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# Four decades of World Natural Heritage – how changing protected area values influence the UNESCO label

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## Abstract

Since the launch of the World Heritage Convention in 1972, World Heritage sites have become increasingly popular. To date, more than 1000 sites have received World Heritage status, among them 228 natural and mixed sites. Yet too, in the past four decades, protected area paradigms have evolved from rather strict and exclusionary to more integrative approaches. Nevertheless, relatively little is known on how such developments influence World Natural Heritage (WNH) sites. This paper presents the results of a global survey of 128 of 211 WNH sites listed in 2011 and analyses the results by taking the year of inscription as a reference. The article shows that the understanding of WNH status has undergone great changes: from being perceived as an internationally valued instrument to foster conservation, WNH status has now rather become a label of great promotional importance. This can, e.g., be shown by a decreasing influence of WNH status on the status of protection of a site. Conversely, the influence of WNH status on visitor numbers has increased with time. Furthermore, evidence suggests that more complex effects of WNH status attribution, such as a site's influence on sustainable development, take time to develop and are thus greater for sites that have been inscribed in the list at an earlier date. Given these developments, it is necessary to rethink whether the World Heritage approach in its current form is still timely, and how the development potential of World Natural Heritage sites can be tapped while ensuring their conservation.

## Zusammenfassung

Seitdem die Welterbekonvention im Jahr 1972 erschaffen wurde, ist die Popularität des Welterbestatus ungebrochen. Bis heute haben mehr als 1000 Stätten den Welterbestatus erhalten, darunter auch 228 Weltnaturerbe- und gemischte Stätten. Doch in den vergangenen vier Jahrzehnten haben sich auch die Ansätze im Schutzgebietsmanagement von eher strikten und ausgrenzenden zu integrativeren Ansätzen gewandelt. Nichtsdestotrotz weiß man relativ wenig darüber, wie diese Entwicklungen die Weltnaturerbebestätten beeinflussen. Dieser Artikel präsentiert die Resultate einer globalen Befragung von 128 von 211 Weltnaturerbe-Stätten, welche im Jahr 2011 auf der Welterbeliste aufgeführt waren. Die Analyse dieser Daten anhand des Aufnahmejahrs zeigt, dass sich das Verständnis des Weltnaturerbebestatus stark verändert hat. Während der Weltnaturerbebestatus ursprünglich als ein international anerkanntes Schutzinstrument angesehen wurde, ist er heute eher zu einem Vermarktungsinstrument von globaler Bedeutung geworden. Dies kann z.B. am schwindenden Einfluss des Weltnaturerbebestatus auf den Schutzstatus eines Gebiets gezeigt werden. Zudem gibt es Hinweise darauf, dass komplexere Auswirkungen des Weltnaturerbe-

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status, wie beispielsweise der Einfluss auf nachhaltige Entwicklung, längere Zeit beanspruchen. Diese Effekte sind darum bei Welterbestätten, die zu einem früheren Zeitpunkt ausgezeichnet wurden, verstärkt zu beobachten. Der Artikel stellt diese Resultate in den Kontext von Schutzgebietsparadigmen, die sich während dem letzten Jahrhundert von sehr strikten zu vermehrt integrativen Konzepten gewandelt haben. In Anbetracht dieser Entwicklungen muss überdacht werden, ob der Welterbeansatz in seiner heutigen Form noch zeitgemäß ist. Ebenso gilt es zu hinterfragen, wie das Entwicklungspotenzial von Weltnaturerbestätten genutzt werden kann, ohne den primären Auftrag zum Schutz der natürlichen Ressourcen zu schwächen oder gar zu gefährden.

**Keywords** World Natural Heritage sites, international labelling, sustainable regional development, conservation debate, global survey

## 1. Introduction

The World Heritage (WH) Convention was conceived at a time when rapid economic development increasingly put the world's most important natural and cultural heritage sites at risk (Lausche 2008: 89). In view of these threats, and the fact that natural and cultural heritage is of universal value to humanity, the General Conference of the UNESCO adopted the 'Convention concerning the protection of the world cultural and natural heritage' in 1972 (UNESCO 1972)<sup>1</sup>. The WH Convention aimed at bringing the international community to act in concert to preserve the heritage of humankind. From the 13 sites originally inscribed in 1978, World Heritage has become a designation of global importance, with 1,007 World Heritage sites in total, of which 779 are cultural sites, 197 are natural sites and 31 are a combination of the two (UNESCO 2014).

