



7th International Wildland Fire Conference

Regional Statement of the Southeast Asia Region – An Input Paper to the Conference Statement

30 October 2019

Introductory Remarks

The repeat fire and haze crisis of 2015 and the recurrent regional smoke episodes in 2016-17 have resulted in renewed national and international efforts in the Southeast Asia region, particularly in Indonesia, to address the serious challenges in the arena of fire management. A widely perceived positive and earnest shift in the political landscape to tackle fire and smoke problems has similarly prompted the Global Fire Monitoring Center (GFMC), through the financial support of the Federal Republic of Germany to assist in establishing the Regional Fire Management Resource Center – South East Asia Region (RFMRC-SEA) in mid-2017. This effort is in alignment with decentralization efforts of the GFMC to, in large part, build up local country-wide and regional capacities. Since 2011, Indonesia and other Southeast Asian nations, comprising the Southeast Asia Regional Network, have been a voluntary member of the greater 14-region Global Wildland Fire Network – for which the GFMC is serving as coordinator and secretariat. For some years now, the work of the GFMC has been decentralizing into the regions through the establishment of Regional Fire Monitoring Centers or Regional Fire Management Resource Centers. Three other Centers are already operating for Southeast Europe / South Caucasus based in Skopje, FYR Macedonia (established 2010), for Eastern Europe based in Kiev, Ukraine (est. 2013) and for Central Asia based in Ulaanbaatar, Mongolia (est. 2015). Two more Centers are being established between 2017 and 2018 for Central Eurasia based in Krasnoyarsk, Russia, and for South America in Chile and Brazil. Between 1 March 2017 and mid-2019, the Regional SE Asia Fire Management Center (RFMC-SEA), hosted by the Bogor Agricultural University, is being established with the assistance of the GFMC. These two institutions have been working together in fire science and fire management since the mid-1990s at bilateral level as well as within international projects. The RFMRC-SEA will draw on the successful and effective experiences and models of the already operational centers.

The mandate of the RFMRC-SEA will be to function as an independent regional center of competency and excellence for fire management, operating at the interface between science and informed policy development and a bridge to the practitioner community (Science-Policy-Practitioner Interface – SPPI). The Center shall successively build the following capacities:

1. Development of an internet-based information portal, which will include the science of vegetation fires and related scientific disciplines;
2. Development of a web-based documentation and information portal on the practices that are prerequisite for the application of scientific principles in informed fire management;
3. Creation of an interface and promotion of the dialogue between services of specialized governmental institutions and civil society organizations;
4. Provision of advisory service for sustainable forestry & land management and relevant policies;
5. Promotion of regional cooperation through networks, notably within the UNISDR Regional Southeast Asia Wildland Fire Network under the Global Wildland Fire Network; and
6. Training and continuing vocational training in fire management (main task: Information, training, training and education and the promotion of human resources and institutional capacities).



Specific landscape fire problems of the region

Fire has been traditionally used in Southeast Asia, i.e., Indonesia, Malaysia, including Upper ASEAN, Thailand, Myanmar, Lao PDR, Cambodia, and Vietnam, there are common problem like other regions. Climate change and economic pressures, however, have changed the way of local life including fire use culture. Many forests are too frequently burned for non-timber forest products (NTFPs) harvesting. Forested area has shifted from native forest cover (mostly deciduous forest) to cultivation (agroforestry) or monoculture, in which traditionally, slash and burn methods are commonly practiced. This has led to frequent unplanned fires and hence more prevalent smoke and haze pollution. The fire, smoke and haze problem caused by humans; therefore, not only fire science, dealing with social issues need to be addressed as well.

