



THE SOCIETY FOR CONSERVATION BIOLOGY¹ DECLARATION ON SUSTAINABLE FOREST MANAGEMENT FOR THE INTERNATIONAL YEAR OF FORESTS

The 21st century is a time of unprecedented demands on forests. If forests are going to continue to sustain humans' basic needs, society must adopt science-based conservation stewardship, and new policies to respond to rising demand for the products and services provided by forests. New measures are needed to halt the decline of forests regionally and globally², and to encourage broader tracking, accountability, and reporting metrics on forest degradation and deforestation. Additionally, because many protected areas currently are protected in name only, they will require appropriate and relevant policy interventions, enforcement, and local incentives to ensure that they are truly protected. Recognizing the demands placed on forests and the need to sustainably manage them, the United Nations prepared a resolution on forests adopted by the General Assembly (Attachment A) in its quest towards sustainable management of forest ecosystems and associated resources.

The Society for Conservation Biology wishes to invoke resolutions two, three and five of the UN resolution. We note also that taken together several nearly universally ratified treaties require their parties to take steps to ensure that uses of biological diversity, including forests, are sustainable in the face of consumptive uses and stressors such as climate change. We note that several treaty bodies and, this year, the UN as a whole, are now considering how to fulfill these obligations with respect to forests. Given that the nations of the world are actively asking how best to accomplish these goals, SCB hereby offers science-based recommendations as well as the services of its conservation scientists and professionals to those who seek more detailed or ecosystem-specific analyses.

¹ The Society for Conservation Biology (SCB) is an international organization of close to 10,000 professionals dedicated to advancing the science and practice of conserving the Earth's biological diversity (www.conbio.org). We seek to provide access to the best available conservation science to inform policy decisions of major international conventions and related accords and treaties, as well as governments, and organizations interested in forests.

² FAO 2005 forest assessment. Millennium Ecosystem Assessment 2005. Washington, D.C.: World Resources Institute. Global Forest Assessment 2010 (www.fao.org/forestry/fra/fra2010/en/).



SCB hereby urges the UN and its member nations to:

1. Acknowledge that additional net loss of quality or quantity of forests or its associated biodiversity cannot occur without long-term loss of the array of ecosystem services that forests provide.
2. Enhance the conservation of critical forest ecosystems and the services and products they provide. These include habitat for wildlife that provide food, clothing, medicines, and pollination services; genetic reservoirs of plant and animal life; carbon uptake and long-term storage that is at a premium in intact forests; and the maintenance of water resources, among other ecosystem services.
3. Ensure that the strategic plans that nations have developed as parties to the Convention on Biological Diversity or similar action plans and policies increase the protection of old-growth and intact forests to offset ongoing degradation and deforestation³ and, where old forests are scarce, permanently protect them from logging and detrimental land uses.
4. Establish a representative and functionally connected network of conservation areas with responsible management in the surrounding matrix for maintaining biodiversity in the face of climate change⁴. Such a network should be established and devoted to maintaining biodiversity and the services it provides to humans at regional and national levels.
5. Harness and provide adequate resources for all nations to monitor and enforce the protection of existing reserves through national frameworks and the support of relevant partners.
6. Increase funding and participation in global deforestation and forest degradation reduction. This includes (e.g., a United Nations Programme on enhanced Reduced Emissions from Deforestation and Degradation – REDD+ with proper social and environmental requirements as safeguards against its misuse – and implemented through full compliance with international laws, including but not limited to the Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered Species (CITES) and greater attention to forest degradation throughout the world (i.e., not just in the tropics). Programs such as REDD+ should recognize the value of other ecosystem services beyond

³ Global Forest Assessment 2010 (www.fao.org/forestry/fra/fra2010/en/).



carbon storage, as well as the rights of forest-dependent communities. Developed nations also should do more to reduce domestic forest degradation as they too contain significant carbon stores particularly in older forests (see Appendix B).

