

they threaten humans, park facilities, or endangered species. The spectacular fire in Yellowstone National Park in 1988 triggered demands to change policy and stop fires from burning, but the size of that fire was a result of the buildup of material on the forest floor that would normally be cleared through occasional surface fires. Fire-prone forests can be thinned to help preserve forest health, but can also be used as an excuse to log forests that otherwise are protected from timber cuts. Prescribed fires may also promote forest health and help prevent more damaging blazes.<sup>70</sup>

Truly sustainable forestry appears to require much more than current forest policy. Additional steps would include growing more timber for longer periods of time before logging, selective cutting of individual or small groups of trees, stripcutting rather than clearcutting, protecting large units of forests, minimize soil erosion and damage from road building and logging methods, and allowing dead trees to remain in forests to promote biodiversity. But forestry policy is not enough to preserve forests. Other required actions include increased recycling of paper and other paper products, development of other sources of fiber for paper products; requiring the price of timber cut in national forests to include the true costs of forests, including the cost of road building, site preparation, restoration; and ending the practice of keeping timber revenues in the Forest Service, because of the incentive it creates for overlogging, and keeping 25 percent of timber receipts in the local communities. Ultimately, Congress can decide that the primary value and importance of nation forests lies in their role as sustainers of biodiversity and environmental quality, and place timber harvesting as a subordinate goal.<sup>71</sup>

Some promising solutions include the following: First, full-cost accounting: prices should reflect the ecological benefits of forests. Part of ensuring true cost pricing is to require companies to pay the full cost of production, including construction of roads, reforestation, restoration of damaged areas. Second, provide assistance to displaced workers and to sawmills to retool for smaller, second- and third-growth trees. Third, parties to purchase protection right or easements. Fourth, tax exports of raw logs but not finished products, to encourage value-added jobs and ban exports of raw logs.<sup>72</sup>

Perhaps the key question is, How much land should be preserved? The perspective from which one stands is critical. Preserving 12 percent of a province or a nation can seem rather ambitious, when compared with what other governments have done, or even as a percent of the entire landscape involved. But from a global, biospheric perspective, two additional questions are raised: 1) how much wilderness should be protected, for human and ecological reasons, and 2) how much wilderness is required to preserve the level of biodiversity that we currently have? This shift from a provincial or even national perspective to a global one is critical. From a global biosphere perspective, we begin with the wilderness lands and habitats that are available and ask how much should we preserve? There is not likely to be any clear, unambiguous answer, but we may have some idea of the magnitude of the landscape required to preserve the existing biodiversity and the biosphere as a whole. Part of the answer rests in what percentage of the photosynthetic product of the world we can safely consume for direct human needs. Part of the answer depends on the carrying capacity of specific ecosystems as well as the biosphere as a whole. Scientists do