

Research paper

What can forest values tell us about human well-being? Insights from two biosphere reserves in Madagascar



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HIGHLIGHTS

- Forest value perceptions provide insights into local natural resource and land use.
- Human capabilities describe the relationship between forest values and well-being.
- Instrumental and intrinsic values reveal the need for nature conservation.
- Human capabilities provide orientation in sustainable biosphere reserve management.

ARTICLE INFO

Article history:

Received 26 May 2015

Received in revised form 2 November 2015

Accepted 14 November 2015

Keywords:

Biosphere reserves
 Capability approach
 Ecosystem services
 Forest value perception
 Madagascar
 Sustainable development

ABSTRACT

The article discusses the relationship between conceptions of forest values among local people in Madagascar and human capabilities. According to Amartya Sen's capability approach, capabilities include both the means of maintaining a livelihood and intangible elements that are necessary to achieve overall well-being. In a qualitative case study in Madagascar's Mananara-Nord and Sahamalaza Biosphere Reserves, we investigated local peoples' conceptions of forest values. Our analysis revealed that forest-value categories fall under a range of ecosystem services and are therefore clustered accordingly. The distinction between instrumental and intrinsic values indicates the broad spectrum on which local people conceive the benefits they derive from the forest. This article discusses the interconnection between instrumental and intrinsic forms of forest value and the important role played by intrinsic values in promoting well-being and conservation. It also addresses the nature of the capabilities that are based on the perceived forest values. Two conclusions are drawn. First, local population's views on valuable natural elements serve to indicate what they consider important for the achievement of well-being. Second, capabilities based on such natural values are vital for their collective sense of sustainable development and need to be given greater consideration in sustainable natural resource and land management.

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1. Introduction

Nature serves as basis for society and the economy insofar as it provides both natural resources to satisfy human needs and life support functions that are essential to human well-being. In order to foster sustainable living conditions it is necessary to find ways to maintain the supportive functioning of ecosystems. Ensuring sustainable living conditions implies the management of people's livelihoods so as to foster the capability of others, and especially future generations, to live sustainably (Brundtland, 1987; MEA, 2005).

In Madagascar, an island with extraordinary natural vitality, many protected areas have been established in order to sustain the conditions necessary for local people's way of life. The well-being of rural communities still depends heavily on their use of natural resources. They have learnt how to maintain soil fertility, where to find natural resources that can be used as building materials, and which plants can be exploited for their medicinal properties (Byron & Arnold, 1999). The establishment of protected areas is thus clearly of concern for the rural populations of Madagascar. One complicating factor is that funding providers and policy makers tend to have a different interpretation of the benefits provided by ecosystems than rural Malagasy people (Scales, 2011). Policy makers, for example, focus on protecting forests in order to reduce greenhouse gas emissions, whereas local people see the forest as being essential for their dietary requirements and their health, and as a resting place for their ancestors. Thus, alongside the assessment and valuation

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of the global ecosystem-services provided by the forests there is a need for the cultural framing of the relations between ecosystem functioning and communal senses of well-being.

On the basis of two case studies in Madagascar this article explores the links between nature, human well-being and development relevant for sustainable land management. It raises two questions. Which particular values do rural Malagasy people associate with forests? And to what extent are these values conducive to furthering local people's well-being? In the examination which follows interpretations of ecosystem services natural values are joined to Amartya Sen's capability approach. We first give a description of the case study sites (two biosphere reserves in Madagascar) and the methodologies applied, and then offer an analysis of forest values, which are defined here as cultural benefits for local people. By establishing a link between forest values and human well-being, we indicate the importance of natural values and thus of the capabilities with which they are associated. We also discuss their consideration in land management, and propose ideas for new perspectives in sustainable land management.

2. Conceptual background

2.1. Ecosystem services and natural values: The link between nature and well-being

Daily et al. (1997) define ecosystem services as “conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfil human life” (Daily et al., 1997: 3). Daily et al. (1997) thereby draw a link between ecosystem services (ESS) and human well-being. On the basis of this connection, the Millennium Ecosystem Assessment (MEA) was established in order to collect information capable (a) of deepening understanding of the relationship and links between ecosystems and human well-being, and (b) of demonstrating the potential contributions ecosystems can make to poverty reduction and enhancing well-being. The MEA defined human well-being as consisting of “basic material needs for a good life, the experience of freedom, health, personal security, and good social relations” (MEA, 2003b: 71). Two sets of factors are thus important for the achievement of human well-being: first, those which make it possible to maintain a livelihood and second, those which promote well-being. The MEA quantified the economic benefits of ESS and the anthropogenic threats posed to them. Forms of their non-economic value were also considered, notably their ecological, socio-cultural and inherent value based on ethical and cultural foundations (MEA, 2003a).

