# Establishing Criteria to Define Priority Areas for Biodiversity Conservation a Case Study from Vietnam

Xuan Dinh Vu[1], Csaplovics Elmar[2]

[1] *Tu Dresden, Germany, Institute of Photogrammetry and Remote Sensing, Department of Geoscience, Faculty of Environmental Sciences, Germany*
[2] *Tu Dresden, Germany, Institute of Photogrammetry and Remote Sensing, Department of Geoscience, Faculty of Environmental Sciences,*

## Abstract

The establishment of protected areas has been widely recognised as an effective means to reduce global biodiversity loss. In order to support for planning conservation through the creation of protected areas, the selection of priority areas for conservation is crucial. However, the identification of priority areas for conservation often required much time and resources in surveys and assessments. Moreover, still many challenges remain for zoning priority level for biodiversity conservation at a large scale. In this study, we applied the environmental Condition—Pressure—Response model to suggest a set of criteria for identifying priority areas for biodiversity conservation. Our empirical data has been compiled from 185 respondents, dividing three main groups: Governmental Administration; Research Institutions and Protected Areas in Vietnam by using a questionnaire. Consequently, the Analytic Hierarchy Process (AHP) theory was used to identify the weight of each criterion in the set. Our results have shown that priority level for biodiversity conservation could be identified by three main criteria: Condition, Pressure, and Response with the value of the weight of 26 %, 41 %, and 33 %, respectively. In addition, our study also revealed the similarity on the results of the assessment on prioritisation of the criteria between the groups of Governmental Administration and Protected Areas since they put a focus on the criterion "Pressure". In contrary, a significant difference was observed in the group of Research Institutions with an emphasis on the criterion "Response". Based on our results, we provided recommendations to apply the developed criteria for identifying priority areas for biodiversity conservation in Vietnam.

**Keywords:** Analytic Hierarchy Process, Biodiversity conservation, Condition—Pressure—Response model, Criteria, Priority areas, Vietnam.

**Contact Address:** Xuan Dinh Vu, Tu Dresden, Germany, Institute of Photogrammetry and Remote Sensing, Department of Geoscience, Faculty of Environmental Sciences, Ackermannstraße, 01217 Dresden, Germany, e-mail: dinh.vuxuan@gmail.com