Initially regarded as a seal safeguarding humanity's natural heritage, World Natural Heritage (WNH) status has since developed into much more than a conservation symbol. It is now viewed as a promotional tool (evidenced by numerous commissioned assessments, such as Hambrey 2007; Prud'homme et al. 2008; Rebanks 2009), a landmark for international tourism (Li et al. 2008; Timothy and Nyaupane 2009; Jimura 2011), or even a tool for fostering social cohesion (Jha 2005). Despite these numerous interpretations and their corresponding expectations, comprehensive and comparative evaluations of what effects are induced by WNH status are still largely missing. Furthermore, the effects described are rarely comparable due to their focus on a limited geographical region and different epistemological approaches. In addition, large protected areas such as WNH sites are increasingly seen as potential triggers for sustainable regional development processes because labelled areas allow communities to guide development in a certain direction (see e.g. Hammer

2003; Liechti and Wiesmann 2004; Mose 2007; Galvin and Haller 2008; Galla 2012).

The present study analyses the responses of managers of 128 WNH sites (representing 61 % of all sites listed in 2011) and is thus one of the very few comparative analyses on WNH status. In addition to investigating the effects induced by WNH status, this paper also analyses how these effects have changed over time and how the different sites' expectations regarding WNH status and their utilisation of the status have evolved. In particular, survey results reveal a shift from an international conservation label to a worldwide promotional tool. These changing understandings of conservation are considered in the context of the current conservation debate, which has decisively influenced the interpretation of the WNH status.

## 2. Methodology

The global survey incorporates answers of managers from 61 % of all WNH sites listed in 2011 (Fig. 1). The study design and its evaluation builds on a grounded theory approach as introduced by Corbin and Strauss in the late 1960s (Corbin and Strauss 2008), in the sense that findings – which can be both qualitative and quantitative in nature – were continuously evaluated and incorporated into the next research step.

Based on three case studies by the authors in Kenya, Tanzania and Switzerland in 2011, a 'driving force – pressure – state – impact – response' framework (EEA 2006) was developed for the conservation-use context. This process helps to understand how conservation, tourism and regional development mutually influence each other in the context of WNH sites. The different drivers, pressures, states, impacts and responses were categorised into ecological, socio-economic and institutional indicators, forming the



Fig. 1 Overview of the WNH sites and mixed WH sites that participated in the survey (map design: Matthias Engesser)

basis for an extensive questionnaire on how WNH site designation can contribute to sustainable regional development. The goal of this procedure was to develop a practical, context-specific survey to better understand the effects of WNH status and its influence on sustainable regional development. Here, sustainable regional development is understood as the interplay of all processes and developments that contribute to an advancement of environmental, economic and social issues within a defined region (Siegrist et al. 2009: 103; see also Subsection 4.5). The questionnaire focused primarily on the influence of WNH status on conservation, the economic impacts of WNH status on tourism, and its influence on social issues like participation, education and awareness raising. Furthermore, there was an overarching section on how survey participants valued the site's contribution to regional development. Questions were answered on a three-to-five-point scale (ranging from very negative to very positive) and complemented with open questions and the option to leave comments, which was used extensively.

To differentiate between developments that are independent of WNH status and those that are influenced by WNH designation, each question asked for the current status of an indicator (underlain with statistical data, where possible), development trends, and the influence of WH status on these developments. This setup requires a high degree of familiarity with both the region where the site is located and with the site itself; as such, only site managers or the relevant public authori-

ties were considered suitable interviewees. The online questionnaire was sent to all WNH sites in summer 2012. Managers from 128 out of a total of 211 sites completed the questionnaire. Almost half of all respondents were site managers, one third were senior staff, 12 % were from the responsible public authorities, and the remainder were advisors, researchers or other staff members. Professional backgrounds in conservation and management were equally represented (45 % of each); the remaining 10 % of respondents had backgrounds in tourism or regional development. One third of the respondents were female, two thirds were male. The high response rate of 61 % underscores the importance of this issue. Based on an evaluation of the quantitative data, 34 interview partners from 12 different WNH sites were selected in order to better understand the results of the quantitative survey. The question on how the interrelation between WNH status and sustainable regional development worked formed the core of these interviews, which were conducted in a semi-structured form in-situ or via Skype according to Flick (2009: 194).