Generally speaking, human beings – whether individually or in groups – determine “what things are good, and how good they are” (Schroeder, 2008: 1st paragraph). These valuations can also be applied to the environment, not only insofar as the latter fulfils certain functions, but also insofar as it may be considered culturally meaningful and beautiful.

O'Neill, Holland, and Light (2008) take this distinction further. Attributes that are of *instrumental value* are those which are considered useful. If a natural object is used to achieve a predetermined end or to satisfy a need, either the object or the relation is of instrumental value. This category contains several of the provisioning ecosystem services such as timber and medicinal plants, and regulating services such as soil retention of floodwater. In this article, instrumental values are considered as being generally substitutable, i.e. if a particular good is not available, the need can be fulfilled by an equivalent (Chan, Satterfield, & Goldstein, 2012). This propensity is connected to a separatist view of human–nature relations.

Those elements of nature which have value in their own right are of *non-instrumental value* (Kupperman, 2005). Natural processes

can be described as means-end relations (such as the food chain); nevertheless, all means-end relations come to an end at the point at which an entity is seen to be “good-in-itself”, or intrinsically valuable. This idea is bound up with the idea of the interconnectedness of human–nature relations.

In the literature, different levels of non-instrumental natural value have been distinguished (Eser & Potthast, 1999). The category of *inherent moral value* refers to the moral standing of an entity considered in its own right. Where non-human entities are concerned, the important question is whether the entity at issue should be considered morally significant independently of any human valuation. In such cases, this will need to be decided through philosophical reasoning, rather than on the basis of given preferences. It was evident from the field interviews undertaken for this study, however, that this dimension had little cultural resonance amongst local people in the Malagasy biosphere reserves; it is therefore not considered here.

Another form of non-instrumental value, *eudaimonistic intrinsic value*, can be attributed to natural entities through associating biodiversity with human happiness/contentment and overall well-being. Here, the anthropocentric perspective is clearly significant. The objects or processes that are of eudaimonistic intrinsic value are ends in themselves for human beings, and are encountered by human beings through sensory perceptions, and feelings (Ott, 2003). Such qualities are perceived and recognised as being valuable in themselves. They are non-substitutable because they are unique. These values are neither absolute nor universally valid (as is the case with inherent moral values), but depend on the interconnections between human beings and the natural environment within a given context. Examples of this form of value include the sunset over the ocean or the appreciation of animals in their natural environment. Ecological values (attributed, for example, to species diversity and ecosystem integrity) and socio-cultural values (expressed, for example, through the designation of sacred places and the associated development of social rules) fall under this category (MEA, 2003a: 129).

Despite criticisms that the ecosystem services concept is anthropocentric, tends to promote commodification (McCauley, 2006), and is excessively normative (Schröter et al., 2014), this approach is still adopted here as means of conceptualising the perceived forest values. This article aims at a suitable inclusion of non-instrumental values in the sense of eudaimonistic intrinsic values (hereafter referred to as intrinsic values), in close integration with instrumental values. Ecosystems thus provide services to human beings that are of instrumental value insofar as they provide the means of maintaining a livelihood. On the other hand, ecosystems provide services that are of intrinsic value. These intrinsically valuable services foster other, often immaterial, dimensions of well-being (see Fig. 1).

Although for analytical purposes it can be useful to present instrumental and intrinsic values as discrete categories, subsequent

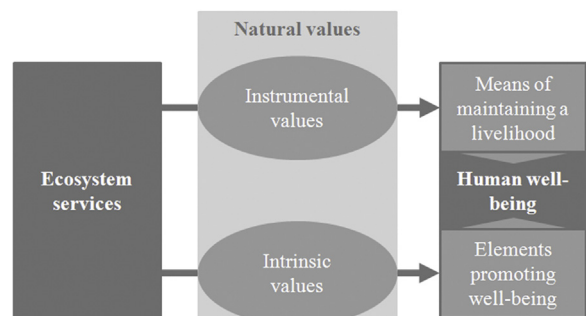


Fig. 1. Conceptual diagram indicating the links between nature and well-being.

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