional Fire Management Resource Centers to the “Global Fire Management Hub” (ongoing in 2024-2025): <a href="http://gfmc.online/programmes/un/fao/fao.html">http://gfmc.online/programmes/un/fao/fao.html</a>
	UNECE	Between 1993 and 2014, the GFMC coordinated the thematic work under the UN Economic Commission for Europe (UNECE) by leading <i>UNECE/FAO Team of Specialists on Forest Fire</i> . The work of the Team focused on providing guidance to member states through transboundary cooperation in fire management: <a href="http://gfmc.online/intro/team.html">http://gfmc.online/intro/team.html</a>
	UNISDR / UNDRR	Since 2002: <ul style="list-style-type: none"> <li>- Member, Interagency Task Force for Disaster Reduction (IATF)</li> <li>- Convener, IATF Working Group on Wildland Fire</li> <li>- Coordinator, UNISDR Wildland Fire Advisory Group / Global Wildland Fire Network <a href="https://www.unisdr.org/2005/task-force/tf-working-groups4-eng.htm">https://www.unisdr.org/2005/task-force/tf-working-groups4-eng.htm</a></li> <li>- Member of the UNDRR Science &amp; Technology Partnership and the <i>Sendai Framework for Disaster Risk Reduction 2015-2030</i> through a Voluntary Commitment: <a href="https://sendaicommitments.unisdr.org/commitments/20190222_001">https://sendaicommitments.unisdr.org/commitments/20190222_001</a></li> </ul>
	UNEP / OCHA	Since 2001: Interface procedures on wildfire emergency preparedness and response through the UNEP/OCHA Joint Environment Unit (JEU), Emergency Services Branch: <a href="http://gfmc.online/emergency/un_gfmc.html">http://gfmc.online/emergency/un_gfmc.html</a> North Macedonia Wildland Fire Disaster Assessment (2007)
	UN WHO	Since 2001: Letter of Agreement signed with WHO concerning cooperation addressing vegetation fire smoke pollution and human health: <a href="http://gfmc.online/programmes/un/who/who.html">http://gfmc.online/programmes/un/who/who.html</a>
	UN WMO	Cooperation in vegetation fire early warning and building of the Vegetation Fire and Smoke Pollution Warning and Advisory System (VFSP-WAS): <a href="http://gfmc.online/programmes/un/wmo/wmo.html">http://gfmc.online/programmes/un/wmo/wmo.html</a> <a href="http://gfmc.online/gwfews/index-12.html">http://gfmc.online/gwfews/index-12.html</a>
	UNESCO	First co-sponsor of the foundation of GFMC in 1998 and partner of activities to protect cultural and natural heritage assets against destruction by wildfires: <a href="http://gfmc.online/programmes/un/unesco/unseco.html">http://gfmc.online/programmes/un/unesco/unseco.html</a>
	UNFCCC	GFMC party of the UNFCCC Nairobi Work Programme and supporting COPs and the launch of the Paris Agreement: <a href="http://gfmc.online/intro/UNFCCC-COP-20-Outreach-Message-Day-3-Vegetation-Fires.pdf">http://gfmc.online/intro/UNFCCC-COP-20-Outreach-Message-Day-3-Vegetation-Fires.pdf</a> and <a href="http://www.fire.uni-freiburg.de/intro/2015/Update-1060/COP-21-CMP11-High-Level-Segment-Republic-of-Korea-08-December-2015.pdf">http://www.fire.uni-freiburg.de/intro/2015/Update-1060/COP-21-CMP11-High-Level-Segment-Republic-of-Korea-08-December-2015.pdf</a>
	PEDRR	Member of the Partnership for Environment and Disaster Risk Reduction (PEDRR) – An alliance of UN agencies, NGOs and specialist institutes: <a href="http://pedrr.org/">http://pedrr.org/</a>
Council of Europe	EUR-OPA	Since 2007: GFMC serving as Specialised Euro-Mediterranean Centre of the European and Mediterranean Major Hazards Agreement (EUR-OPA), Council of Europe. Reactivation of a regional team of specialists (former UNECE/FAO) by the establishment of the <i>Eurasian Team of Specialists on Landscape Fire Management</i> : <a href="https://www.coe.int/en/web/europarisks/gfmc">https://www.coe.int/en/web/europarisks/gfmc</a>
OSCE		Since 2006: Policy advisor and field implementation entrusted by of the Organization for Security and Cooperation in Europe (OSCE), including the Environment and Security Initiative (ENVSEC); implementation of OSCE Ministerial Council Decision 6/2014: <a href="http://gfmc.online/globalnetworks/seeurope/SEEurope_8.html">http://gfmc.online/globalnetworks/seeurope/SEEurope_8.html</a>
ITTO		Since the mid-1990s: Implementer of the thematic work of the International Tropical Timber Organization (ITTO): <a href="http://gfmc.online/programmes/itto/itto_start.html">http://gfmc.online/programmes/itto/itto_start.html</a>
EU		Examples: Development of the EuroFire Competency Standards (EU Leonardo, 2006-2008): <a href="http://gfmc.online/eurofire/index-11.html">http://gfmc.online/eurofire/index-11.html</a> ; Fire Paradox (2006-2009). Network of European Hubs for Civil Protection and Crisis Management, with pilot hub Wildfire Risk Management: <a href="https://gfmc.online/programmes/eu-comission/eu-commission.html">https://gfmc.online/programmes/eu-comission/eu-commission.html</a>
ACTO/OTCA		Support of the Amazon Cooperation Treaty Organization (ACTO): Memorandum of Understanding on Cooperation and Mutual Assistance for Integrated Fire Management among ACTO / OTCA Member Countries: <a href="https://gfmc.online/programmes/acto/acto.html">https://gfmc.online/programmes/acto/acto.html</a>

