The 6th International Wildland Fire Conference was held in Pyeongchang, Republic of Korea, 12 to 16 October 2015. The conference, held for the first time in Asia, was hosted by the Korea Forest Service and Gangwon Province, and held under the auspices of the United Nations International Strategy for Disaster Reduction (UNISDR) and the United Nations Food and Agriculture Organization (FAO). The Minister of Korea Forest Service, Prof. Dr. Shin Won Sop, and the Governor of Gangwon Province, Mr. Choi Moon-Soon, warmly welcomed the conference participants. In a video message the United Nations Secretary General Ban Ki-moon emphasized a “critical need to integrate fire management into natural resource management strategies at the global level” in the context of a planet continuing “to experience the cumulative impacts of global warming and urban sprawl.” Furthermore, the Secretary General recognized the important role fire management plays in achieving the new 17 Sustainable Development Goals, with particular emphasis in realizing Goal 15 aiming to protect ecosystems, manage forests, combat desertification, reverse land degradation and halting biodiversity loss. The head of the UNISDR Office for Northeast Asia, Mr. Sanjaya Bhatia, on behalf of Undersecretary General Ms. Margareta Wahlström, welcomed over 3500 delegates from 73 countries represented by government officials, representatives of twelve regions of the Global Wildland Fire Network, international organizations, as well as by professionals from civil society. The Undersecretary General highlighted the emerging importance of vegetation fires globally, particularly in the context of climate change. She stressed the importance of the work of wildland fire scientists and practitioners for international risk and disaster reduction concerns and efforts – a contribution to meet the challenges of the Sendai Framework for Disaster Risk Reduction 2015-2030. The Global Fire Monitoring Center (GFMC) welcomed the inputs of the Global Wildland Fire Network members to the conference and conveyed welcome remarks of the Council of Europe, EUR-OPA Major Hazards Agreement, and the Organization for Security and Cooperation in Europe (OSCE).1

Conference participants, while acknowledging some strides in international cooperation and fire management activities since the previous 5th International Wildland Fire Conference in 2011, continued to express strong concerns for a number of larger issues. Some of the most widely shared concerns were the impacts of climate and global change, the application of fire in land-use change, increasing impacts of fire in the wildland urban interface and of smoke on human health and security. Looking forward, participants expressed common hopes for increased international cooperation and response mechanisms, exchange of information and technical and scientific expertise, increased data collection and application of monitoring and early warning measures, and for strengthening (local) education efforts, capacity building in Integrated Fire Management (IFM) and rural participatory, community-based initiatives.

1 The Statements of the Regional Wildland Fire Networks, Thematic Sessions and International Organizations are provided on a dedicated website of the GFMC: https://gfmc.online/iwfc/korea-2015.html
The wildland fire management and scientific community shared reports with the conference participants regarding the progresses made since the last conference in 2011. Within the regions and at global level, major advancements have been noted in fostering capacity building at national level and by enhancing cross-boundary cooperation in fire management. Many of the initiatives, however, were borne and realized as voluntary commitments and activities with limited financial support.

Participants therefore stressed the need for more financial support and governmental commitments for national and regional fire management efforts, international policy mechanisms, and especially for greater application of community based fire management practices.

Common Concerns

During the conference, the wildland fire community explored challenges relating to a number of general topic areas, notably including: international and regional cooperation, local and national fire management, regional and global climate change, socio-economic changes, capacity building, science and technology, politics, and general operational fire management limitations. Identified within these categories, the conference participants hereby highlight the following common concerns:

- Increasing impacts of climate change on climate variability, weather patterns, fuels and fire behaviour, particularly the lengthening of fire seasons, the size in area burned, and the extremity and frequency of fire occurrences
- Insufficient political commitment and support for fire management and development of fire management policies
- Impacts of smoke on human health and air quality as well as fire-induced professional and civilian injuries and fatalities
- Impacts of fires from land-use change and agricultural/industrial clearing
- Increasing impacts of wildfires at the interface with rural settlements and urban fringes
- Impacts of socio-economic and demographic changes, including consequences of human migration, on fire regimes
- Insufficient fire management capacities – in terms of human, technical and financial resources
- Insufficient use of fire as a positive force to address landscape-level fire fuel build up and bush encroachment

Areas of Special Concerns

While most participants held common concerns and goals moving forward, some regions are experiencing unique and critical challenges that should receive special attention. These concerns include:

- Increasing occurrence of fire in ecologically and especially carbon-rich environments such as in tropical rainforests, peatlands, and in the arctic tundra; development of positive feedback loops leading to accelerated disturbances of the global system is of particular concern
- Challenges associated with collateral damages due to armed conflicts
The resulting contaminated ground and unexploded ordnance which endanger fire management activities in these areas

- Occurrences of fire on otherwise contaminated ground such as from radioactivity
- Instances of frequent fatalities due to fire and also fire-smoke pollution
- Lack of sufficient protective equipment, training, and response capabilities in some regions resulting in unnecessary risks and damages from fire
- Lack of viable alternatives to fire as an agricultural and land-use change tool in some regions
- Bush encroachment / ecological succession on former intensively cultivated or otherwise managed lands throughout the world and the resulting increased wildfire hazard

