

Chapter 1

Introduction

Mangroves are coastal forests found in sheltered estuaries and along river banks and lagoons in the tropics and subtropics. The term ‘mangrove’ describes both the ecosystem and the plant families that have developed specialized adaptations to live in this tidal environment (Tomlinson, 1986). In a dense mangrove forest, lights and shadows reflect on the water and fish and crabs hide among the submerged roots and trunks. Moving forward may sometimes be possible only by climbing on giant roots or using small boats.

Mangroves have traditionally been widely used and exploited in the past in the majority of countries in which they exist. Knowledge of their current and past extent, condition and uses is essential for forest managers and policy- and decision-makers. The planning of sustainable forest management at the local and national levels depends largely on this information, and the lack of data on the status and distribution of mangroves makes it difficult to prepare successful plans for their conservation. Regular monitoring is thus necessary and may contribute to their conservation, but also to sustainable use of mangroves as a source of wood, food, income and recreational areas for present and future generations.

Although the literature on mangrove forests is extensive and numerous case studies describe their extent and losses over time, global, comprehensive information on the status and trends in the extent of mangroves has been lacking. The first attempt to estimate total mangrove area worldwide was undertaken as part of the FAO and United Nations Environment Programme (UNEP) *Tropical Forest Resources Assessment* in 1980. In that study, the world mangrove total was estimated at 15.6 million hectares, while more recent estimates range from 12 to 20 million hectares (Table 1).

Countries with small areas of mangroves were excluded from many of the earlier studies, probably because of lack of information. The area of mangroves in these countries and areas is, however, relatively small and therefore did not significantly affect the world total.

The world’s mangroves 1980–2005 was prepared by FAO in collaboration with mangrove specialists throughout the world, and was cofunded by the International

TABLE 1
Previous estimates of mangrove area worldwide

Reference	Year ^a	No. of countries	Estimated total mangrove area (ha)
FAO and UNEP, 1981a,b,c	1980	51	15 642 673
Saenger, Hegerl & Davie, 1983	1983	65	16 221 000
FAO, 1994	1980–1985	56	16 500 000
Groombridge, 1992	1992	87	19 847 861
ITTO & ISME, ^b 1993	1993	54	12 429 115
Fisher & Spalding, 1993	1993	91	19 881 800
Spalding, Blasco & Field, 1997	1997	112	18 100 077
Aizpuru, Achard & Blasco, 2000	2000	112 ^c	17 075 600

^a For FAO and UNEP (1981a,b,c), FAO (1994) and Aizpuru, Achard and Blasco (2000), the data refer to the ‘reference year’ (i.e. the weighted average year of all the national area estimates), while for the other references, the data refer to the publication year.

^b Combined figure from three publications: Clough (1993), Diop (1993) and Lacerda (1993).

^c New estimates were provided for 21 countries; for the remaining countries, the study relied on Spalding, Blasco and Field (1997).