

## Editorial

# Forest Fires, A Burning Issue

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The focus of this issue of ASEAN Biodiversity is FIRE.

The ASEAN Regional Centre for Biodiversity Conservation (ARCBC) held a special workshop on this subject in Brunei in March this year, which was attended by experts and representatives from almost all our ASEAN country partners. In recent years the problems of wild fires have become more prominent and the word 'haze' is increasingly referred to as a threat to human health, aircraft safety and of course biodiversity.

The Association of Southeast Asian Nations (ASEAN) takes the matter very seriously and has established a special Haze Technical Task Force to look into these matters; it has also undertaken several national and regional projects to improve our understanding of the fire phenomenon, fire detection, analysis in relation to climate, assessment of damage and establishment of root causes. Are the extensive forest fires that have swept across Sumatra and Borneo the results of changing human behavior, changing climate, and illegal land clearance? Are they inevitable, will they continue? Can we prevent fires? Can we halt fires earlier?

The ARCBC's interest in fire is of a narrower scope. What can the manager of a protected area do on the ground to reduce the damage of fires to the biota under protection? Do the fires matter? Do they really cause irreversible losses of biodiversity or does nature heal over the wounds and recover? Can we recognize special places or special species that are most at risk, and are there particular protective management

measures that can be taken to protect these better? The articles in this issue answer some of these questions.

Fire is not new to our region. Nor is fire always negative in its impacts. The biologist Chuck Warton, while studying wild cattle in Southeast Asia during the 1960s, wrote several papers on the gradual opening up of the forests of mainland Southeast Asia as a result of hundreds of years of use of fire by human communities to clear land. The long-term results



were a changing of local conditions from a largely closed forest system dominated by evergreen forests to a mosaic system of evergreen with deciduous and savannah woodland systems with areas of grasslands and fallow. This change has been highly beneficial to many significant wildlife, such as wild cattle and the big carnivores that follow them – tigers, leopards, vultures etc. Elephants, rhinos, deer and wild pigs have also probably benefited. Indeed, the diversification of the habitat has probably had a positive impact on

biological richness so that we find very long species lists for Myanmar and Thailand.

However, the opening up of the forests has also caused local changes in climate and certainly caused losses in the local flora and fauna of the original evergreen communities.

What we are seeing today in Borneo and Sumatra is different in scale and speed of change, giving nature less time to adapt to the huge changes in the landscape. Literally millions of hectares of forestlands have been cleared and burned and some large forest species are quite unable to cope. Moreover the species that are recolonizing the area after fires are often introduced exotics, such as *Acacia mangium* and *Acacia auriculiformis*. The combination of forest clearance, fires, hunting and capture of young animals for pets has decimated the orangutan populations on both Sumatra and Borneo. Rijksen & Meijaard (1999) in their book 'Our vanishing relative' conclude that 93% of the Bornean orangutan population and 86% of the Sumatran populations have been wiped out during the last century.

Forest fires are indeed a major problem that must be given priority in any nature conservation effort. As can be gleaned from the papers featured in this issue, there is a clear and pressing need for protective management measures, supported by adequate funds. The ASEAN workshop on forest fires thus developed a set of guidelines and mechanisms that included funding and institutional support to minimize fire risks and species extinction. Hopefully, enough funds could be raised while it is not too late. ■