Graduate course

**Ecosystem-services-of-tropical-dry-forest**

**Soraya Villalobos, PhD.**

sorayavillalobos@mail.uniatlantico.edu.co

Profesor

Universidad del Atlántico

Departamento de Biología. Facultad de Ciencias Básicas

SVillalobos Web, SVillalobos ORCID, SVillalobos Publons

Summary

Connecting mechanistic knowledge studied in Biodiversity Ecosystem Function field with Biodiversity Ecosystem Service may help to quantify the Ecosystem Function that result in final ES to finally enhance the implementation of conservation policies. However, it is necessary the creation of a bridge to better manage spatial incongruence in the study and interpretation of ecosystem services and ecosystem function. Tripartite network approaches may help to understand the structure of ecosystem services as a product of multiple ecosystem function. This approach may complement the recent idea of the identification of groups of ES commonly positive associated in space, (i.e., ES ‘bundles’ Maes et al. 2012, Gao et al. 2016 ) as a way to link multiple ecosystem function to ecosystem services delivery. Some multi-mode network properties such as modularity help to discover cohesive groups within the web. Integrating ecosystem function and ecosystem services using this approach may account for how units interact with the subsets of species of different trophic levels and with which ecosystem services. We still would have to find a way to properly weight biodiversity effects, but multi-mode network may reduce the gap in the quantification of trophic interaction studied in ecosystem function and its influence on ecosystem services.

Course Objectives

By the end of this course, the grand students will be able to:

Define the concept of ecosystem services, its principles and limitations

Understand the key services associated with any resource (e.g., fresh water) through readings and case-studies

Appreciate the advantages and potential risks of monetizing ecosystem services

Integrate tactical advice on mainstreaming this approach into policy and standard government practices

Learn how to map ecosystem services with biparite tools in R