## Annex II – Overview of International Tasks and Projects of GFMC

### International Scientific, Technical and Policy Committees

- Leader, UNECE/FAO Team of Specialists on Forest Fire (1993-2014)
- Convener, Coordinating Committee for the "Biomass Burning Experiment: Impact on the Atmosphere and Biosphere" (BIBEX) project of the International Global Atmospheric Chemistry Programme (IGBP/IGAC) (1998-2003)
- Chair / Co-chair IUFRO Group 8.05 Forest Fire Research (ex S 1.09) (Co-Chair 1987-92, Chair: 1992-95, Co-Chair 1998-2004)
- Member, Scientific Council of the Siberian Centre for Ecological Research of Boreal Forests
- Member, International Laboratory of Forest Fire Ecology (Krasnoyarsk)
- Convener, the Working Group on Early Warning of Fire and other Environmental Hazards of the UN International Decade of Natural Disaster Reduction (IDNDR) (1997)
- Member, Scientific Advisory Board to the German National Committee of the International Decade of Natural Disaster Reduction (IDNDR / UNISDR) (1998-99)
- Member, German National Committee on Disaster Reduction (2000-ongoing); Board of Directors, German National Committee on Disaster Reduction (2000-2007)
- Coordinator, Working Group Wildland Fire of the Inter-Agency Task Force, UN International Strategy for Disaster Reduction (UNISDR) (2001-2003)
- Co-Chair, Forest Fire Monitoring and Mapping Implementation Team, Global Observation of the Forest Cover (GOFC) program of the Global Terrestrial Observing System (GTOS) (2002-2016)
- Host of the Online Repository of the International Wildland Fire Conferences (since 1989)<sup>28</sup>
- Coordinator, UNISDR Wildland Fire Advisory Group and Global Wildland Fire Network (since 2004)
- Secretary, International Wildfire Response Mechanism (IWPM) (since 2014)
- Member, IUCN Commission of Ecosystem Management (CEM) (renewed 2017)
- Leader, Eurasian Team of Specialists on Landscape Fire Management (since 2018)

