



Sustainability and Forest Certification as a Framework for a Capstone Forest Resource Management Plans Course

PDF (Size:83KB) PP. 159-166 DOI : 10.4236/ojf.2012.23019

Author(s)

Christine M. Watts, Lauren S. Pile, Thomas J. Straka

ABSTRACT

Forest sustainability is the foundation of forestry and modern forest management. Originally the central concept was sustained-yield and maximum timber production and then multiple-use and other non-timber values gained importance. After the Rio Conference and development of the Montréal Process in the early 1990' s, forest sustainability rapidly gained importance and various forest certification schemes developed to certify forest products that were grown using sustainable forest management. Forest sustainability and forest certification have become critical topics in forestry curricula. The American Tree Farm System is one of the important North American forest certification organizations. Modern forestry curricula often include a capstone course where forest management plans are developed. We describe a capstone course at Clemson University under development that uses the management standards and management plan template of the American Tree Farm System as a framework for students to develop actual forest management plans for local forest owners. The material is integrated into a series of four courses leading up to the capstone course. The course offered a hands-on approach for students to create management plans using actual certification standards and the system' s management plan template. In addition, students received specialized training to qualify as auditors for the certification system. This is an example of forest sustainability being integrated into the forestry curriculum.

KEYWORDS

Forest Certification; Forest Sustainability; American Tree Farm System (ATFS); Forestry Education

Cite this paper

Watts, C. , Pile, L. & Straka, T. (2012). Sustainability and Forest Certification as a Framework for a Capstone Forest Resource Management Plans Course. *Open Journal of Forestry*, 2, 159-166. doi: 10.4236/ojf.2012.23019.

References

- [1] Abusow, K. (2004). Forest certification: Multiple standards advance sustainable forest management. *Wood Design and Building Magazine*, 42, 42-44.
- [2] American Tree Farm System (2010). 2010-2015 standards. Washington, DC: American Forest Foundation.
- [3] American Tree Farm System (2012a). Certification. URL (last checked 5 March 2012). <http://www.treefarmssystem.org/certification>
- [4] American Tree Farm System (2012b). American Tree Farm System. URL (last checked 5 March 2012). <http://www.treefarmssystem.org>
- [5] American Tree Farm System (2012c). Managing your woods: A template for Your plans for the future, management plan template. URL (last checked 5 March <http://treefarmssystem.org/managementplantemplate>
- [6] American Tree Farm System (2012d). A guide for foresters and other natural resource professionals on using: Managing your woodlands: A template for your plans for the URL (last checked 5 March http://www.treefarmssystem.org/stuff/contentmgr/files/1/811656e8116af1c86571cbbf51851fac/files/guide_for_foresters_for_the_joint_management_plan_template.21feb1
- [7] American Tree Farm System (2012e). Understanding your plan: A guide for landowners using: Managing your woodlands: A template for your plans for the future. URL (last checked 5 March http://www.treefarmssystem.org/stuff/contentmgr/files/1/811656e8116af1c86571cbbf51851fac/files/guide_for_landowners_for_the_joint_management_plan_template.21feb1
- [8] Arthur, M. A., & Thompson, J. A. (1999). Problem based learning in a natural resources conservation and management curriculum: A capstone course. *Journal of Natural Resources Education*, 28, 97-103.
- [9] Bettinger, P., Boston, K., Siry, J. P., & Grebner, D. L. (2009). *Forest management and planning*. Burlington, MA: Academic Press.
- [10] Butler, B.J. (2008). *Family forest owners of the United States, 2006*. General Technical Report NRS-27. Newtown Square, PA: USDA Forest Service, Northern Research Station
- [11] Cashore, B., Auld, G., & Newson, D. (2004). *Governing through markets: Forest certification and the emergence of non-state authority*. New Haven, CT: Yale University Press
- [12] Clutter, J. L., Fortson, F. C., Pienaar, L. V., Brister, G. H., & Bailey, R. L. (1983). *Timber management: A quantitative approach*. New York, NY: John Wiley & Sons.
- [13] Dana, S. T., & Fairfax, S. K. (1980). *Forest and range policy: Its development in the United States (2nd ed.)*. New York, NY: McGrawHill Book Company.
- [14] Daniels, S. E., Kilgore, M. A., Jacobson, M. G., Greene, J. L., & Straka, T. J. (2010). Examining the compatibility between forestry incentive programs in the US and the pr

