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Food and Agriculture
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An international journal
of forestry and forest
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Cover: Close-to-nature managed forest in Basadingen,
Canton of Thurgau, Switzerland. This young, naturally
regenerated spruce will grow slowly for decades in the
"waiting room" until parent trees are harvested. In the
additional light it will then develop its crown to become
a giant like the tree behind it.

C. Küchli

Three hundred years of sustainable forestry

Foresters tend to take a long-term view because trees take so long to grow. That may explain why foresters have led the way in developing the modern concept of sustainability.

There are debates on where, when and by whom this concept arose, but in this edition of *Unasylva*, Schmithüsen makes a case for Hans Carl von Carlowitz as the catalytic figure. Three hundred years ago this year, von Carlowitz, a German mining administrator, was vexed by the dwindling supply of wood for the silver mines he oversaw, and he was critical of the profit-driven thinking that was causing overharvesting of the forest. He published a book, *Sylvicultura oeconomica*, in which he coined the German term for sustainability, *Nachhaltigkeit*. Von Carlowitz said that the *Nachhaltigkeit* principle should be applied to the management of forests to ensure the perpetual supply of timber, and he urged the adoption of measures that would make forests a permanent economic resource. Over the next decades and centuries, the *Nachhaltigkeit* principle spread through Central Europe and to India, the United States of America and elsewhere. Arguably, it was the start of the modern approach to sustainable forest management (SFM).

According to an article by KÜchli, forestry in Switzerland was influenced strongly by German approaches, but in the late 1800s it diverged towards what became known as close-to-nature forestry. This approach moved away from the earlier tendency to simplify forest stands towards the development of mixed, naturally regenerating stands composed mainly of local species. KÜchli thinks that close-to-nature forest management could be the most effective strategy in the face of climate change.

Ball and Kollert report on the little-studied *Centre International de Sylviculture*, the first country-membership-based international forestry organization, which was established in Berlin, Germany, in 1938. The organization was short-lived, but it managed to accumulate a library of more than 15 000 books, some of them rare editions dating to the 1600s. Not all the books in the collection survived the Second World War, but those that did – more than 10 000 of them – were transferred in 1948 to the newly established Food and Agriculture Organization of the United Nations, where they remain today.

Changing tack, Sarre and Sabogal ask whether SFM is an impossible dream. Using certification as a proxy for SFM, they report that nearly 20 percent of forests designated for production or multiple uses were under management consistent with SFM in 2012, the majority in temperate forests. The authors describe some of the obstacles to SFM in the tropics, and they answer their own question by asserting that SFM is not a fantasy – it is an essential pursuit.

In his article, Appanah reviews silvicultural models applied in tropical rainforests in Southeast Asia and finds that none has fully demonstrated sustainability, at least partly because overharvesting has limited the extent to which they have been implemented. Technically, says Appanah, there is little reason why SFM cannot be achieved in tropical rainforests by improving silvicultural and harvesting practices, but the real struggle is to convince the holders of land and land-use rights that SFM is in their interests.

Tongkul and co-authors examine efforts to strengthen community involvement and the use of traditional knowledge in forest management in Sabah, a state of Malaysia. The Sabah Forestry Department has been willing to engage local communities in addressing long-standing problems in forest reserves, but the key issue of resource ownership is still to be tackled. The authors say this is critical to the survival of indigenous communities, who want formal ownership of the land to which they have customary rights.

Matta and co-authors develop this theme further. They acknowledge the long history of SFM in traditional communities in India, and report on social research that shows how traditional communities work cooperatively to conserve and sustainably manage their common resources. While there have been attempts in India to engage local communities in SFM, these have generally fallen short of the ideal. The restoration of traditional management systems in India, say the authors, requires the transfer of power, resources and responsibility from central authorities to lower levels of governance.

A short article by Aggarwal and co-authors looks at the makers of traditional wooden toys, which play an important cultural role in India. The resource on which this craft is based has dwindled due to overuse, and the authors suggest steps that can be taken to ensure the continuation of this artisanal pursuit.

This edition of *Unasylva* opened with an article looking back 300 years, and it finishes with one that looks forward an equal distance. Blaser and Gregersen speculate on the future role of forests, given climate change and expected increases in population and resource consumption. The fate of humanity, they say, rests in large measure on how we deal with forests. Optimistically, they believe that, 300 years from now, forests will be highly valued by the global community, as will their managers. There will be many challenges, and forest managers will need a wide range of skills. SFM has come a long way since von Carlowitz's day, but it is likely we will still be perfecting its art and science for some time to come.