

US Environmental Protections: Leading the World in Forest Sustainability

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As the European Union (EU) seeks to potentially revise its current renewable energy policy legislation, known as RED II¹, there has been renewed focus on woody biomass and efforts to ensure that it is produced sustainably. Concerns that harvesting wood negatively impacts biodiversity supported by forest ecosystems have prompted calls for the EU to limit the type of feedstock that can be used for sustainable biomass. However, the United States (U.S.), which exported nearly 7 million metric tons of sustainable biomass to the EU in 2019, has maintained a strong legacy of protecting its forests for over a century. Recognizing that it has a wealth of natural resources, the U.S. has served as a global leader in the environmental protection movement and, particularly, with regard to sustainable forest management.

The U.S. has enacted a comprehensive series of environmental laws focused on each major environmental resource and impact, including forestry resources and the forestry industry's impacts. In contrast to many other countries, the U.S. protects the environment through subject matter, programmatic protections instead of by piecemeal legislation regulating specific industries. Through this unique regulatory framework, forests in the U.S. are protected by numerous federal laws, which are overseen by more than seven different federal agencies, including the Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS),

Army Corps of Engineers (Corps), Bureau of Land Management, National Park Service, and the Department of Justice. Additionally, most states and many localities also have enacted various laws and regulations that serve to protect our nation's forests with an overall goal of sustainability. Non-governmental organizations (NGOs) like Greenpeace and The Nature Conservancy have recognized the effectiveness of U.S. environmental protection laws stating for example: "Environmental laws adopted over the last five decades in the United States have dramatically improved the quality of the nation's air and water, reduced the public's exposure to harmful chemicals, given the public a greater voice in government decisions and conserved fish, wildlife and other natural resources."²

Forest Protection

Beginning with the Forest Reserve Act of 1891, which allowed the president to establish forest reserves from timber-covered public domain land, to the official creation of the U.S. Forest Service in 1905, the U.S. has supported public management and conservation principles for its forests.³ The U.S. has multiple statutes that focus on forest conservation within federal lands by balancing continued growth in U.S. working forests and protecting wilderness and conservation priorities. The Lacey Act of 1900 was the first U.S. law to protect wildlife through civil and criminal penalties for those who violate the rules and regulations.⁴ The Lacey Act was subsequently amended in 2008 and now ensures that illegally forested timber and wood products are not imported into or exported from the U.S. and imposes criminal sanctions on perpetrators.⁵ The Weeks Act of 1911 permits the government to preserve critical headwaters and implement fire

protection measures.⁶ The Multiple Use Sustained Yield Act of 1960, ensures that a sustainable portfolio of uses, from timber harvests to wildlife habitat, are supported on public forests.⁷ The Wilderness Act of 1964, created the National Wilderness Preservation System, currently containing 111 million acres, for protecting untouched lands in perpetuity.⁸ The National Forest Management Act (NFMA) has resulted in approximately 332 million acres of U.S. forests being held under public protection.⁹ The NFMA requires a National Forest System land management plan for publicly held forests.¹⁰

The U.S. continued enacting a broad host of modern environmental statutes through protective laws relating to air, water, species, and toxic chemicals.¹¹ The U.S. Congress enacts environmental statutes, which are further interpreted and enforced through regulations by federal agencies. Many statutes allow individual states to implement them with oversight authority retained by the federal government. States generally can enact more stringent laws and regulations in many instances, and often do. Local governments do the same thing, as long as their laws do not conflict with state or federal laws. Additionally, state and federal courts interpret the laws and regulations.

NEPA

The National Environmental Policy Act (NEPA), often described as the "Magna Carta" of environmental law, marks the beginning of the modern era of federal protection of ecosystems.¹² NEPA requires federal agencies to consider the environmental impacts of "major federal actions significantly affecting the quality of the human environment" through an extensive process of developing an

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environmental assessment and often an environmental impact statement.¹³ Statutes such as NEPA, that regulate federal activities, also indirectly regulate private interests. For example, under NEPA, the Corps could be required to perform an environmental assessment before issuing a wetlands permit to a land developer. Agency decisions regarding NEPA often are challenged by NGOs in the federal courts. This type of litigation provides an additional layer of scrutiny regarding protection of US natural resources.¹⁴

Clean Water Act

The Clean Water Act (CWA) regulates discharges of pollutants, including debris and sediment, entering the country's waters, as well as the fill of wetlands.¹⁵ The CWA's purpose "is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."¹⁶ To that end, the CWA allows the Corps to "issue permits, after notice and opportunity for public hearings for the discharge of dredged or fill material into the navigable waters at specified disposal sites."¹⁷ Pursuant to regulations promulgated under the CWA, "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences."¹⁸ The EPA, Corps, and individual states share responsibility for implementing regulations and the court system is also called on to determine jurisdictional issues and the applicability of regulations. The penalties for violating the CWA include civil penalties of up to \$50,000 per day per violation and criminal fines and imprisonment for negligence or knowing and willful violations.¹⁹

