CHAPTER 16

SUMMARY

This book has been about nature conservation in tropical forests. Although it has been written with particular reference to Uganda, it is hoped that the principles can be applied more widely. It was written at a period in our history when plants, animals and forests are vanishing at an unprecedented rate worldwide.

Nature conservation is seen to embrace a wide variety of activities, some of them very familiar to traditional foresters, others less so. These activities range from establishing nature reserves, to promoting wise and sustainable uses of forests, promoting ecotourism and the involvement of local communities in management. Ultimately, conservation is really a guiding philosophy for wise management of forests rather than a specific branch of forestry divorced from other branches. It seeks to put our relationship with forests and wildlife back on a sustainable footing. Over the long term, this is seen to be in the interests not only of the forests but also of humanity as well.

Everyone working within the field of forestry, and many outside that field, will have a role to play in furthering this philosophy. There has already been much progress, but in the end conservation will only take hold if adopted at a variety of levels, both within existing forestry institutions and beyond: in academic and training establishments, in local government and amongst the general public. The reader of this book should now be in a strong position to help the conservation message get through to a wide audience, and to put conservation into practice in his or her own work and way of life.

If there is one published source that summarises what this book has been about, it is a report by the International Tropical Timber Organisation (ITTO, 1991), aimed specifically at forestry institutions. It comprises a series of guidelines for the conservation of biodiversity. Although it refers specifically to forests managed for timber production, it does cover a lot of ground that is relevant to all forests and provides a useful reminder of much that has been covered in this book. The guidelines are quoted in full in Box 16.1.

Box 16.1
Guidelines for the conservation of biodiversity in production forests (ITTO, 1991)

1. Provide a national agency, or reform and strengthen existing institutions, to include biodiversity conservation in their mandate.
2. Provide this agency with sufficient human and financial resources to effectively achieve integrated biodiversity conservation involving both the totally protected area and production forest systems.
3. Develop and adapt practical techniques, such as environmental impact assessment, for assessing the consequences of different forest management techniques on biodiversity. Incorporate biodiversity monitoring into on-going management programmes for all forests.
4. Identify, survey and delineate the various categories of the permanent forest estate and develop complementary management plans in consultation with forest dwellers and surrounding populations, taking into account their present and future needs for agricultural land and their customary use of the forest.
5. Within the constraints of prevailing social and economic circumstances, design totally protected areas to cover as large an area of natural forest as socially and economically feasible, with due attention to optimising their shape. Surround these totally protected area cores with sympathetically managed near-natural production forests to minimise edge effects, and ensure the protection of ecological function.
6. Link totally protected area reserves by providing "corridors" of natural forest and ensuring that the habitat at known major resting sites and the known ends of migration routes are retained. Locate production forests to maximise the connectivity between natural forest totally protected areas at the landscape level.
7. Particular care should be taken in applying silvicultural treatments to ensure that adequate populations of species which are important in food chains or in providing ecological functions (keystone species) are retained. In the case of plantations, the use of indigenous species should be encouraged.
8. Trees with hollows, standing dead trees (snags) and decomposing fallen trees all have ecological importance for a range of species and not all should be removed from the forest in any silvicultural treatment to improve timber yields.
9. The use of pesticides or other chemicals should be kept to a minimum in any silvicultural treatment, and the manufacturer's instructions for the use of each product should be strictly observed.
10. In forest areas of recognised importance for biodiversity conservation, incorporate consideration of the effects of rotation length, felling cycles, girth limits and size of the annual area cut-over in deciding the allocation of the annual allowable cut.
11. When determining yield allocations and rotation lengths for particular management units, plan logging operations so that a mosaic of recently logged and old growth forests is maintained.
12. Within each major management area, a system of small virgin reserves should be designated on the management plan and maps. Reserve boundaries should be marked in the field where feasible.
13. Management inventories should aim to locate key areas within all production forest units that are known to have higher biodiversity values as outlined above.
14. Working plans should prescribe appropriate management measures in accordance with the specific biodiversity value of these key areas. Buffer strips of no intervention should be established along streams and around lakes and wetland areas.
15. Reduce individual gap size as far as possible, unless specifically required for the regeneration of key species. Avoid creating very large gaps that equate to areas of local clear felling.
16. Minimise machinery and felling damage to the residual stand, undergrowth and soil.
17. Utilise market mechanisms and economic incentives at the national and international level to encourage maintenance of biodiversity services.
18. Efforts should be made to involve local people in the management of the forests, and to ensure that they obtain benefits, which will motivate the people themselves to use their traditional knowledge in support of the conservation of biodiversity.
19. Investigate and adapt existing systems to develop locally specific, rapid, cost-effective and efficient biodiversity surveys and monitoring systems that could be carried out by, or in conjunction with, forest inventory teams during their survey activities. Implement such systems as a part of normal forest inventory processes.