

Conceptualizing a Forest

The simplest and classical dictionary definition states that a forest “*a large area covered chiefly with trees and undergrowth*”¹. However, this broad categorization has resulted in everything from orchards, timber monocultures, home gardens, and natural forests to be termed as such. Sadly, the consequence of this free interpretation of the term ‘forest’ is reflected in the implementation of forestry policy and practice.

According to the International Analog Forestry Network (IAFN), **forests are tree dominated ecosystems that display the seral dynamics of ecosystem maturity and possess tree crown cover (stand density) of more than 40% of the total area**. All in all, the tree species of a forest account for less than 2% of the biodiversity of such formations but are critical in the maintenance of the total biodiversity. In terms of biomass, tree species account for over 80% of a forest. In this way, the identity of a forest is best expressed by the biomass patterns and biodiversity status. This measure of biodiversity status has been discussed at length and would best be described in the context of Analog Forestry if measured as alpha biodiversity (numbers of species).

Biodiversity is what gives a forest its identity. In this context, a forest must also be appreciated as a constantly evolving, growing entity. From small pioneer bushes in an area after a fire to tall-growth fifty years later, the number of species and architectural complexity of a forest goes through many changes.

If forests are examined in this manner, two types of forests can be identified: natural and anthropogenic.

Natural Forests are tree dominated native ecosystems which have not been disrupted by human activity. They contain multiple age classes of native tree species and exhibit only the original patterns of biodiversity. The native species occur in seral patterns; those established in the ecological succession phases by natural processes.

Anthropogenic Forests are tree dominated ecosystems, managed or influenced by humans with a frequency or intensity capable of changing established seral patterns or the presence of native species at densities not found in natural forests. When ecosystems so created begin to contain elements of exotic species, they are also classified as anthropogenic forests.

¹ Ref: <http://oxforddictionaries.com/definition/forest>



Implications of the misconception of forests and opportunities for Analog Forestry

Defining forests as trees and plants quantifies nature into a sum of its parts. In essence, this view removes the complexity of ecosystems from human perception and facilitates the *commoditization* of forests for human use. As mentioned, this mentality is often reflected in destructive, widespread forest management practices. To illustrate this point, intensive forest practices often involve the liberal application of pesticides, monoculture plantations, and genetically modified organisms; often to the detriment of the surrounding environment and communities therein.

Conventional forest management practices such as sustained yield and maximized growth have often been informed by technological and scientific advances, as well as political agendas. These are often solely focused in timber production and not respectful of the complexity and the timelines of the Earth's natural processes. The result is degraded landscapes, contamination of wetlands, inequality in economic distribution, and unfair trade.

Inasmuch as the economic quantification and categorization of nature leads to its destruction, it also invites policy alternatives for healthier and more sustainable practice including payments for ecosystem services, sustainability programs, and restoration initiatives.

The socio-environmental benefits of restoring those degraded ecosystems are enhanced by Analog Forestry. This system mimics the structural and ecological functions of the natural forest, thereby providing more ecological benefits than other farming systems because it focuses on the development of mature, multi-strata, full canopy, biologically diverse forests; which provide an optimum of ecological functions. These include increased biodiversity, improved nutrient and water cycling, soil and water conservation, pest control, and carbon cycle benefits. **In practice, Analog Forestry systems restore degraded natural landscapes with highly productive and biologically diverse anthropogenic forests.**