These qualitative interview data were analysed with ATLAS.ti. The quantitative survey data were evaluated with SPSS, using a number of independent variables. For this paper, we focused on the influence of the date of inscription on the effects attributed to WNH status. This variable was determined as indicative for the overall change that occurred since the date when the world heritage status was created. For individual sites, a direct comparison of older and more recent data is possible if there are respective time series. However,

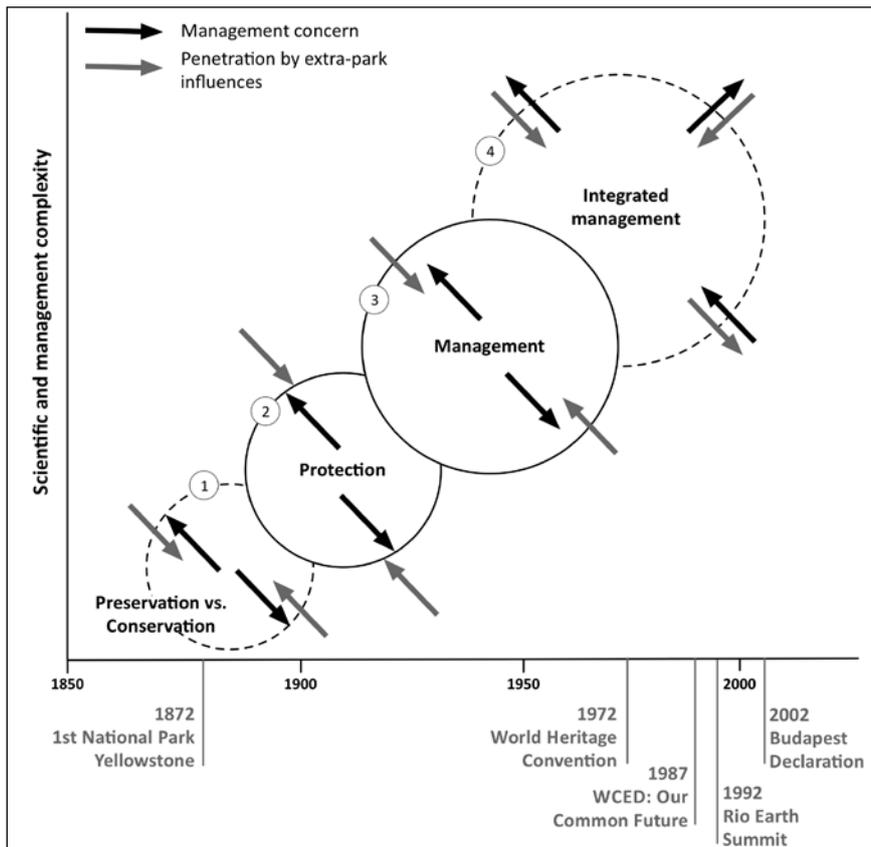


Fig. 2 Development of conservation approaches (adapted from Slocombe and Dearden 2002: 303)

such data are lacking on a global level. Due to the individual foci and epistemological approaches of research in each WNH site, existing data for individual WNH sites are not comparable across sites and continents. Nevertheless, the breadth of the available survey data, in combination with the sites' year of inscription, bring to light noteworthy results that allow to draw conclusions on changes that have occurred during the past four decades. We specifically use the described approach to investigate changes that occurred in terms of the site's motivation for gaining WNH status, trends regarding the impact of WNH status on conservation, and the influence of WNH status on tourism. We also analyse how these developments relate to sustainable regional development. In order to corroborate the findings, the survey results are backed with existing studies. To put the results in their proper context, we provide an overview of the conservation debate and changing paradigms therein, which decisively impact the developments attributed to WNH status.

