Additional file 1.
Swedish perspectives on active management of forest set-asides

The review that is presented in the main document was initiated at the request of Swedish stakeholders, who wished to get an overview of the scientific support for various ways of managing forests set aside for conservation or restoration.

Of the financial resources available for conservation of Swedish forests, the largest share by far is still devoted to setting aside additional areas of valuable forest as reserves, rather than managing reserves that already have been established. In recent years, though, interest in active management of forest reserves has increased. Moreover, the Swedish Forest Agency has estimated that, in the long term, some 500,000 ha of forest land needs to be restored if there are to be, once again, sufficient areas of those biologically valuable forest types that are currently in short supply in the country. Since 1999, Sweden’s Environmental Code allows for reserves to be designated with the intention of recreating lost natural values.

Several Government bills dealing with environmental or silvicultural issues have underscored the importance of maintaining the influence of fire in Swedish forests and of ‘managing care-demanding forests with high natural and cultural values so that these assets are preserved and enhanced’ (e.g. [1]). Various forms of active management of forest reserves are recommended in many of the action plans for threatened species that have been developed by the Swedish Environmental Protection Agency (SEPA) and county administrative boards. Several counties have also adopted regional strategies for prescribed burning of protected forests (e.g. [2]). During the years 2006–2010, the county administrative boards spent a total of €13 million on the management of forest reserves [3].

Prescribed burning and similar activities also take place at a substantial scale in forest areas that have been voluntarily set aside by forest companies and other forest owners. Interest in such measures among Swedish forest owners grew when, in 1997, it became possible for them to obtain forest certification. One criterion for certification is that at least 5% of a forest holding is voluntarily excluded from production; another is that 5% of harvested areas on dry or mesic soils are burned [4].

We estimate that, as a consequence of this development, prescribed burning of forest is now carried out over at least 1,000 ha annually in Sweden. This is of the same order of magnitude as the total present-day extent of wildfires in the country. EU-funded LIFE projects have contributed significantly to the reintroduction of forest fires and other restoration measures in Natura 2000 areas in both Sweden and Finland. Yet, the currently burned areas likely amount to little more than a single percent of the extent of forest fires in Sweden only two centuries ago [5].

However, opinions currently differ among conservationists on how active management of forests set aside for conservation or restoration should be balanced against non-intervention. The Swedish Society for Nature Conservation recently criticised SEPA for largely continuing with a traditional non-intervention policy (Möjliggör skötsel av skyddad skog för att bevara hotade arter, Letter to SEPA, 29 January 2012). Questioning whether such a policy is in line with the Swedish Environmental Quality Objectives, where measures to preserve biodiversity are given high priority, the Society ‘felt that parts of SEPA instead have
acted as if impressions of “virginity”, “primordialism” or “naturalness” were more important as goals for the protection and management of reserves than the conservation of biodiversity’.

SEPA has now published a revised strategy for the management of forest reserves [3]. According to the agency, non-intervention should be ‘the main management strategy in objects in which internal dynamics should prevail’. Reserves in montane forests, wet forests and a number of other specific forest types are mentioned as examples of such objects, but the agency also declares that ‘non-intervention contributes to perceptions of wilderness and virginity, which makes it an important management option in other forest types as well’. However, the strategy also states that various forms of active management should be given high priority in parts of the country. These management options include burning, removal of spruce, grazing, use of leaf fodder and haymaking, and restoration of natural hydrology.

Although regarding SEPA’s new management strategy as acceptable, the Swedish Society for Nature Conservation maintains that day-to-day decisions taken by the agency still reflect more traditional views on how forest reserves should be managed (Kristoffer Stighäll, pers. comm.). During our consultations with stakeholders, similar criticism was also expressed by representatives of county administrative boards.

References