### EXAMPLES of projects addressing the Science-Policy-Practitioners Interface (SPPI) implemented by GFMC on behalf of international organizations and national / multilateral development programs (only selected examples; more information available on request)

- **Albania:** National Forest Fire Management Strategy and Action Plan for Albania (FAO Technical Assistance to the Forestry Project) (2001-2002)
- **Algeria:** Projet Pilote de Développement Forestier du Massif de Collo (Algérie): Gestion de feu (GTZ P.N. 85.2011.6-01.200) (1992)
- **Argentina:** Fire research and management in Andino-Patagonian forests and other ecosystems. Desertification control. Argentina (GTZ P.N. 85.2025.6-01.100, 87.2278.7-01.200, 88.2267.8-01.100) (1991, 1993, 1997)
- **Armenia:** Enhancing National Capacity on Fire Management and Wildfire Disaster Risk Reduction in the South Caucasus – Armenia, on behalf of OSCE / ENVSEC (2010-2015)
- **Azerbaijan:** Enhancing National Capacity on Fire Management and Wildfire Disaster Risk Reduction in the South Caucasus – Azerbaijan, on behalf of OSCE / ENVSEC (2010-2015)
- **Bénin:** Fire Management, Pendjari Biosphere Reserve (GTZ) (2002)
- **Brazil (I):** Fire ecology and management research (German Research Council /DFG & GTZ) (1980-82)
- **Brazil (II):** *Prevencao, Controle e Monitoramento de Incendios no Cerrado* (GIZ P.N. 11.9035.4-001.00) (2013-2017)
- **Bulgaria:** National Fire Management Strategy (Bulgaria-Swiss Forestry Programme); Regional Balkan Wildland Fire Network and Regional Forest Fire Exercise (2002-2005)
- **Burma / Myanmar:** Technical and Vocational Forestry and Forest Industries Training. Forest Fire Management (FAO: DP/BUR/81/001) (1986)
- **Chile:** Second Regional Symposium and Consultation on Cross-Boundary Cooperation in Fire Management in South America (Declaration of Viña del Mar 2017, endorsed by 9 South American countries), financed by German Federal Ministry for Food and Agriculture) (2017)<sup>29</sup>

<sup>28</sup> <https://gfmc.online/conferences/iwfc.html>

<sup>29</sup> [https://gfmc.online/globalnetworks/southamerica-southamerica\\_9.html](https://gfmc.online/globalnetworks/southamerica-southamerica_9.html)