### 3. Historical overview of the conservation debate

The history of WNH sites is closely linked to the history of conservation (Fig. 2). Although "conservation

and sustainable utilisation of natural resources are centuries-old inherent dimensions of indigenous culture and livelihoods" (Saxena et al. 2011: 79), the first attempts at nature conservation in the sense of protected area designation date back to the late 19<sup>th</sup> century (Nash 1980). The large-scale colonisation of the New World and the resulting degradation of natural resources made it obvious – at least to a few progressive minds – that pristine nature was not an endless resource (see Adams 2009 as well as Fox 1985 or Steiner 2011 who analyse the writings of John Muir). In 1872, the US Congress passed an "[a]ct to set apart a certain Tract of Land lying near the Head-waters of the Yellowstone River as a public Park", thus creating the world's first national park (Library of Congress 1872: 32). The park's rules were directed against commercial exploitation in particular, but allowed for tourism and thus a certain human utilisation, as indicated by the dotted line around the first circle in Figure 2. Even then, two distinct schools of protected area management had emerged: The so-called preservationists wanted to preserve pristine "wilderness" and thus advocated for the protection of nature for its intrinsic value (Henderson 1992: 396). In contrast, conservationists advocated for a utilitarian approach based on limited use (Fox 1985: 115). As the destruction and over-exploitation of

natural resources progressed unimpeded, the preservationists' approach became the dominant paradigm of protection towards the beginning of the 20<sup>th</sup> century, although different approaches co-existed (Mose and Weixlbaumer 2012: 118); this more strict approach is indicated by the second circle from the right in *Figure 2* (uninterrupted line, arrows not crossing the line).

Weixlbaumer (2005) argues that the preservationist approach, which he describes as “static-conservatory”, was predominant up to about the 1970s. This approach is characterised by a dichotomy between humans and the environment that emphasises “a conceptual separation of human and natural” (Adams 2009: xv) and dates back to the European Enlightenment. From this perspective, protected areas are to be set apart from cultivated and economically exploited areas, and the protection of individual species and valuable areas is weighed more than ecosystem and (cultural) landscape conservation (Weixlbaumer 2005) (see third circle in *Figure 2*; where the management focus clearly remains within park boundaries). This understanding of environmental protection is central to the World Heritage Convention (UNESCO 1972), where human influence on nature is predominantly considered negative, and where conservation is primarily understood as the act of protecting a site from this very influence.

This static and exclusionary understanding of environmental conservation has changed over the last half-century, due in part to external influences. On the one hand, international tourist arrivals have increased by more than a factor of 70 since the 1950s (UNWTO 2013). Protected areas “benefited” from this development and often became tourism icons (Reinius and Fredman 2007). In the introduction to their comprehensive work on participatory conservation, Galvin and Haller (2008: 15) note that “conservation is no longer just a noble goal but can be viewed as a kind of global business”.

On the other hand, the emerging sustainability debate (WCED 1987) and subsequent paradigm changes have led to a more inclusionary view of environmental conservation that no longer regards human utilisation and conservation as mutually exclusive goals. Meyer-Abich (1990) proposed an understanding of the human-environment relationship in which the environment and humanity are no longer two separate concepts; instead, he argues that humans should understand themselves as being part of the environment – i.e., a “connatural world”. Mose and Weixlbaumer (2012: 118)

classify these approaches toward environmental conservation as “dynamic-innovative”, reflecting a more participatory understanding of conservation. These developments are reflected in the fourth circle in *Figure 2*, where the protected area is again more open to extra-park influences, and where the management concern clearly goes beyond the park boundaries.

In 1994, the World Heritage Committee reacted to these developments by adding a new category of cultural landscapes to the types of World Heritage sites; this was also the first time the term “sustainable” appeared in the Operational Guidelines (UNESCO 1994). A more intense debate about WNH sites and sustainable development was launched in 2002 with the Budapest Declaration (WHC 2002), which highlighted the potential of WNH sites to contribute to sustainable development. Currently, discussions are underway regarding the inclusion of sustainable development as a specific aim of the WH Convention (WHC 2010; WHC 2012).