- [15] Davis, L. S., Johnson, K. N., Bettinger, P. S., & Howard, T. E. (2001). *Forest management: To sustain ecological, economic, and social values* (4th ed.). New York, NY: McGraw-Hill Companies.
- [16] Durst, P. B., McKenzie, P. J., Brown, C. L., & Appanah, S. (2006). Challenges facing certification and eco-labeling of forest products in developing countries. *International Forest Review*, 8, 193-200. doi:10.1505/ifor.8.2.193
- [17] Fischer, C., Aguilar, F., Jawahar, P., & Sedjo, R. (2005). *Forest certification: Toward common standards?* Washington, DC: Resources for the Future.
- [18] Floyd, D.W. (2002). *Forest sustainability: The history, the challenge, the promise*. Durham, NC: The Forest History Society.
- [19] Floyd, D. W., Vonhof, S. L., & Seyfang, H. E. (2001). Forest sustainably: A discussion guide for professional resource managers. *Journal of Forestry*, 99, 8-28.
- [20] Forest Stewardship Council (2011). *Global FSC certificates: Type and distribution*. Bonn: Forest Stewardship Council.
- [21] Forest Stewardship Council (2012). *Forest Stewardship Council*. URL (last checked 5 March 2012). <http://www.fsc.org>
- [22] Gordon, J. D. (2006). Forestry education and research in the United States: A story of shifting paradigms. *Forest Science and Technology*, 2, 1-10. doi:10.1080/21580103.2006.9656306
- [23] Hanson, E., Fletcher, R., Cashore, B., & McDermott, C. (2006). *Forest certification in North America*. Corvallis, OR: Oregon State University Extension Service.
- [24] Holvoet, B., & Muys, B. (2004). Sustainable forest management worldwide: A comparative assessment of standards. *International Forestry Review*, 6, 1-10. doi:10.1505/ifor.6.2.99.38388
- [25] Innes, J. L., Hickey, G. M., & Hoen, H. F. (2005). *Forestry and environmental change: Socioeconomic political dimensions*. New York, NY: CABI Publishing.
- [26] Kilgore, M. A., Greene, J. L., Jacobson, M. G., Straka, T. J., & Daniels, S. E. (2007). The influence of financial incentives in promoting sustainable forestry on the nation's forests. *Journal of Forestry*, 105, 184-191.
- [27] Klooster, D. (2005). Environmental certification of forests: The evolution of environmental governance in a commodity network. *Journal of Rural Studies*, 21, 4-15. doi:10.1016/j.jrurstud.2005.08.005
- [28] Leuschner, W. A. (1984). *Introduction to forest resource management*. New York, NY: John Wiley & Sons.
- [29] Lindenmayer, D. B., & Franklin, J. F. (2003). *Towards forest sustainability*. Washington, DC: Island Press.
- [30] Luckai, N. (2002). Undergraduate programs offered by the university schools of forestry. *Forestry Chronicle*, 78, 240-244.
- [31] Maser, C. (1994). *Sustainable forestry: Philosophy, science, and economics*. Delray Beach, FL: St. Lucie Press.
- [32] Maser, C., & Smith, W. (2001). *Forest certification in sustainable development: Healing the landscape*. Boca Raton, FL: CRC Press.
- [33] McConnell, G. (1966). *Private power and American democracy*. New York, NY: Alfred A. Knopf.
- [34] McDonald, G. T., & Lane, M. B. (2004). Converging global indicators for sustainable forest management. *Forest Policy and Economics*, 6, 63-70. doi:10.1016/S1389-9341(02)00012-0
- [35] Melfi, F. M., Straka, T. J., Marsinko, A. P., & Baumann, J. L. (1997). Landowner attitudes toward South Carolina's Forest Stewardship Program. *Southern Journal of Applied Forestry*, 21, 158-163.
- [36] Montréal Process Working Group (2012). *The Montréal Process*. URL (last checked 5 March 2012). <http://www.rinya.maff.go.jp/mpci>
- [37] Munsell, J. F., Hamilton, R., & Downing, A. K. (2009). Prospective scope of forest management education at James Madison's Montpelier. *Journal of Natural Resources and Life Sciences Education*, 38, 198-203. doi:10.4195/jnrise.2009.0012
- [38] Oliver, C. D. (2003). Sustainable forestry: What is it? How do we achieve it? *Journal of Forestry*, 101, 8-14.
- [39] Perera, P., & Vlosky, R. P. (2006). *A history of forest certification*. Louisiana Forest Products Development Center Working Paper No. 71. Baton Rouge, LA: Louisiana State University.
- [40] Programme for the Endorsement of Forest Certification (2012). *PEFC caring for our forest globally*. URL (last checked 5 March 2012). <http://www.pefc.org>
- [41] Prokopy, L. S. (2009). Looking at the big picture: Engaging natural resource students in landscape level planning through a capstone course. *Journal of Forestry*, 107, 90-94.
- [42] Rametsteiner, E., & Simula, M. (2003). Forest certification—An instrument to promote sustainable forest management. *Journal of Environmental Management*, 67, 1-10. doi:10.1016/S0301-4797(02)00191-3
- [43] Sample, V.A., & Anderson, S. (2008). Common goals for sustainable forest management: Divergence and reconvergence of American and European forestry. Durham, NC: Forest History Society.
- [44] Sample, V.A., & Sedjo, R.A. (1996). Sustainability in forest management: An evolving concept. *International Advances in Economic Research*, 2, 165-173. doi:10.1007/BF02210001
- [45] Sample, V. A., Ringgold, P. C., Block, N. E., & Gilmier, J. W. (1999). Forestry education: Adapting to the changing demands on professionals. *Journal of Forestry*, 97, 4-10.
- [46] Schelhas, J., & Greenberg, R. (Eds.) (1996). *Forest patches in tropical landscapes*. Washington, DC: Island Press.
- [47] Shindler, B., & Cramer, L. A. (1999). Shifting public values for forest management: Making sense of wicked problems. *Western Journal of Applied Forestry*, 14, 28-34.
- [48] Smith, W. B., Miles, P. D., Perry, C. H., & Pugh, S. A. (2009). *Forest Resources of the United States, 2007*. General Technical Report WO-78. Washington, DC: USDA Forest Service, Washington Office.
- [49] Steen, H. K. (Ed.). (1984). *History of sustained yield forestry: A symposium*. Durham, NC: Forest History Society.
- [50] Straka, T.J. (1993). Forest resource management plans—A landowner-oriented approach. *Journal of Natural Resources and Life Sciences Education*, 22, 111-115.

