

Buddhism and Biodiversity Conservation in Sri Lanka

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Buddhism and biodiversity conservation in Southeast Asia: past, present, and future

Epitome: We conducted biodiversity surveys and standardized interviews in and around Buddhist temples in Sri Lanka and Thailand to examine the role of Buddhism in biodiversity conservation in South and Southeast Asia, then hold workshops with monks, scholars, and conservationists to help translate these findings into conservation action.

Introduction:

Background: Curbing the loss of biodiversity and natural habitats is one of the planet's most pressing issues, and this problem is most acute in South and Southeast Asia. Many insular plants and animals in this archipelagic region are found nowhere else, and yet forest felling is higher than in any other tropical area. At the current rate of forest and biodiversity loss, it is estimated that 13-85% of species in Southeast Asia will be extinct by 2100 (Sodhi et al. 2010b). Tropical rain forests are the most biologically diverse terrestrial ecosystems on Earth and are found almost exclusively in developing countries. Economic realities often force the destructive extraction of forest resources for short-term gain (e.g., timber and bush meat), thus destroying the long-term value of tropical forests for oxygen production,

climate change amelioration (carbon sequestration), and wildlife. Although impoverished people living around national parks and wildlife sanctuaries realize the conservation value of protected areas (Sodhi et al. 2010a), lack of education about the effects of forest and biodiversity loss and about environmentally sustainable income sources hinders the conservation of high-value protected areas, where poaching and illegal logging are common.

Biologists have been sounding the alarm bells about the dangers of habitat loss and species extinction for many years (Brook et al. 2006), and it is now clear that the solutions to curbing the planet's current mass extinction event will be inherently non-biological. These remedies will require cross-disciplinary efforts involving governments, scientists, sociologists, educators, civil society and religious leaders. The noted biologist and conservationist E.O. Wilson has argued passionately that public education campaigns work too slowly to curb the planet's biodiversity loss before it is too late (Wilson 2007). He argues that religion provides the most effective conduit to communicate conservation imperatives with a large audience in an expedient manner. Wilson notes that habitat and biodiversity conservation resonates with the precepts of most major religions, and that calls for conservation action from religious leaders appeal to an individual's spiritual leanings and worldview.

Objectives for Sri Lanka

(1) To survey the biodiversity of two or more selected taxa in monasteries and the surrounding area through visual observations.

(2) Quantify perceptions of biodiversity by Buddhist monks and residents near forest Monasteries through standardized interviews.

(3) Convene a workshop that brings conservation biologists together with Buddhist monks, abbots, and other stakeholders to discuss the role of Buddhism in changing conservation attitudes in the country.

Duration of the project: One year from February 2011

Biodiversity survey

To examine the role that Buddhism has played in biodiversity conservation we selected 50 temples that fit the following criteria: at least 1 hectare in area; at least 1 km from a national park; and relatively evenly distributed throughout the selected region. At each of these monasteries, we surveyed the species richness and abundance of two taxa that serve as indicators of vertebrate and invertebrate biodiversity: birds and butterflies.

We chose these taxa because they are relatively species-rich and can be confidently identified using pictorial keys without killing the organisms. To survey birds, standardized point counts were made along transects within each forest monastery and along a 1 km transect extending to the east of each monastery to make a standardized comparison. The length of transects within each forest monastery were proportional to its total area; point counts along bird transects will be made every 100 m using sighting and acoustical (song) data. Butterflies were identified, counted and photographed continually along the paths used for the avian transects. We also recorded the presence or absence of primates.

QNR survey

- Quantification of the perceptions of the biodiversity by Buddhist monks and residents near forest temple (Aranya) through standardized interviews.
- No. of interviewed monks depend on the availability of monks at the Aranya at that time (Mostly 1 - 2)
- 10 individuals (families) were interviewed at the village.

Province	No. of Aranya
North Western	04
Western	14
Central	03
Eastern	03
North central	05
Sabaragamuva	05
Southern	09
Uva	09
Total	52