7. Adopt science-based carbon accounting methods to provide basic metrics that compensate landowners for avoiding deforestation and forest degradation. Improved methods are necessary to calculate and apply systems such as REDD+ accurately so that countries are encouraged to adopt forestry measures that are improvements over standard practices and are discouraged from using offsets instead of more direct means of reducing pollution.⁵
8. Ban trade in illegally harvested forest products.⁶ This requires task forces to oversee monitoring and enforcement to ensure competent authorities are fully implementing domestic and international legal obligations in controlling harvests and trade. This is especially important in “protected areas” and for species listed under CITES or listed as Endangered in the Red List published by the International Union for Conservation of Nature (IUCN).¹ CITES in turn must take a more effective, precautionary approach to the species that are the subjects of commercial over-harvesting in forests.
9. Carry out country-specific forest assessments to monitor changes not only in forest cover but in forest quality with respect to biological diversity, forest fragmentation, and old-growth forests in order to ensure more robust accounting. The Food and Agriculture Organization and other global entities tracking forest cover should appropriately devolve and delegate this duty and ensure that it is fulfilled.
10. Encourage independent science-based assessments of certification schemes and practices (e.g. FSC) intended to assure social, economic, and environmental interests in forest management.

⁴ Mackey, B. G., Watson, J.E.M., Hope, G. and S. Gilmore (2008). Climate change, biodiversity conservation, and the role of protected areas: An Australian perspective. *Biodiversity*, 9:11-18. Lindenmayer, D.B., and J. F. Franklin. 2002. *Conserving Forest Biodiversity*. Island Press, Washington, D.C.

⁵ Venter, O. J.E.M. Watson, E. Meijaard, W.F. Laurance, and H.P. Possingham. (2010). Avoiding Unintended Outcomes from REDD, *Conservation Biology*, 24: 5-6.

⁶ In order to achieve the rule of law for forests which is an essential first step toward sustainable management, the UN and its member nations must answer the 2009 call of the Conference of the Parties to the Convention on Biological Diversity to implement an effective ban on trade in illegally harvested forest products.



11. Include in the protection and use of forest resources the rights of indigenous peoples as recognized in the UN Declaration on the Rights of Indigenous Peoples⁷. Countries should also recognize the role of protected areas in regional development and tourism with a requirement of reinvesting in local communities and supporting conservation efforts⁸.
12. Empower an Inter-Governmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)⁹ to foster better use of the best available science in an open dialogue resulting in improved forest management.

Forest ecosystems are inherently complex, consisting of interacting species and functional relationships that we do not fully understand. The precautionary principle states that if an action or policy has a suspected risk of causing harm to the public or to the environment, then in the absence of scientific consensus that the action or policy is harmful, the burden of proof to show that it is not harmful rests on those taking the action. As the UN Rio Declaration of 1992 in Principle 15 stated the precautionary principle:

Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Therefore, SCB advises nations to adopt the precautionary principle to sustainably manage forests and to take the twelve steps in this Declaration in the context of a precautionary respect for the forest ecosystems of the earth.

⁷ <http://www.un.org/esa/socdev/unpfii/en/drip.html>;

http://en.wikipedia.org/wiki/Declaration_on_the_Rights_of_Indigenous_Peoples#Support

⁸ Balmford A, Beresford J, Green J, Naidoo R, Walpole M, et al. (2009) A Global Perspective on Trends in Nature-Based Tourism. PLoS Biol 7(6): e1000144. doi:10.1371/journal.pbio.1000144

⁹ <http://www.ipbes.net/>



APPENDIX A: UNITED NATIONS FOREST RESOLUTION

Emphasizing the need for sustainable management of all types of forests, including fragile forest ecosystems,

Convinced that concerted efforts should focus on raising awareness at all levels to strengthen the sustainable management, conservation and sustainable development of all types of forests for the benefit of current and future generations,

1. Decides to declare 2011 the International Year of Forests;
2. Requests the secretariat of the United Nations Forum on Forests of the Department of Economic and Social Affairs of the Secretariat, to serve as the focal point for the implementation of the Year, in collaboration with Governments, the Collaborative Partnership on Forests and international, regional and subregional organizations and processes as well as relevant major groups;
3. Invites, in particular, the Food and Agriculture Organization of the United Nations, as the Chair of the Collaborative Partnership on Forests, within its mandate, to support the implementation of the Year;
4. Calls upon Governments, relevant regional and international organizations, and major groups to support activities related to the Year, inter alia, through voluntary contributions, and to link their relevant activities to the Year;
5. Encourages voluntary partnerships among Member States, international organizations and major groups to facilitate and promote activities related to the Year at the local and national levels, including by creating national committees or designating focal points in their respective countries;
6. Requests the Secretary-General to report to the General Assembly at its sixty-fourth session on the state of preparations for the Year.