- [51]Straka, T. J. (2009). Evolution of sustainability in American forest resource management planning in the context of the American forest management textbook. *Sustainability*, 854. doi:10.3390/su1040838
- [52]Straka, T. J. (2011). Taxonomic review of classical and current literature on the perennial American family forest problem. *Forests*, 2, 660-706. doi:10.3390/f2030660
- [53]Straka, T. J., & Childers, C. J. (2006). Consulting foresters' view of professional forestry education. *Journal of Natural Resources and Life Sciences Education*, 35, 48-52.
- [54]Straka, T. J., & Layton, P. A. (2010). Natural resources management: Life cycle assessment and forest certification and sustainability issues. *Sustainability*, 2, 6 doi:10.3390/su2020604
- [55]Sustainable Forestry Initiative (2011). *The bigger picture: Conservation, integrity, community (Progress Report)*. Washington DC: Sustainable Forestry Initiative.
- [56]Sustainable Forestry Initiative (2012). Sustainable Forestry Initiative. URL (last checked 5 March 2012). <http://www.sfiprogram.org>
- [57]Temu, A. B. (1994). Integrating multiple land-use approaches into forestry education. *Commonwealth Forestry Review*, 73, 231-234.
- [58]Temu, A., & Kiwia, A. (2008). *Future of forestry education: Responding to expanding societal needs*. Nairobi: World Agroforestry Centre.
- [59]Thompson, J., Jungst, S., Colletti, J., Licklider, B., & Benna, J. (2003). Experiences in developing a learning-centered natural resources curriculum. *Journal of Natural Resources and Life Sciences Education*, 32, 23-31.
- [60]Thrift, T. G., Straka, T. J., Marsinko, A. P., & Baumann, J. L. (1997). Forest resource management plans: Importance of plan components to nonindustrial private forest landowners in South Carolina. *Southern Journal of Applied Forestry*, 21, 164-167.
- [61]United Nations Forum on Forests (2012). About UNFF. URL (last checked 5 March 2012). <http://www.un.org/esa/forests/about.html>
- [62]USDA Forest Service (2012). Forest Stewardship Program. URL (last checked 5 March 2012). <http://www.fs.fed.us/spf/coop/programs/loa/fsp.shtml>
- [63]USDA Natural Resources Conservation Service (2012). Programs and services. URL (last checked 5 March 2012). <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/pr>
- [64]US Green Building Council (2012). Welcome to USGBCS. URL (last checked 5 March 2012). <http://www.usgbc.org>
- [65]Vaux, H. J. (1975). The "integrated curriculum" in contemporary forestry education. *Journal of Forestry*, 73, 80-83.
- [66]Vianna, V. M., Ervin, J., Donovan, R. Z., Elliott, C., & Gholz, H. (Eds.) (1996). *Certification of forest products: Issues and perspectives*. Washington, DC: Island Press.
- [67]Vogt, K. A., Larson, B. C., Gordon, J. C., Vogt, D. J., & Fanzeres, A. (2000). *Forest certification: Roots, issues, challenges, and benefits*. Boca Raton, FL: CRC Press.
- [68]von Gadow, K., Pukkala, T., & Tomé, M. (2002). *Sustainable forest management*. Dordrecht: Kluwer Academic Publishers.
- [69]Washburn, M. P., Jones, S. B., & Nielsen, L. A. (1999). *Nonindustrial private forest landowners: Building the business case for sustainable forestry*. Washington, DC: Island Press.
- [70]Williams, M. (2006). *Deforesting the earth: From prehistory to global crisis, an abridgement*. Chicago, IL: University of Chicago Press.
- [71]World Commission on Forests and Sustainable Development (1999). *Our forests, our future*. Cambridge, UK: Cambridge University Press.
- [72]

• [Open Special Issues](#)

• [Published Special Issues](#)

• [Special Issues Guideline](#)

[OJF Subscription](#)