Summary

As species go extinct at an exceptionally high rate, action for nature conservation is increasingly called upon. To increase the efficacy of conservation efforts, a shift in nature conservation strategies has taken place in recent decades: in addition to moral arguments for the protection of nature that emphasise the intrinsic value of biodiversity, strategies that focus attention on the instrumental value of nature for human well-being have emerged. Such strategies are aimed at raising awareness about the importance of nature for our own well-being in order to provide additional incentives to act for the protection of nature. Furthermore, it is assumed that nature conservation objectives will be reached more easily when nature conservation policies better account for the livelihoods of local communities. Where nature conservation policies were initially predominantly aimed at conserving ecological values, there is increasingly attention for the societal values of nature. As a consequence, there is a growing demand for knowledge about the values people assign to nature.

This thesis looks into public perceptions of the value of nature, thereby reflecting on the use of the ecosystem services (ES) concept for gauging such values. The concept of ES puts focus on the ecological functions of nature that are of service to human well-being and has increasingly been forwarded as a potential theoretical framework to shed light onto the societal values of nature (see for instance the 'Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services', IPBES). Given the starting point in the disciplines of ecology and economics, however, the ES literature has predominantly paid attention to the economic value of nature, while the values people assign to nature cannot be solely expressed using economic terminology. For this reason, a growing group of scholars has called for value pluralism in the ecosystem services domain, wherein ecological values and economic values are distinguished from socio-cultural values. Yet, while the controversy over monetising nature resulted in thorough scrutiny of the economic valuation of nature, little effort has been paid to reflect on research that practices a so-called 'socio-cultural valuation' of ES. How should we understand socio-cultural values for nature within an ES framework? What can we learn from using an ES approach to gain knowledge about people’s values for nature? These questions form the backbone of this thesis.

Chapter 2 reviews how socio-cultural values for nature within ES research can be conceptualised.
Given the functional perspective of the concept of ES, we posit that socio-cultural values for ecosystem services should be understood as the importance which people assign to specific functions of nature. These assigned values can both represent negative or positive associations with nature (i.e. both ecosystem services as ecosystem disservices), can be expressed individually or collectively, and can be of egoistic or altruistic nature (i.e. even if you do not find nature important for your own well-being, you may still find nature important for the well-being of others). In addition, this chapter presents a theoretical framework wherein socio-cultural values are the product of the dynamics between a physical environment, which is characterised by a number of physical landscape attributes such as type of vegetation, and a social environment that shapes how people perceive and interact with this physical environment. Along similar lines nature should be seen as both materially and socially produced, since it is grounded in the material characteristics of the physical environment and the socio-cultural contexts through which meanings of nature are created and reproduced. This also means that the importance that people assign to specific functions of nature, i.e. ecosystem services, is to a large extent influenced by underlying representations of nature and the extent to which these representations are ecocentric or anthropocentric.

This is also shown in Chapter 3, in which we look at the relations between the values people assign to ES and their attitude towards the restoration of wetlands. For this chapter a survey was conducted in collaboration with the World Wildlife Fund (WWF), through which farmers, fishermen and local residents working and living in Persina Nature Park in Bulgaria were asked which ES they associated with different types of wetlands, which of these ES they thought were most important and what their attitude was towards the ecological restoration project initiated by WWF. Based on these questions, four underlying environmental value orientations were identified: an anthropocentric value orientation that puts emphasis on the importance of nature for local communities, an economic value orientation that puts emphasis on tensions between nature conservation and economic prosperity, an ecocentric value orientation whereby nature is predominantly important for other species and a fourth value orientation, whereby nature is seen as something that is not important.

The instrumental perspective of nature that the concept of ES forwards, also makes that questions are asked about the substitutability of nature. Such questions closely relate to the question whether the importance of nature is contextual and predominantly determined by location or by a set of generic attributes that are present in multiple locations. Although these questions could be (and have been) answered from a theoretical and ethical perspective, in chapter 4 and 5 of this thesis these questions are treated empirically. Chapter 4 looks into the extent to which local residents are willing to compensate certain negative environmental impacts with ecological restoration elsewhere. Such mechanisms of 'biodiversity offsetting’ or environmental compensation are increasingly propagated to ensure that negative impacts on nature can be appropriately mitigated.
or, if necessary, compensated for. In most biodiversity offsetting studies, however, the question whether local residents are willing to be compensated is neglected. This question forms the basis of chapter 4, for which research has been done in East Lothian, Scotland. As a consequence of demographic changes, East Lothian - which is situated just outside the city of Edinburgh - faces a growing demand for residential housing. We used this context to assess to what extent residents from different villages in East Lothian were willing to accept additional housing in exchange for woodland restoration. To better understand their choices, this chapter also looks into the ES people associate with different kinds of woodlands (as different forms of environmental compensation). It furthermore explored which ES people found important and what their attitude was against additional housing in the East Lothian countryside.