83rd plenary meeting
20 December 2006



APPENDIX B:

FORESTS IN THE SPOTLIGHT: INTERNATIONAL YEAR OF FORESTS

Dominick A. DellaSala, Benjamin Delali Dovie, Martin Dieterich, John M. Fitzgerald, Bengt-Gunnar Jonsson, Patricia Majluf, Jeff McNeely, Simon Nemtzov, Owen T. Nevin, Chris Parsons, James E.M. Watson

Forests cover nearly one-third (4 billion ha) of the planet's terrestrial surface, and contain at least 80 percent of its terrestrial biodiversity¹⁰. Forests cleanse the air we breathe, are an integral part of global and regional water cycles, purify our drinking water, and provide habitat for thousands of wildlife species, including many endangered ones¹¹. They provide homes, food, and forest products for millions of people¹², contribute to poverty eradication, energy, food and livelihoods security, and basic services that help to lessen (mitigate) and prepare (adapt) people and nature for climate change.¹³ In spite of the fundamental functions of forest ecosystems for human wellbeing, deforestation and degradation of forests continue at an alarming pace, particularly in South America, Africa, and Asia¹⁴ and afforestation does not compensate for the loss of biological diversity from old-growth forests. The causes that are well established may be proximate or underlying, direct or indirect. Notably, amongst the causes of forest decline are human settlement and demographic change, including displacement, agricultural land use, and poor social and economic policy environments¹⁵. Climate change could also reduce the population viability of several forest species and alter ecosystem processes with diminishing returns on forest productivity¹⁶.

Recognizing the importance of forests globally and in the context of the United Nations 2006 resolution that instituted the “International Year of the Forests,” the United Nations

¹⁰ Global Forest Assessment 2010 (www.fao.org/forestry/fra/fra2010/en/). FAO 2005 forest assessment.

¹¹ Lindenmayer, D.B., and J.F. Franklin. 2002. Forest biodiversity. Island Press: Washington, D.C. DellaSala, D.A. 2011. Temperate and boreal rainforests of the world: ecology and conservation. Island Press: Washington, D.C.

¹² WCFS (World Commission on Forests and Sustainable Development). 1999. Our forests, our future. Cambridge University Press, Cambridge, United Kingdom.

¹³ Millennium Ecosystem Assessment. 2005. Washington DC: World Resources Institute.

¹⁴ Global Forest Assessment 2010 (www.fao.org/forestry/fra/fra2010/en/). FAO 2005 forest assessment.

¹⁵ Geist, H.J., Lambin, E.F., 2001. What drives deforestation? A meta-analysis and underlying causes of deforestation based on subnational case study evidence. Ciaco Printshop, Louvaine-la Neuve.

¹⁶ McClean et al. 2005. African plant diversity and climate change. *Annals of the Missouri Botanical Garden* 92, 139–152.



recently released a declaration intended to promote sustainable forest management¹⁷ and a related global forest assessment from which to gauge changes in forest cover over time¹⁸.

The forest estimates reported to the United Nations in the Global Forest Assessment, while important indicators of forest cover, are notably deficient. For instance, national forest assessments and monitoring reported by countries are based on broad definitions of forest cover (e.g., tree cover >10%) that include tree plantations. Regions are not tracking changes to forest quality as reflected in recent reports by the United States and Europe to the Global Forest Assessment that did not include appropriate estimates of conversion of old-growth forests to plantations. Nonetheless, even with this limited monitoring in place, Global Forest Assessment trends are alarming as noted:

- **Old-growth forests continue to decline:** Reforestation as replacement for old-growth forests does not remotely substitute for the essential ecosystem services provided by old forests that have declined globally at an annual rate of 0.4% (more than 40 million ha/year) over the last ten years¹⁹. Such declines are not limited to developing countries. For instance, all but 5 percent of old-growth forests in the contiguous United States have been logged with substantial reductions in regions historically having large amounts²⁰. Similar patterns can be seen over large parts of Europe where the remnants of old forests still are being logged despite that these constitute just a few percent of the forest area²¹. In order to halt the global decline in old-growth forests, these forests should receive immediate priority for conservation globally.
- **Half the earth's forests have been degraded by human activities:** Most of the world's intact forests are gone²², some regions have close to none (Europe)²³, others have very

¹⁷ International Year of Forests (www.un.org/en/events/iyof2011/) and 9th Session on UN Forum on Forests (www.un.org/esa/forests/session.html).