- **Ecuador:** National Strategy For Integral Fire Management in the frame of the project „Strengthening of Technical and Institutional Capacities for Integrated Fire Management in Ecuador's Natural Heritage" (GIZ P.N 15.2121.0-027.00) (since 2018, ongoing)
- **Ethiopia:** Fire emergency response and National Round Table on Forest Fire Management (GTZ) (2000)
- **Georgia (I):** Enhancing National Capacity on Fire Management and Wildfire Disaster Risk Reduction in the South Caucasus – Georgia, on behalf of OSCE / ENVSEC (2010-2015)
- **Georgia (II):** Sustainable Management of Biodiversity, South Caucasus (GIZ P.N. 11.2197.9-005.00) (2014-15)
- **Georgia (III):** Integrated Biodiversity Management in the South Caucasus (IBiS) (GIZ P.N. 15.2101.2-004.00 (2017-19)
- **Germany:** Fire Management in Conservation Areas on Terrain Contaminated by Unexploded Ordnance (UXO) (2011-2014) (NaturSchutzFonds Brandenburg, EU) and multiple projects in fire management<sup>30</sup>
- **Greece:** Chair and lead of the “Committee on the Future of Landscape Fire Management and Wildfire Risk Reduction in Greece” (J.G. Goldammer), based on the Prime Minister Decision Y60/2018 – Government Gazette 3937/B of 10 September 2018<sup>31</sup>
- **Guatemala:** Local Round Table on Community-Based Fire Management (GTZ-German Foreign Office) (2001); National Fire Management Policy (2002)
- **India:** Modern Forest Fire Control. Statistical Forest Fire Reporting (FAO DP/IND/84/003) (1986)
- **Indonesia (I-II):** Bilateral research in cooperation with the University of Mulawarman, Fakultas Kehutanan, Samarinda (1987-2002). Long-term Integrated Forest Fire Management, Indonesia (GTZ P.N. 90.2020.7-03.108). Initiation of the "Bandung" program in conjunction with BAPPENAS and international partners (1992+).
- **Indonesia (III):** Initiator and backstopper of Integrated Forest Fire Management Project (IFFM), East Kalimantan (1994-2002).
- **Indonesia (IV):** South Sumatra Forest Fire Management Project (EU-GTZ, IDN/RELEX/1999/0103), technical and scientific backstopper (2003-2007)
- **Indonesia (V):** Initiator and leader of the project “Establishment of the Regional SE Asia Fire Management Resource Center at Bogor Agricultural University” (German Federal Ministry for Food and Agriculture) (2017-2019)
- **Indonesia (VI):** Partner of FORCLIME Forests and Climate Change Programme (TC Module), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (2017-2020)
- **Kazakhstan:** Forest Protection and Reforestation Project (World Bank) (2004)
- **Madagascar:** Fire Management within the project “Sustainable Management of Natural Resources” (GTZ P.N. 07.2042.5-001.00) (2009)
- Fire Management within the project “Projet d’appui pour le renforcement des capacités en économie de la gestion durable et de la dégradation des terres”, a cooperative project between the Laboratoire Terres Paysages et Développement (LLandDev) du Département des Eaux et Forêts, Ecole Supérieure des Sciences Agronomiques (ESSA-Forêts), the German Development Corporation GIZ and the SV BoDeN Initiative “ELD et ProSol” (2019+)
- **Mongolia (I):** Integrated Fire Management Project (GTZ) (2001-2002)
- **Mongolia (II):** “Integrated Wildland Fire Management and Wildland Fire Disaster Prevention in Mongolia” (BMZ / GTZ Transregional Small Grants Fund [PN 2006.1833.0] in the frame of the „Emergency and Transition Support Programme“ (2008)
- **Mongolia (III):** “Supporting Protected Areas for the Conservation of Ecosystem Services” (SPACES), including fire management training and development of a fire management plan for Khan Khentey Strictly Protected Area (with GIZ and Ministry for Environment and Tourism) (2020)
- **Mozambique:** Pilot Project “Community-Based Fire Management” (CBFiM) in Central Mozambique in the frame of the Regional Project “Integrating Vulnerability and Adaptation to Climate Change into Sustainable Development Policy Planning and Implementation in Southern and Eastern Africa” (GTZ / UNEP) (2005-2007)
- **Namibia:** *Long-term Integrated Forest Fire Management Strategy, and National Round Table on Fire Management*, under the frame of the Namibia-Finland Forestry Programme (FTP) (1998-99)
- **Nepal:** Consolidation of the Global Wildland Fire Network: Development of local and national capacities in fire management (German Foreign Office) (2007)