Results of this chapter show that the extent to which people were willing to accept environmental compensation, strongly depended on the way in which they experienced the particular process of land use change at hand. Compensation was mostly accepted by residents who saw the necessity of additional housing but simultaneously thought that additional housing would have a negative environmental impact. These respondents accepted that additional housing will happen and that any form of compensation is always better than none. In contrast, respondents who experienced additional housing as a loss of the rural character of their villages were not willing to accept woodland restoration as a measure to compensate for this loss. This, while one could argue that compensation is most important for this group of residents: they are mostly affected by the change. Differences in attitudes against additional housing could partially be explained by the type of villages respondents lived in: residents from villages with a high degree of urbanisation had a more positive attitude towards additional housing and compensation than residents from villages with a lower degree of urbanisation. This is perhaps not surprising but shows the importance of taking into account the heterogeneity and spatiality of values for nature.

Chapter 5 elaborates on the spatially heterogenous valuation of nature by studying how values for nature differ between residents from six different regions in the Netherlands. Data from the Hotspotmonitor was used for this chapter. This database stems from an online survey for which residents from 'de Kempen', 'het Groene Hart', Amsterdam, Groningen, Twente and Oost-Betuwe were asked in an online-survey to pinpoint the areas with nature they found most attractive, within their own regions and the Netherlands at large. As such, this chapter delves into differences between regions but also between scales. The chapter also explores to what extent the ‘attractiveness’ of nature can be explained by particular physical attributes, such as type of nature and accessibility.

Although results from chapter 5 show that there are clear differences in values for particular landscapes between regions - which logically also has to do with the fact that particular types landscapes are more abundant in a certain region -, it is the communality of perceptions that strikes attention. National park ‘de Veluwe’, parts of the Dutch coast and the hilly area of Southern Limburg are
marked as most attractive by residents from all regions. The statistical analyses of the attributes that contribute most to the importance people assign to places also show that respondents from all regions mostly appreciate places near the coast, urban green, hilly areas and national parks. This shows there is at least somewhat of a shared understanding of what the attractive pieces of nature in the Netherlands are, suggesting that social representations play an important role in the construction of values for nature.

The chapters of this thesis that have been discussed hitherto, show that the concept of ES can be employed in very different ways. This heterogeneity is characteristic for the contextual nature of research on the socio-cultural values for nature. Nevertheless, the variegated implementation of the ES concept has become increasingly debated in the ES literature, because it might hamper the degree to which different case studies can be compared and meaningfully synthesised. Going back to what has become a rather eclectic literature on ES valuation, Chapter 6 reviews the different ways in which socio-cultural values for nature are studied in the ES scholarship. The chapter thereby posits that differences in research design result from the different motivations researchers have for studying values for nature. These motivations are broadly summarised as follows: a.) to create knowledge and awareness about people-environment relationships, b.) to transform values to the good of nature and bring about societal change and c.) to pave the road for more inclusive and participatory decision making processes. It is argued that making such differences explicit promotes an informed interdisciplinary discussion about how research on values for nature can be designed and used. The discussion should take up a more prominent place in the ES literature, which until now has mainly focused on the potential of standardised frameworks.

In chapter 7, I integrate findings from the different chapters in order to provide an answer to the research questions posed in this thesis. I argue that it is important to distinguish between different ways in which socio-cultural values for nature can be understood. Firstly, socio-cultural values for nature can be understood as guiding principles that influence how we interact with nature. Secondly, we may see such values as instrumental values, thereby reflecting the relative importance people assign to specific forms or functions of nature. This information can consequently be used in environmental governance, for instance by prioritising highly valued areas for nature-based recreation. Such an exercise does, however, require us to assume that values are relatively stable; an assumption which may not always hold true since many of us do not think about the question of which nature is important (and for what reasons) on a daily basis. As such, it is important to distinguish between values that are well developed and values that are transformative. Allowing for deliberation about the importance of nature is necessary when people do not (yet) have a strong preference for specific forms or functions of nature.

Reflecting on the empirical chapters of the thesis I conclude that the instrumental and anthropocentric nature of the ES concept limits our understanding of the values people assign to nature. The
empirical studies of this thesis show that the support of biodiversity is one of the functions of nature that people find most important. The conceptualisation of nature as a provider of services to human well-being may not resonate with people who are not used, and perhaps not willing, to judge nature according to such terms. As such, the concept of ES can oversimplify the complex and contextualised environment in which values for nature are constructed. The simplicity of the concept of ES, however, is both a weakness and a strength. The second conclusion therefore is that the concept of ES can function as a heuristic device between actors engaged with and/or affected by nature conservation, among which scientists, policy makers, conservation practitioners and local residents. The translation of complex ecological processes into ES offers a platform to discuss the associations people have with certain functions of nature. Furthermore, the instrumental paradigm in which the concept of ES operates offers people the opportunity to reflect on the question of why nature is important and how they think nature and people relate to each other; even if (or precisely because) it is perceived as controversial. In this way, the concept of ES can contribute to the wish of focusing more attention to the societal values of nature in conservation governance.