¹⁸ Global Forest Assessment 2010 (www.fao.org/forestry/fra/fra2010/en/). FAO 2005 forest assessment.

¹⁹ DellaSala, D.A.. 2011. Temperate and boreal rainforests of the world: ecology and conservation. Island Press: Washington, D.C.

²⁰ Strittholt, J.R., D.A. DellaSala, and H. Jiang. 2006. Status of mature and old-growth forest in the Pacific Northwest, USA. *Conservation Biology* 20:363-374.

²¹ Wesolowski, T. 2005. Virtual conservation: how the European Union is turning a blind eye to its vanishing primeval forests. *Conservation Biology* 19(5): 1349-1358. DellaSala, D.A., P. Alaback, A. Drescher, H. Holien, T. Spribille, and K. Ronnenberg. 2011. Temperate and boreal rainforest relicts of Europe. Pages 154-180 in D.A. DellaSala (ed). Temperate and boreal rainforests of the world: ecology and conservation. Island Press: Washington, D.C.

²² Bryant, D., D. Nielsen, and L. Tangle. 1997. The last frontier forests: ecosystems and economies on the edge. World Resources Institute, Washington D.C. www.globalforestwatch.org/english/pdfs/Last_Frontier_Forests.pdf

²³ DellaSala, D.A (ed.). 2011. Temperate and Boreal Rainforests of the World: Ecology and Conservation. *Island Press*, Washington, D.C.



little (contiguous United States)²⁴. Intact and old-growth forests are the foundation of healthy ecosystems and should be inventoried and protected.

▪ **Human stressors are accumulating globally and are a major cause of forest declines:**

While the Global Forest Assessment reported on forest losses from disease, insect outbreaks, and wildfires, it did not mention how such disturbances may become amplified by human-induced stressors, including, for instance, mechanized fire suppression that increases fuel loads and thus fire intensity in forest ecosystems; over-simplification of forest structure, composition, and function by industrial logging that can make forests more susceptible to insects and disease outbreaks; road building that can facilitate the propagation of invasive species and spread of fires; overexploitation by hunting and trapping of forest-dwelling vertebrates that are essential for forest health; and climate change leading to increased tree mortality (e.g., increased tree mortality from drought has been documented in both temperate and tropical systems²⁵). Such stressors have contributed to an unprecedented decline in the earth's biological diversity with much of this underway in the tropics²⁶.

▪ **Acute shortage of protected areas:** Only 13 percent of the world's forests are in legally protected areas (based on the Global Forest Assessment). While there have been increases globally (63 million ha of new areas since 2000)²⁷, the erosion of forest ecosystem services and biological diversity will continue without the addition of new reserves and improved forest practices in the surroundings²⁸. In addition, even some areas considered reserves are not protected areas in practice. While this largely has been the case in the tropics, in the European Union only those parts of Natura 2000 sites representing specific habitat types are actually protected. Notably, the CBD new strategic

²⁴ Heilman, G.E., Jr., J.R. Strittholt, N. C. Slosser, and D.A. DellaSala. 2002. Forest fragmentation of the conterminous United States: assessing forest intactness through road density and spatial characteristics. *Bioscience* 52(5):411-422.

²⁵ van Mantgem, P.J., N. L. Stephenson, J. C. Byrne, L. D. Daniels, J. F. Franklin, P. Z. Fulé, M. E. Harmon, A. J. Larson, J. M. Smith, A. H. Taylor, T. T. Veblen. 2009. Widespread increase of tree mortality rates in the western United States. *Science* 323:521-524. Phillips, O.L. et al.. 2009. Drought sensitivity of the Amazon rainforest. *Science* 323:1344-1347.