<sup>30</sup> <https://gfmc.online/manag/germany.html>

<sup>31</sup> <https://gfmc.online/allgemein/press-release.html>



- **North Macedonia:** Wildland Fire Disaster Assessment 2007 (UNEP-OCHA); support of initiation of a Landscape Fire Management Programme in the Western Balkans (2020-21)
- **Philippines (I):** Multiple-use Forest Management. Fire Management (FAO: DP/PHI/77/011) (1984-85)
- **Philippines (II):** TCP Assistance in Forest Fire Management. The Philippines. Forest Fire Research (FAO: TCP/PHI/66053 [T]) (1987)
- **Russian Federation:** Numerous projects initiated in 1991, on behalf of various development agencies and donors (Volkswagen Foundation; Federal German Ministry for Food and Agriculture; World Bank; Council of Europe) (48 project missions between 1991 and 2019)
- **Salvador:** Border-crossing fire management project TRIFINIO (El Salvador, Guatemala y Honduras) 2007 (GTZ)
- **Sudan:** Integrated fire management, Jebel Marra Forest Circle (GTZ P.N. 86.2595.6- 01.100) (1991)
- **Syria:** Wildland Fire Early Warning System, national fire policy, 2007 (UNDP)
- **Tunisia:** Projet Tuniso-Allemand: Protection des Forêts contre les Incendies (KfW) (1995)
- **Turkey:** UNECE Conference on Forest Fire Management and International Cooperation in Fire Emergencies in the Eastern Mediterranean, Balkans and adjoining Regions of the Near East and Central Asia (Antalya, 2004); Advanced Regional Seminar in Wildland Fire Management was conducted by the General Directorate of Forestry in cooperation with and co-sponsored by Environment and Security Initiative (ENVSEC), the UNISDR Regional Southeast Europe Wildland Fire Network and the UNECE / FAO Team of Specialists on Forest Fire (Antalya, 2010); Second "Regional Fire Management Training for the South Caucasus, Western Balkans and Eastern Europe / Central Asia" in the frame of the OSCE/ENVSEC project "Enhancing National Capacity on Fire Management and Wildfire Disaster Risk Reduction in the South Caucasus" (Antalya, 2014).
- **Ukraine:** Continuing cooperation since 2001, with increasing activities after 2005 on fire management on terrain contaminated by radioactivity, joint research, building of fire management capacities (finances by the Council of Europe and OSCE), development of proposals for legislation related to fire management. 2013: Establishment of the Regional Eastern Europe Fire Monitoring Center (REEFMC) in Kyiv. Launch of the bilateral German-Ukrainian research and development project RESILPINE aimed at enhancing the resilience of forest in Ukraine to climate change – between GFMC, Eberswalde University, UNFU (Lviv) and REEFMC (Kyiv) (projects ongoing beyond 2021). In September 2020, the government of Ukraine appointed the head of GFMC as Co-Chair of the Working Group for the development of a Draft State Strategy of a National System of Landscape Fire Management.<sup>32</sup> Cooperation and support of Ukraine in addressing the collateral damages of the war of aggression and invasion of Russian Federation to Ukraine.<sup>33</sup>
- **Uruguay:** Support of National and Regional Competency in Integrated Fire Management to Secure Sustainable Forest Management in Uruguay and through Cross-border Cooperation with Brazil and other Neighboring Countries of South America (financed by German Federal Ministry for Food and Agriculture) (2014-2016)<sup>34</sup>

## Regional Projects

- **ASEAN:** Project *Clean Air for Smaller Cities in the ASEAN Region* (GTZ/German Federal Ministry for Environmental Protection, P.N. 08.9297.6-001.03) (2010)
- **Asian Development Bank (ADB):** Regional Technical Assistance (RETA) Project "Strengthening ASEAN's Capabilities to Mitigate Transboundary Atmospheric Pollution" (1997)
- **Council of Europe (CoE):** GFMC is one of the Specialised Euro-Mediterranean Centres of the European and Mediterranean Major Hazards Agreement (EUR-OPA) serving the Member States in the field of fire management capacity building and policy development; EUR-OPA sponsor of the establishment of three Regional Fire Monitoring Centers (SE Europe, Eastern Europe, Central Eurasia) (since 2006)<sup>35</sup>

<sup>32</sup> [https://gfmc.online/globalnetworks/balticregion/BalticRegion\\_7.html](https://gfmc.online/globalnetworks/balticregion/BalticRegion_7.html)

<sup>33</sup> [https://gfmc.online/globalnetworks/SEEurope/SEEurope\\_1\\_radio.html](https://gfmc.online/globalnetworks/SEEurope/SEEurope_1_radio.html)

