# Chapter 3
# A Value for the Non-Valued:
## Valuation of Ecosystem Resources

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## ABSTRACT

*The ecosystem has its intrinsic value while offering an extrinsic satisfaction to humans. Ecosystem resources are devalued in the economic valuing process when a monetary value is difficult in assigning to the 'non-use' effects of the separated functions of the ecosystem. There is a tendency to forego the value of the ecosystem, the bequest or existence values, although it offers some utility of satisfaction. This trade-off decision leads to detrimental effects on the survival of organisms. The chapter allows the decision-maker to identify the non-use ecosystem resources with an 'off-trade' value for the production process through Reflective Analysis, systems theory and feed-in indicators. The off-trade decision would enable the sustainability of organisms in the ecological system with their interwoven functions intact and not exposed to bargaining as separated parts. As a result, it would help the regeneration of the valued resources for economic valuing process.*

## INTRODUCTION

"Non-valued" are the ecosystem resources that are affected by the economic valuing process when economic value is difficult in assigning due to the "non-use" effect of these resources. Ecosystem resources generate services while offering some utility of satisfaction to individuals. A change agent would decide the value of the ecosystem resource: an individual, a firm, or a government and will depend on the technology in hand, the framework in operation including the social forces linked

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with the utility of satisfaction (Sullivan & Arias, 1972). The decision, therefore, would permit the value to significantly vary on the above factors due to the connected subjectiveness. If ecosystem resources are inputs to the economic decision, as raw material, the limits of the methods and techniques associated with the extraction of those resources will decide its cost. If these resources provide only satisfaction, the value could be judged through an indirect assessment, using the alternative to the satisfaction of these resources. But, the difficulty in value judgment of bequest and existence values leads to a trade-off decision. This trade-off will support the sanction to proceed with no economic value added to these resources, leading to the extinction of non-use valued resources. They become the non-valued. Authors argue that the natural environment considered as a form of capital (Barbier & Markandya, 2013). However, one of the questions posed is, will the natural capital, once valued, be exposed to trading?

Another method is to assign preferences to natural capital (Loomis, 1996; Costanza, 2003, 2000). Without much scientific input, these preferences could result in the loss of the intrinsic value of the system (Zimmerman & Bradley 2019). Besides, manipulation of choices could happen (Costanza, 2003, 2000). But, if a value is not assigned, the resources are taken for granted as a continuous flow of nature. Nature has no capability in reproduction at the rate at which humans use and misuse them. This reduction of natural capital leads to environmental degradation unless an economic barrier is created to lessen the rate at which exploitation of natural resources is taking place. Sustainability of humans, in terms of both social and financial capital, and other organisms will depend on the sustainability of the ecosystem, the natural capital (Naeem et al., 2016; Lin, 2012; Morelli, 2011). As Lin (2012) points out, a wide range of ecosystem services are required to satisfy the demands of humans. These demands could vary from fertile soil for intensive agriculture, delivered by profoundly transformed ecosystems, to a steady supply of high-quality water, which depends on the maintenance of quasi-natural ecosystems. Evaluating trade-offs and valuing ecosystem resources are becoming concerns of the researches (Lin, 2012). As Naeem et al. (2016) point out, biodiversity is a foundation of ecosystem processes. For some people, it is like social cohesion, happiness and connections to nature, which is related to human well-being.

This chapter will enable economic decision-maker to identify the non-use resources in the ecosystem with economic value for the production process through Reflective Analysis. The valuing process would depend on contextual factors and professional judgment rather than a preference of a layman to ecological resources or manipulated choices for the satisfaction of a few elites. The valuing process for non-use resources will be supported and developed through systems theory and feed-in indicators. The introduction of an "off-trade" value assigned contextually would enable the sustainability of non-use valued resources with their interwoven