

Executive Summary - Conifers: Status Survey and Conservation Action Plan

Conifers are one of the world's most important resources of timber. Especially in the Northern Hemisphere, these resources are vast and will, if managed wisely and used sustainably, provide wood for a multitude of purposes virtually indefinitely. Other functions, not the least of which are ecological ones, provided by these vast conifer forests, are equally important. Unsustainable exploitation of these forests, while not yet banned, is gradually giving way to better forestry in many countries with substantial populations of this invaluable resource. Why then this Action Plan? Why an IUCN/SSC Conifer Specialist Group?

Globally, there are some 630 species of conifers, plus c. 170 taxa at infraspecific ranks (subspecies and varieties), totalling 800 taxa. Of these, 355 are listed as of conservation concern. The total number of taxa threatened with extinction (CR, EN, VU) is 200 (c. 25%). Seventy of these are likely to become extinct in the foreseeable future if current trends continue.

Conifers occur on all continents except Antarctica, but their abundance is unevenly distributed both in terms of individuals and taxa. Where the vast boreal conifer forests stretch across continents and contain billions of trees, they sustain no more than a handful of species. In contrast, more southerly latitudes in the Northern Hemisphere and all of the Southern Hemisphere have either scattered conifer forests, or mixed conifer/hardwood forests in which conifers occur in low densities, dispersed among other trees or shrubs. Many species occupy very small areas, often as relict populations of once greater abundance. Some areas have a high diversity of species, but hardly any of these species are abundant enough to form forests of any appreciable size. A good example is New Caledonia in the Southwest Pacific, an island with 43 species of conifers, all endemic, in an area about the size of Wales. Mexico has 42 species and 18 varieties of pines (*Pinus*), compared with eight species and one variety in all of Canada and Alaska. Unknown to many, c. 200 species of conifers are restricted to the Southern Hemisphere, where vast conifer forests are unknown. It is this scattered diversity that is most threatened with extinction.

This Action Plan assesses conifer diversity and its threats in Chapter 1. Endemic genera are particularly important since they represent taxa of high genetic distinction often represented by a single species. We have indicated where these genera are concentrated. In Chapter 2 we return to this theme and analyse the data to indicate 'conifer hot spots' or areas where there is a combination of high conifer diversity and threats. Conifer conservation in such areas should be a priority. While a generalised assessment of threats in Chapter 1 and general conservation recommendations in Chapter 2 often apply to such hot spots and may help to identify the action that is needed, more detailed regional accounts are provided for several of these hot spots in Chapter 3. In addition, this Action Plan is unique among IUCN's Plant Action Plans so far published in that it gives the complete Global Red List of Conifers using the 1994 IUCN Red List Categories and criteria. Since this list includes distribution of the taxa, any country can tally from this list its conifers which are threatened globally. We have also developed a formula for prioritising at the taxonomic level, resulting in a short-list of threatened species. We think that we have chosen objective criteria to do this, but since conservation action often will be taken at regional or local levels, taxa which are not short-listed remain important targets. We encourage priority Action Plans to be

undertaken for the short-listed species. This Action Plan presents ten species accounts. These accounts should be used both as models for more such reports which need to follow and as first steps towards species Action Plans. In these species accounts, we have included examples of 'success stories' to encourage conservationists to begin work on other species.

With threats to conifers so multifarious and widespread, the three groupings developed in the Conifer Action Plan (Global Red List of Conifers, hot spots, and short-list of threatened species) provide focus for further assessment and conservation action. In a summary of recommendations we call for:

- Conservation of existing diversity through nine action points focusing on in situ strategies supported where necessary by *ex situ* conservation;
- Reduction of pressure on conifers as a resource through four action points focusing on timber management and market strategies.