Gaps / shortcomings in landscape fire science, management and policies

There has been little dedicated research and intervention strategies dealing directly with wildland and human-caused fires, smoke and haze occurring in the vegetation types, geographic conditions, weather patterns, and related human behaviors of Southeast Asia including Mainland Southeast Asia. The ecosystems and the purpose of fire use in Mainland Southeast Asia differ from those in Insular Southeast Asia, which is dominated by fire use to clear logging and agricultural waste, often on peatlands. Knowledge gained about the Insular Southeast Asia fire environment since the 1990s is limited in its applicability to the Lower Mekong, because of differences in land use and forest cover, for example the dominance of deciduous forest. Moreover, for example, misleading information about and misunderstanding of wildfires, smoke and haze issues is caused by a lack of science-based research efforts and studies on wildland fire and open burning, smoke and haze behavior. Without these important elements quantified properly for the South Asia region, efficiently controlling and managing fire, smoke and haze is not possible. Understanding fire behavior is also very important in order to control fire. There are a few main factors that determine how fast fires can spread, which are fuel availability, fuel dryness, fuel type, fuel structure, the weather conditions (fire weather), and the topographic (terrain) conditions.

Understanding the breadth of these issues, along with utilization of suitable and effective knowledge of science-based tools and advanced technologies, is needed for fire and haze control and management in ASEAN. Understanding fuel and fire behavior in peatlands, deciduous forests and open burning in highland agroforestry and agriculture will provide information on the nature of fire in these ecosystems, which will reflect the role of fire ecology on biodiversity and ecosystem degradation (fire-sensitive ecosystems) or even ecosystem maintenance under fire environment (as fire-dependent ecosystems). In conjunction with current works of many researchers in wildfire and emissions, there is a common interest to deeper understanding of the behaviors, patterns, characteristics, relationship, influence and effect of fire and its emissions which is racking from upper Southeast Asia region. It is very important to have a reliable fire and smoke daily monitoring and early warning system including transboundary issue within the region and to other regions (such system might already exist, but in a coarse resolution and less frequency scale which is not good enough for a local fire, smoke and haze management). The finally goals is to have scientific findings which will enable more efficient fire and smoke management system that can be used by all parties in order to have the most possible fire and smoke control and management system including reducing of fire emissions in upper ASEAN region.

Main advances achieved since the last International Wildland Fire Conference

(reference to the recommendations of the 6th IWFC and the results of activities between the 6th and the 7th IWFC, i.e., between 2015 and 2019).

Proposals for solutions / action to be taken

The Science to Policy Makers is very important and needed in order to for decisions at a political level to be science-based. Usually those high-level officers and politicians do not understand the science, so the first step that can be done is to synthesize all findings and facts, and to communicate them through the existing channels. Knowledge sharing is still the problem along with sufficient fund. Moreover, Regional Fire Management Resources Center- Southeast Asia (RFMRC-SEA), Division of Forest Protection,



Department of Silviculture, Faculty of Forestry, IPB University; the Upper ASEAN Wildland Fire Special Research Unit (WSRU), Forestry Research Center, Faculty of Forestry, Kasetsart University (<http://frc.forest.ku.ac.th/sru/indexen.php>) is another good and strong channel to pass along information to the public. Furthermore, having a training at the Asian Forest Cooperation Organization (AFoCO) through Regional Education and Training Center (RETC, <http://retc.afocosec.org/>) which Korean Government built it for Myanmar Government for forestry related training provides the high possibility to delivering and passing along findings and knowledge to ASEAN mid-class Government officers, local people, local authorities and NGOs is highly promising in the region.

Conclusions

It had been clearly understood that to solve the landscape fire in Southeast Asian Countries is strengthening the research collaboration among the member ASEAN and developed countries especially to those which working on fires, smokes/haze. The other important also is sustainable funding.

Recommendations

The expansion of fire, smoke and haze research, study, collaboration and management to cover the whole Southeast Asia is really needed. Fire science and fire weather need to be seriously deploy in the region. The awareness recognition of the problem needs to be emphasized to regional leaders top down from IWFC through all possible international channels. It has to be following up through intensive process by representatives who really want to make a difference within each country. The current fire representatives over the past decade do not reach out to the real responsible people as they suppose to, unfortunately, they kept what they have learned from meetings, conferences, workshops, and working group to themselves, so that need to be changes; therefore, the new appointed members of each country indeed really need to be identified and funded in order to move it forward, a charity work proves to be going nowhere. There has to be a way to push known issues within ASEAN meetings. Since it is actually the social issue that causes most of the fires in this region, a fire and water community based management is a crucial approach to improve local people livelihood. The real incomes need to be generated in order to sustain such management.