

**Title:** A systematic review of ecosystem services research on the Pendjari Biosphere Reserve: current state and the way forward.

**Presenting author:** Tèwogbadé J.D. Akpona<sup>1</sup>,

**Other authors:** Rodrigue C. Gbedomon<sup>1</sup>, Anne-Julie Rochette<sup>2</sup>, Luc Janssens de Bisthoven<sup>2</sup>, Jean Hugé<sup>3</sup>, Maarten P.M. Vanhove<sup>3,4</sup>, Romain Glele Kakai<sup>1</sup>

**Primary affiliation:**

<sup>1</sup>Laboratoire de Biomathématiques et d'Estimations Forestières, Université d'Abomey-Calavi, Bénin

<sup>2</sup>Royal Belgian Institute of Natural Sciences, Operational Directorate Natural Environment, Belgium

<sup>3</sup>Hasselt University, Centre for Environmental Sciences (CMK), Research Group Environmental Biology, Belgium

<sup>4</sup>Hasselt University, Centre for Environmental Sciences (CMK), Research Group Zoology: Biodiversity and Toxicology, Belgium

**Abstract**

The application of the ecosystem services concept in the UNESCO-Man and Biosphere reserves is of particular interest as biosphere reserves (BR) are meant to enhance a strong and harmonious relationship between people and protected areas. In this paper, we systematically reviewed the ES studies conducted on the Pendjari Biosphere Reserve in Benin with the aims to (i) provide a summary of the research effort on ES-Science in Pendjari, (ii) critically analyze the achievements in ES-science in PBR, and to (iii) identify the knowledge gaps and way forward in supporting ES research and its mainstreaming into policy decisions in Pendjari. Findings show a growing body of literature on ES studies in PBR with an average of 3.7 studies per year, resulting in 44 papers within the past twelve years. The focus of these studies lies on provisioning ecosystem services, including agricultural products, wild food, fish, oyster, fuels, material for construction, honey, medicinal plants, etc. In this presentation we will describe the results of the review, and we will identify practical challenges which limit the development of an effective uptake of ecosystem services research in Benin. We advocate for capacity development of stakeholders (researchers, park managers, local communities) in research and sustainable use; and we recommend the development and use of ES assessment tools that are adapted to local contexts.

**Keywords:** Ecosystem services; Review; Pendjari; Benin.