This new paradigm of understanding protected areas as triggers for sustainable regional development decisively influences the understanding of WNH status. Our data highlight this evolving perception of conservation by tracing how the different benefits attributed to WNH status have changed over time.

#### 4. World Heritage over the past four decades

Over the past forty years, the implications of WNH status have changed considerably, as have the core motives for applying for World Heritage status. This study draws on a survey conducted in 2012 and uses the year of inscription as an independent variable; it does hence not build on historic data. Nevertheless, survey responses brought to light notable differences with regard to the effects induced by WNH status. These differences are strongly correlated with the site's date of inscription<sup>2</sup>. They are hence indicative of substantive changes with regard to the purpose, management and effectiveness of protected areas, which have long since been subject of research.

##### 4.1 Motivation for WNH status application

Conservation has remained the single most important motivation for inscription in the WNH list, yet its relative importance over time is slightly decreasing (*Fig. 3*; see also Fyall and Rakic 2006 on this issue). In addition,

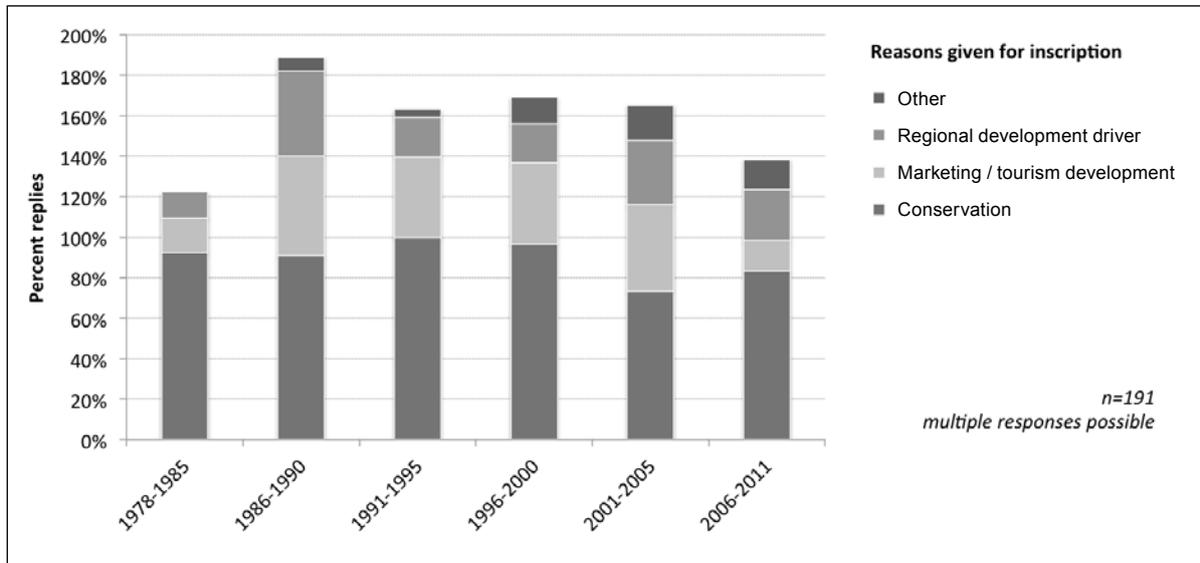


Fig. 3 Motivation for inscription in the WH list given in survey, by period of date of inscription

the importance of other motives such as marketing, tourism or regional development has increased over time. In the following, we analyse whether participants felt that their development expectations were actually fulfilled, and what effects are actually induced by WNH status. The following four sections provide an overview of the areas that best demonstrate the effectiveness of WNH status, i.e. conservation, management, tourism and, more comprehensively, sustainable regional development. At the same time, these sections highlight how the date of inscription influences the delivered benefits and what changes have taken place over the last forty years.