²⁶ Millennium Ecosystem Report. 2005. www.maweb.org/documents/document.356.aspx.pdf

²⁷ A protected area under Category 1 of The World Conservation Union (IUCN) World Commission on Protected Areas would not infringe upon the rights of indigenous peoples to extract resources for traditional, subsistence and ecologically sensitive development purposes, such as non-timber forest products, eco-tourism, and other sustainable activities.

²⁸ Lindenmayer, D.B., and J. F. Franklin. 2002. *Conserving Forest Biodiversity*. Island Press, Washington, D.C.



plan calls for 17 percent²⁹ of forests to be regionally placed in “ecologically representative” reserves and thus for a general increase from current protection levels. While this would be a significant step forward for conservation, this recommendation likely falls far short of what is needed regionally to achieve representation, maintenance of intact processes, and persistence of forest species, particularly those in decline.³⁰

- **Old forests are a global sink for carbon storage:** Carbon stores in the world’s forests are estimated at ~289 gigatons³¹, which is the equivalent of more than 35 times the global annual rate of carbon dioxide emissions from the burning of fossil fuels³². While much of this carbon is stored in tropical rainforests, many other forest types also are important. For example, temperate rainforests in North America and Australia are among the most carbon-dense ecosystems on the planet³³; boreal forests, because of their extensive area, contain extensive carbon pools³⁴; and old-growth forests in general account for high amounts of stored carbon because they either have not been altered by logging or other extractive purposes or have recovered from such practices³⁵. Carbon-rich areas are a high priority for both climate mitigation and conservation action.

SCB applauds the United Nations for its declaration of the International Year of Forests and encourages governments, land managers, and citizens to include comprehensive measures to achieve sustainable forest management. Forests have sustained societies for millennia but will become increasingly stressed by a burgeoning population at a time when they are under unprecedented stresses from climate change and human activities. Science-based stewardship and stepped up conservation will need to work hand in hand to halt the

²⁹ Convention on Biological Diversity. 2011. Year in Review. Secretariat of the Convention on Biological Diversity United Nations Environment Programme Montreal, Quebec, Canada. <http://www.cbd.int/doc/reports/cbd-report-2010-en.pdf>

³⁰ Tear T.H., et al. 2005. How much is enough? The recurrent problem of setting measurable objectives in conservation. *BioScience* 55: 835-849. Watson, J.E.M., Fuller, R.A. and L. Barr (2008). Why are we still using a “one size fits all” philosophy for systematic reserve planning in Australia? *Pacific Conservation Biology*, 14: 233–235.

³¹ Global Forest Assessment 2010 (www.fao.org/forestry/fra/fra2010/en/). FAO 2005 forest assessment.

³² Based on conversion of carbon stores to carbon dioxide equivalents and comparisons to global fossil fuel emissions in the IPCC 2007 assessment (www.ipcc.ch/publications_and_data/ar4/syr/en/contents.html).

³³ Keith et al. 2009 (www.pnas.org/cgi/doi/10.1073/pnas.0901970106). DellaSala, D.A. 2011. Temperate and boreal rainforests: ecology and conservation. Island Press: Washington, D.C.

³⁴ Wells, J., D. Roberts, P. Lee, R. Cheng, and M. Darveau. 2010. Forest of Blue—Canada’s Boreal Forest: the World’s Waterkeeper. International Boreal Conservation Campaign, Seattle. 74 pp.



decline of old-growth and intact forests globally and regionally, and to encourage broader tracking and reporting measures on forest degradation and deforestation. Because global forest biodiversity cannot afford additional net loss of quality or quantity without severe long-term consequences, major increases in protected areas, properly enforced, and sound stewardship outside reserves are urgently needed.

ⁱ Schemes such as the European Forest Law Enforcement Governance and Tradeⁱ provide a model for voluntary compliance in trade of only legally harvested timber imported to the European Union from countries agreeing to be part of the trading scheme.

³⁵ Keith et al. 2009 (www.pnas.org/cgi/doi/10.1073/pnas.0901970106). Luyssaert, S., E. Detlef Schulze, A. Börner, A. Knohl, D. Hessenmöller, B.E. Law, P.Ciais, and J. Grace. 2008. Old-growth forests as global carbon sinks. *Nature* 455: 213-215.