<sup>34</sup> [https://gfmc.online/globalnetworks/southamerica/SouthAmerica\\_6.html](https://gfmc.online/globalnetworks/southamerica/SouthAmerica_6.html)

<sup>35</sup> <https://gfmc.online/programmes/europe-org/coe.html>

- **European Union:** Implementation of various thematic projects since 2001:
  - EU/TACIS: Improvement of the Forest Fire Response System, Russian Federation (1999-2001)
  - Twinning Project Hungary – Germany “Implementation of new regulation – Forest Focus – Forest Fires” (HU/2004/IB/AG02-TL), MS Project Leader (2005-2006)
  - Strengthening of the Administrative Capacity of the State Forestry Administration, Bulgaria (BG/2004/IB/AG/04/UE), MS Consultant (2006)
  - EU FIRE PARADOX (2006-2010)
  - EuroFire project on development of competency standards for fire managers at Level 2 (EU Leonardo) (2006-2008)<sup>36</sup>
  - Study on wild fire fighting resources sharing models (with GHK Consultants) (2010)
  - Study on Currently Available Aerial Forest Fire Fighting Assets (with VVA Consultants) (2017-2018)
  - Lead of Thematic Working Group (TWG) C, Vegetation Fires Crisis Mitigation, Fire and Rescue Innovation Network (FIRE-IN) (SEC-21-GM-2016-2017 – Pan-European Network of Practitioners and Other Actors in the Field of Security) (Project ID: 740575) (2017-2020)
  - Member of consortium tasked to design a *Network of European Hubs for Civil Protection and Crisis Management*, with pilot hub *Wildfire Risk Management* (GFMC 2019-2020)
  
- **Organization for Security and Cooperation in Europe (OSCE):** Since 2006 the GFMC conducts fire management projects in Participating States in the frame of OSCE’s Second Dimension / Office of the Co-ordinator of OSCE Economic and Environmental Activities<sup>37</sup>
  - **South Caucasus:** OSCE-led Environmental Assessment Mission to Fire-Affected Areas in Nagorno-Karabakh, in Fulfillment of the UNGA Resolution A/RES/60/285 “The Situation in the Occupied Territories of Azerbaijan: Revised Draft Resolution / Azerbaijan” (2006)
  - OSCE / ENVSEC Project “Enhancing National Capacity on Fire Management and Wildfire Disaster Risk Reduction in the South Caucasus” (Georgia, Armenia, Azerbaijan, 2008-2016)
  - OSCE / UN mission to assess the fire damages in Georgia resulting from the armed conflict between Georgia and Russia in August (2008)
  - Numerous missions and projects in Eastern Europe, Southeast Europe and South Caucasus (various, related to capacity building in fire management, focussing on terrain contaminated with radioactivity and unexploded ordinance; confidence building projects conducted within OSCE’s Second Dimension / Office of the Co-ordinator of OSCE Economic and Environmental Activities)
  - **Central Asia:** Establishment of the Regional Central Asia Fire Management Resource Center (OSCE / SDC Switzerland) (2015)
  - **Western Balkans:** Regional transboundary cooperation in fire management; fire management in conflict and post-conflict regions, particularly on terrain contaminated by unexploded ordnance (UXO) and land mines.
  
- **Programme Landscape Fire Management in the Western Balkans” (LFMWB):** Cross-boundary cooperation in landscape fire management, including Albania, Bosnia and Herzegovina, Kosovo\*, Montenegro, North Macedonia, and Serbia, implemented in the first phase 2022-2025 by the Regional Fire Monitoring Center for Southeast Europe / South Caucasus (RFMC), financed by Swiss Agency for Development and Cooperation (SDC) and supported by GFMC.<sup>38</sup>

### Annex III – Professional Awards

The GFMC / head of GFMC have been awarded the following recognitions:<sup>39</sup>

