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## Indonesian Biology Teacher and Agronomy Students' Perception of Commons Dilemmas

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### Abstract

Central Sulawesi harbors core ecosystems of the global Wallacea biodiversity 'hotspot'. Largely consisting of common pool or open access forest resources, it is heavily threatened by intensive resource appropriation such as rattan extraction and forest conversion into agricultural plots. To improve prospects for conservation and sustainable long-term development, a set of socio-ecological 'commons dilemmas' need to be solved. This requires local actors who command knowledge on the social, economic, institutional, and ecological aspects of forest resource utilisation. In the spirit of the Agenda 21 or the Convention on Biological Diversity (CBD), fostering such knowledge should be a prime task of international environmental education. While Indonesia strives to include environmental education in its school curricula, we report on results of a study that systematically investigates the pre-concepts that future teachers bring to local resource conservation issues in Central Sulawesi.

Based on the 'Protection Motivation Theory', we abstracted our results from 19 qualitative in-depth interviews with agronomy and biology teacher students from UNTAD University, Palu, i.e. from potential key communicators on resource use dilemmas. They are only able to teach or provide advice what and how they themselves understand the resource management problems as well as potential solution strategies to be. Most interviewees readily recognised ecological aspects of the exploitation of forest resources, and frequently called for state regulations. While emphasising e.g. the time tap of over-exploitation of natural resources, the core of the commons dilemmas, i.e., the need to institutionally balance short-term individual exploitation profits with long-term and community interests was not recognised in any detail, however.

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