

## **Socioecological Dynamics of Resurgent Forests: Lessons for Degrowth**

### **Introduction**

This paper asks: What can regrowing forests tell us about environmental politics and economic relations? Much of the work on regrowing forests has occurred in the context of forest transition theory, which contends that after decades if not centuries of net forest loss, countries begin to experience increases in forest cover as economies shift toward service industries, populations migrate to urban centers, and marginal agricultural land is released from cultivation (Mather 1992; Mather and Needle 1998). Critics of this theory often cite the lack of evidence of transitions in developing nations, its failure to take into account context-specificity and relations between places (Mansfield et al. 2010), and the imprecision of the term ‘forest’ (Perz 2007). In particular, Perz (2007) suggests that one of the limits of forest transition theory is its broad treatment of forests and forest dynamics, as data used to evaluate forest cover change rarely distinguish between primary and secondary forests, or between tree plantations and naturally regenerating forests. Indeed, if one uses the data collected by the Food and Agriculture Organization (FAO) of the United Nations, an old-growth forest could be logged and re-planted with a monoculture of five-foot tall trees with no resulting change in forest cover (Putz and Redford 2010). Ecologists, however, recognize that forests vary not only in composition and structure, but also in the provision of ecosystem goods and services such as clean water, forest products, wildlife habitat, carbon sequestration, nutrient cycling, and erosion prevention. Because of these differences, it is essential that considerations of forest resurgence take into account the characteristics of both forests lost and gained. Further, forests change over time regardless of whether or not they are subject to intense human disturbance (such as logging). Data that suggest no change in forest cover, then, can belie significant ecological changes in species richness, age structure, wildlife populations, carbon storage, and timber harvest potential, as well as significant economic and political changes involving economic inequality, industrialization, trade patterns, and resource management policies, among other forces.

### **Purpose, Study Area, and Methods**

In this short paper we interrogate the relationship between forest regrowth and economic growth, drawing out particular lessons for advocates of degrowth. We do this through a case study of regrowing forests in the Appalachian region of the U.S. The environments we investigate lie in the coalfields of Appalachian Ohio, where once decimated forests are again widespread. Located on the edge of the central Appalachia plateau, this region has been a resource periphery since Euro-American settlers arrived at the turn of the 19th century. People cleared forests by mining for coal and clay and by logging—for timber, for fuel for early industrial pig iron and brick ovens, and for urban and agricultural development (Bashaw et al. 2007). Whereas the region was 95 percent forested in 1800, by 1910 tree cover was reduced by more than 80 percent (Dyer 2001). During the same era, exploitation and extraction of capital during economic booms and abandonment during subsequent busts left the region’s inhabitants in intense poverty (Bashaw et al. 2007).

Over the next fifty years the forest changed dramatically. By the 1990s, forest cover had rebounded to close to 70 percent; while patchy and diverse, total forest cover has held steady since (Dyer 2001; Widmann et al. 2009). But most regrowth is not happening on land that has been abandoned or turned into a forest reserve or tourist playground. Rather, trees have returned

in a densely populated area under very diverse ownership: public and private, wealthy and poor, long-term resident and newcomer. As a result, the expanse of green that characterizes the landscape of Appalachian Ohio hides very different socioecologies—recognizably distinct types of relationships between people and trees. In what follows, we describe several of these socioecological forests, particularly in terms of the economic, social, *and* ecological dynamics deemed essential to maintain them into the future, and we highlight inherent antagonisms—politics—as each forest jostles for position in the landscape. This is not simply a matter of matching forest types (oak dominant, softwood plantation) with particular categories of forest owners, users, or managers (private landowners, the state, corporations). Rather, we look to how preferences for particular types of forest are enacted and articulated by entities who are active in the region, including in public agencies (e.g. Wayne National Forest, county auditors, OSU extension), non-profit organizations (e.g. Rural Action, Athens Conservancy), and private industry (e.g. rental cabin owners, Chambers of Commerce). We draw from 50+ interviews we have conducted since 2009, as well as written documents such as newsletters and annual reports, all of which we analyzed using an iterative process of coding, sorting, and grouping.

## **Results**

Six distinct socioecological forests emerged in the analysis:

- Silvicultural forests
- Historic forests
- Exurban forests
- Matrix forests
- Livelihood forests

In the full version of the paper, we describe these six forests and highlight important comparisons with the other types of forests. Each forest is characterized not only by species composition, structure, and function, but also by specific *economic relations* and *management activities* deemed necessary for its persistence, i.e. necessary to foster this forest into the future. Notably, each also is characterized by the actions and actors deemed to threaten it—and in this environmental politics, threats in one forest are those things deemed necessary to another. These are the forests that people foster and want to propagate, and doing so pits their desires against others’.

## **Summary of Contributions**

Ultimately this research demonstrates that forest recovery is not a singular path, and that forests can recover through markedly different social, economic, and ecological pathways. In other words, we argue that economic growth is not the only—or the most beneficial—pathway to forest recovery and biodiversity conservation.

### Short Bibliography

- Bashaw, Andrew, Sandra Landis, Dana White, and John Winnenberg. 2007. At the Glacier's Edge. Shawnee, Ohio: Little Cities of Black Diamonds Council.
- Dyer, James M. 2001. Using witness trees to assess forest change in southeastern Ohio. *Canadian Journal of Forest Research* 31:1708-1718.
- Mansfield, B., D. Munroe, and K. McSweeney. (2010). Does economic growth cause forest recovery? Geographical explanations of forest regrowth. *Geography Compass*, 4(5), 416-427.
- Mather, A.S. (1992). The forest transition. *Area*, 24(367-379).
- Mather, A.S., and C.L. Needle. (1998). The forest transition: a theoretical basis. *Area*, 30(2), 117-124.
- Perz, S.G. (2007). Grand theory and context-specificity in the study of forest dynamics: forest transition theory and other directions. *The Professional Geographer*, 59(1), 105-114.
- Putz, F.E., and K.H. Redford. (2010). The importance of defining 'forest': tropical forest degradation, deforestation, long-term phase shifts, and further transitions. *Biotropica*, 42(1), 10-20.
- Widmann, RH, D Balsler, C Barnett, BJ Butler, DM Griffith, TW Lister, WK Moser, CH Perry, R Riemann, and CW Woodall. 2009. Ohio Forests 2006. Newtown Square, PA: US Forest Service.