Although timber harvesting is exempt from wetlands permitting requirements, regulations relating to protecting water quality and biodiversity are applicable. Forest management activities cannot convert wetlands to another land use and must protect threatened and

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endangered species. Accordingly, U.S. foresters must manage their forest harvests so that debris, sediment, and any potential chemical pollutants running off from the harvest site during rain events do not exceed set regulatory requirements or fill in critical wetlands. States also have regulations to support implementation of the CWA, such as requiring detailed best management practices (BMPs) to assist forest land owners with compliance.²⁰ BMPs ensure that activities like forest thinning and the equipment used in timber harvests do not inadvertently push sediment or brush into nearby waterways or promote erosion of stream banks.²¹ Many states have similar BMPs. For example, Virginia's BMPs restrict harvesting timber after heavy rains and require riparian buffers along forest water bodies, which act as a natural filter of non-point source pollution.²²

Endangered Species Act

The Endangered Species Act (ESA) is considered by some scholars to be the "most powerful natural resources law in the world."²³ The ESA prohibits the "taking" of an endangered species, including destroying the endangered species' critical habitat. Thus, U.S. foresters are banned from conducting any logging or wood harvesting of a tree species or a forest ecosystem that provides critical habitat for an endangered species. The U.S. Fish and Wildlife Service (FWS) is the principal federal agency responsible for administering the ESA. This agency prides itself on its "tradition of scientific excellence in the conservation of fish, wildlife, plants and their habitats."²⁴ Civil penalties for violating the ESA include up to \$25,000 per violation and knowing violations can have criminal penalties of up to \$50,000 or imprisonment up to a year.²⁵

Any area, whether federally or privately owned, may be designated as a critical habitat. Forest landowners support these critical habitats through development and protection of the riparian buffers required in connection with the CWA. A critical habitat designation affects private land if some federal action is also involved.²⁶ For example, consider a landowner who

wants to develop in an area that has a critical habitat designation and the area also has wetlands that would require a permit under the CWA from the Corps. The ESA requires the Corps to consult with the FWS before issuing the permit. The Corps could deny the permit based on the recommendation from the FWS.

U.S. Forests

The U.S. Department of Agriculture Forest Service is responsible for sustaining the health, diversity and productivity of U.S. forests. The Forest Service maintains the Forest Inventory and Analysis Program (FIA), which measures and monitors forest growth, inventory, and carbon stocks.²⁷ According to FIA data, the US's forest resources have increased over the last 100 years and forest carbon stocks have doubled since the 1950s, despite a tripling of the US population, record commercial and urban development, and devastating forest fires.²⁸ Although some environmental groups have speculated that America's forests are in danger of clear-cutting for use as woody biomass, much like similar fears from wood chip mills back in the 1980s and 1990s, which destruction never happened, instead U.S. forests have been thriving.²⁹ Additionally, wood pellet markets have expanded at the same time that pulp and paper mills have been closing, which fills a critical void for Southern forest owners.³⁰ Markets for woody biomass provide financial incentives for landowners to continue replanting and sustainably manage their lands. The development of woody biomass markets also can be a potential tool "to both reduce wildfire risk and help keep southern forests forested rather than converted. . . ."³¹

In addition to laws and regulations, organizations such as the National Wildlife Federation and the USDA Forest Service support sustainable forest management certification programs, such as the Forest Stewardship Council, Sustainable Forestry Initiative, American Tree Farm System, Program on the Endorsement of Forest Certification, Roundtable on Sustainable Biomaterials, and Sustainable Biomass Partnership.³² These certifications help the woody biomass industry demonstrate sustainability.

Conclusion

The U.S. framework of environmental laws, regulations, court adjudications, and policies includes sustainability and the protection of biodiversity as bedrock principles. The combination of strong environmental laws and incentivizing markets have demonstrated success, with U.S. forest inventory at higher levels today than in the 1950s, despite record-high urban development and population growth.

The incoming Biden administration has pledged immediate steps to focus on issues related to climate change and science, including recommitting the U.S. to the Paris Climate Agreement in January 2021. The administration also is expected to have a renewed emphasis on the enforcement of environmental laws and environmental NGOs have quickly expressed their support.³³ With its history of comprehensive environmental protection laws and new leadership focused on safeguarding biodiversity, the EU can be assured, that the US is committed to upholding its legacy of environmental stewardship and sustainable forest management.

References

¹ Renewable Energy Directive of the European Parliament and of the Council of the European Union, 2018/2001/EU.

² The Nature Conservancy, *Environmental Conservation Laws*, <https://www.nature.org/en-us/about-us/who-we-are/how-we-work/policy/environmental-conservation-laws/>; see also "Solutions to Deforestation" www.greenpeace.org/usa/forests/solutions-to-deforestation ["In the United States, laws like the Endangered Species Act, the Wilderness Act, the Lacey Act, and the Roadless Rule help protect our forests and stop illegal wood products from entering the U.S. marketplace."].

³ U.S. Forest Service and U.S. Department of Agriculture, *The U.S. Forest Service – Our History*, <https://www.fs.usda.gov/learn/our-history>.