**Identified Courses of Action**

In recognizing the concerns raised by the conference participants the following courses of action were identified:

- Increase the application of existing international fire management and incident preparedness mechanisms
- Utilize existing and further develop interoperability mechanisms, Standard Operating Procedures (SOPs), and protocols, e.g. the voluntary Fire Aviation Guidelines
- Broaden the application of the Incident Command System (ICS) for application in bi- and multilateral cross-border responses to wildfire emergencies
- Enhance integrated fire management; promote multi-sectoral communication between related and relevant agencies, regionally and nationally
- Strengthen legal and enforcement mechanisms to combat the illegal application of fire in land use and land-use change
- Integrate fire management into initiatives like the Reducing Emissions from Deforestation and Degradation (REDD+) and use opportunities offered by the Global Environment Facility (GEF) and Green Climate Fund (GCF)
- Strengthen institutional and governmental capacity in fire management
- Develop or make available alternatives for fire as a land-use change tool
- Establish or improve vegetation fire monitoring data collection, analysis and early warning mechanisms
- Develop fire management strategies for protected / sensitive areas and contaminated areas
- Increase efficiency and effectiveness of transboundary cooperation, and preparedness and response mechanisms in fire management
- Establish regional programs and / or resource centers for fire management where none currently exist
- Take measures to reduce fire-induced greenhouse gas emissions
- Develop measures for resilience and adaptation in the face of a changing vegetation fire climate, including measures to respond to secondary disasters resulting from fire
- Heighten the international exchange of information and cooperation
- Promote the development and application of more science and technology, with emphasis to strengthen the link between fire management and science
- Focus on prevention over suppression; increase the application of prescribed burning
- Continue to place emphasis on community-based fire management practices by education campaigns and capacity building efforts in participatory fire management at local level to successfully reduce wildfire hazards, and enhance productivity and stability of land and the environment by
  - Creation of operational environments where community decision-making and implementation balance traditional and contemporary fire management requirements
  - Management of fire for its benefits, through controlled burning, to improve livelihoods and health of local populations, and reduce greenhouse gases
  - Promoting the establishment of volunteer groups to assist state authorities in rural fire management

**Envisioned Implementation Goals**

In addressing these areas of concern and the priority actions, four implementation goals are envisioned, three representing fire management regimes in vulnerable, transitioning, and advanced settings, and a final goal to commonly prioritize addressing urgent global challenges.

**Goal 1.** In developing fire management the global fire management community is encouraged to help the most vulnerable members to address fundamental threats posed by fires on human health and security; to lend support in the form of financial, technical, or operational measures; and to offer basic training and expertise for strengthening local education efforts, capacity building and rural community-based initiatives. This Goal acknowledges that local communities are the most vulnerable to the effects of a warming climate and of changing fire regimes.

**Goal 2.** In transitioning fire management settings where basic needs are met or institutional capacity are established, the fire management community is encouraged to continue supporting efforts recognized under Goal 1; establish regional programs and / or resource centers where needed; advance technical efforts such as fire detection, early warning and monitoring; enhance cross-border cooperation; further apply practical measures like standard operating procedures, the Incident Command System (ICS) for use in bilateral and multilateral wildfire emergency response; and to strengthen participatory fire management approaches (community-based fire management, involvement of volunteers).

**Goal 3.** In advanced fire management settings, efforts under Goals 1 and 2 shall be continually evaluated and improved as appropriate; emphasis shall be placed on further developing legal frameworks where desired; enhancing bi- and multi-lateral mechanisms for fire management expertise and resource sharing; share and advance science and technology; and when in the position, lend any and all forms of support to vulnerable and transitioning fire management communities.

**Goal 4.** The global fire management community explicitly recognizes the need to address several challenges which include the role of vegetation fires on
- Climate change
- Positive feedback loops of disturbances in the Global System
- Ecologically sensitive and carbon-rich environments like tropical rainforests, peatlands, and arctic tundra
- Agricultural systems and beyond (transboundary impact of agricultural fires such as long-range transport of Black Carbon)
- Environment and humans, stemming from armed conflicts (collateral damages)
- Contaminated terrain (industrial, unexploded ordnance and radioactivity)
- Human health and pre-mature mortality through fire-smoke pollution

**Recommendations**

Looking to the coming years, the conference participants emphasize the importance of and mutual gains to be achieved by supporting and participating in current, emerging, and planned initiatives in fostering the application of principles of Integrated Fire Management. These initiatives will contribute to realizing Sustainable Development Goal 15 (SDG 15) and meet the challenges of the Sendai Framework for Disaster Risk Reduction (SFDRR). These initiatives should receive immediate attention over the next years and their progress should be reported at the 7th IWFC in 2019. Two major recommendations are directed to the international community and included in the Pyeongchang Declaration.

The conference participants thanked the Conference Organizing Committee of the Republic of Korea, the Korea Forest Service and the Gangwon Province for organizing and hosting the conference. The global wildland fire community welcomed the offer of Brazil to host the 7th International Wildland Fire Conference in 2019.