- *United Nations Sasakawa Award for Disaster Reduction* (2001)
- *Golden State Medal, Baden Württemberg State (Germany) for Merits for Rural Space, Agriculture, and Forestry* (2001)
- *2<sup>nd</sup> Zayed International Prize for the Environment 2005 for co-authoring the Millennium Ecosystem Assessment* (with UN Secretary General Kofi Anan)

<sup>36</sup> <https://gfmco.online/eurofire/index-11.html>

<sup>37</sup> [https://gfmco.online/globalnetworks/seeurope/SEEurope\\_8.html](https://gfmco.online/globalnetworks/seeurope/SEEurope_8.html)

<sup>38</sup> <https://www.lfmwb.net/>

<sup>39</sup> <https://gfmco.online/intro/awards.html> / [https://en.wikipedia.org/wiki/Johann\\_Goldammer](https://en.wikipedia.org/wiki/Johann_Goldammer)

- Honorary Doctor Degree, Mongolian State University of Agriculture (2007)
- Award *El Batefuego de Oro* (The Golden Fire Swatter), International Category, Spain (2008)
- Medal of the Russian Government for *Saving and Multiplying the Forest Resources of Russia* (1999)
- Memorial Badge of the Federal Forest Agency, Ministry of Agriculture, Government of the Russian Federation, for the *Merits in Protecting the Forests of the Russian Federation* (2009)
- Memorial Medals of the Aerial Forest Fire Center *Avialesookhrana*, Russian Federation (2006, 2016, 2021)
- Honorary Doctor Degree, National University of Life and Environmental Sciences of Ukraine (2013)
- Certificate of Honour, Ministry of Environment, Green Development and Tourism of Mongolia (2015)
- Mongolia – National Emergency Management Agency (NEMA) State Medal Class III for Disaster Reduction (2015)
- Germany – Federal Ministry for Food and Agriculture Professor Niklas Gold Medal in recognition of merits for the protection of forests (2020)
- Star of Service “Bintang Jasa Utama”, by the President of Republic of Indonesia (2021)
- Honorary Doctor Degree, Aristotelion University Thessaloniki, Greece (2022)

The head of GFMC contributed to the reports of the International Panel on Climate Change (IPCC), which was awarded the Nobel Peace Prize in 2007. Since 2018, the head of GFMC is Member of the Convention of the Environmental Laureates of the European Environment Convention (EEF).<sup>40</sup>

## Annex IV – Publications

Key publication: Vegetation Fires and Global Change. Challenges for Concerted International Action: A White Paper directed to the United Nations

- <https://gfmc.online/wp-content/uploads/Vegetation-Fires-Global-Change-UN-White-Paper-GFMC-2013.pdf>

Thirty Years International Cooperation in Landscape Fire Management

- [Goldammer, J.G. 2021. Thirty Years International Cooperation in Landscape Fire Management: Review of Progress, Achievements and Prospects for the Future.](#) This paper is based on the opening keynote of the 7th International Wildland Fire Conference, held in Campo Grande, Brazil, 28 October 2019. The original keynote “Thirty Years International Wildland Fire Conferences: Review and Achievements of a Circumglobal Journey from Boston to Campo Grande” has been published in a modified version in: Edição Temática: 7th International Wildland Fire Conference: Full text articles. Instituto Chico Mendes de Conservação da Biodiversidade, [Biodiversidade Brasileira 11 \(2\), 2021, p. 6-52](#) (Steil L., Nóbrega de Oliveira L., Rivera-Lombardi R., eds.), DOI: 10.37002/biobrasil.v10i3.1743.

Selected digital versions of major publications

- [http://gfmc.online/latestnews/recent\\_pub.html](http://gfmc.online/latestnews/recent_pub.html)

Complete list of publications

- <https://gfmc.online/feuerökologie/publikationen.html>

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<sup>40</sup> <https://www.european-environment-foundation.eu/en-en/environnetwork/profiles/goldammer-johann-georg>