⁴ 16 U.S.C. § 3371 (1900).

⁵ 16 U.S.C. § 3372 (2008).

⁶ 36 Stat. 961 (1911).

⁷ 16 U.S.C. § 528 et seq. (1960).

⁸ 16 U.S.C. § 1131 (1964); The

Wilderness Society, *National Wilderness Preservation System*, <https://www.wilderness.org/articles/article/national-wilderness-preservation-system>.

⁹ 16 U.S.C. § 1600 et seq. (1976).

¹⁰ Id.

¹¹ Todd S. Aagaard, *Environmental Law Outside the Canon*, 89 Ind. L.J. 1239 (2014) ["The existing major environmental statutes that comprise the canon of environmental law have accomplished significant improvements in environmental quality while proving resilient in the face of sometimes harrowing political headwinds."].

¹² 42 U.S.C. § 4321 et seq. (1970); See, e.g., Daniel R. Mandelker, *The National Environmental Policy Act: A Review of Its Experience and Problems*, 32 Wash. U. J.L. & Pol'y 293, 293 (2010); see also <https://www.ceq.doe.gov>.

¹³ 42 U.S.C. § 4332(C); 40 C.F.R. § 150.4.

¹⁴ See e.g. *Klein v. U.S. Department of Energy*, 753 F.3d 576, 585 (6th Cir. 2014) [Sierra Club sued to stop renewable energy project citing failure of agency to comply with NEPA].

¹⁵ 33 U.S.C. § 1251 et seq. (1972).

¹⁶ 33 U.S.C. § 1251(a).

¹⁷ 33 U.S.C. § 1344(a), (d); see *United States v. Deaton*, 332 F.3d 698, 707 (4th Cir. 2003).

¹⁸ 40 C.F.R. §§ 230.10(a), 230.12(a)(3)(i).

¹⁹ 33 U.S.C. §§ 1342, 1344; see *United States v. Lucas*, 516 F.3d 316 (5th Cir. 2008) (developers impacted 260 acres of wetlands without Corps permit and were sentenced to 108 months in prison and a development company was fined \$4.8 million).

²⁰ State forestry agencies play a critical role in ensuring that forests are protected and properly managed and most have created BMPs. See National Association of State Foresters, <https://www.stateforesters.org/> ["Our members manage and protect state and private forests, which encompass nearly two-thirds of the nation's forests."].

²¹ National Association of State Foresters, <https://www.stateforesters.org/bmps/> ["Most states began developing BMPs in the 1970s to encourage forest managers and loggers to take the necessary steps to protect water quality when undertaking silvicultural activities."].

²² Virginia Department of Forestry, *Virginia Forestry Best Management Practices for Water Quality Technical Guide*, 2011, <http://dof.virginia.gov/water/index.htm>.

²³ 16 U.S.C. § 1531 et seq. (1973); James Salzman and Barton H. Thompson, Jr., *Environmental Law and Policy 3rd Ed.*, pg. 282, Thompson Reuters/Foundation Press, 2010.

²⁴ https://www.fws.gov/endangered/improving_esa/science-overview.html.

²⁵ 16 U.S.C. § 1540.

²⁶ 16 U.S.C. § 1536(a)(2) (requires federal agencies to consult with the U.S. Fish and Wildlife Service if agency action could affect an endangered species or critical habitat).

²⁷ USDA Forest Service, *Forestry Inventory and Analysis National Program*, <https://www.fia.fs.fed.us/>.

²⁸ Id.

²⁹ See Blake Hudson, *Harnessing Energy Markets to Conserve Natural Resources? The Case of Southern U.S. Forests*, 44 Fla. St. U.L. Rev. 943, 1008, 1031 (2018)

³⁰ Id. ["New markets can encourage landowners to maintain forestland, rather than convert it to other uses].

³¹ Blake Hudson, *Fighting Fire with Fire? Adjusting Regulatory Regimes and Forest Product markets to Mitigate Southern United States Wildfire Risk*, 33 J. Env'tl. L. & Litig. 33, 44-45 (2018).

³² <https://nwf.org/Our-Work/Our-Lands> (works to "ensure that sustainable land use, carbon benefits, and environmental protections are in place"); see, e.g., *Forestry Bioenergy in the Southeast United States: Implications for Wildlife Habitat and Biodiversity*, commissioned by National Wildlife Federation and Southern Environmental Law Center (2013).

³³ NRDC, President and CEO Gina McCarthy, *In Biden's Win, a Unifying Call for Bold Action on Climate*, (November 13, 2020) ["He'll safeguard biodiversity, confront species collapse, and strengthen natural carbon absorption by conserving at least 30 percent of US lands, waterways, and ocean habitat by 2030."]; Greenpeace US, Executive Director Annie Leonard, *Biden's Historic Election Win is the First Step Towards Avoiding Climate Catastrophe*, (Nov. 7, 2020) ["Joe Biden won the presidential election on the most ambitious and far reaching climate platform of any presidential nominee for a major party in history."];

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