#### 4.2 Conservation: Decreasing impact on protection status

The survey confirms that increased protection is one of the core effects of WNH status (Fig. 4). Out of all participating sites and over the entire time span, 68 % stated that the protection status increased considerably (37 %) or somewhat (31.5 %) after inscription into the WH list. This is noteworthy, given the fact that the World Heritage Convention “fully respects the sovereignty of states on whose territory the [...] heritage [...] is situated” (UNESCO 1972: 4), i.e., that the Convention does not have a formal influence on a nation’s legislation. Nevertheless, according to the survey participants, inscribed sites receive greater national attention due to the international significance of inscription. This finding is in line with those of earlier researchers, who also describe an improved

conservation status of sites following inscription (see e.g. Liechti and Wiesmann 2004; Hambrey 2007).

Over time, however, the influence of WNH status on conservation decreases (Fig. 4). Of all the sites that were inscribed in the WH list during the first decade after the establishment of the Convention, nearly 50 % indicated that the protection status of the site had increased significantly; in contrast, only 19 % of the sites inscribed in the last decade thought this was the case. Although it may be that these results are partly due to a certain time lag (it takes time to develop or adapt legislation), they are also a likely indication that conservation is no longer the most important goal of attaining WNH status (see also Fig. 3).

The assumption that the importance of conservation and the utility of WH status for achieving a better conservation status have diminished over time, as Figure 4 shows, is further backed by an analysis of the sites that feature on the list of endangered sites, i.e. sites that are in urgent need of an international and concerted conservation effort. The group of WH sites that were inscribed during the first decade (1978 to 1990) has the largest share of sites “in danger” (12 %), as well as the largest share of sites that featured on the “endangered sites” list at some stage during their history (10 %). This reflects the concern for conservation that dominated the original WH Convention discourse. Of the sites that were inscribed in the last decade (2001-2011), only 4 % are on the “endangered sites list”, and none of those sites had been endangered in the past. Given the generally increasing pressure on the envi-

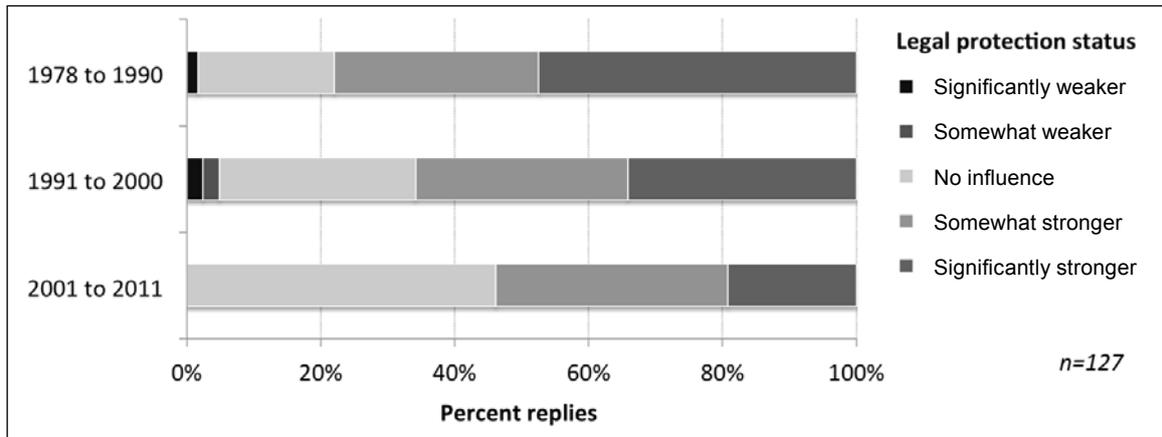


Fig. 4 Perceived influence of WNH status on the protection status, by decade of inscription

ronment due to global change (e.g., climate change, unchecked deforestation, increased exploitation of natural resources, see, e.g., Galvin and Haller 2008), it seems unlikely that WH candidates are less threatened today than they were fifty years ago. Rather, the now very complex nomination process, among other factors, suggests that the most threatened sites are least likely to be in a position to apply for WH status.

The paradigm change in protected areas management is also reflected in the criteria for protected area planning. Whereas less than 5 % of all sites inscribed between 1978 and 1990 had a buffer zone, nearly 45 % of all WNH sites inscribed between 2000 and 2011 now include buffer zones (UNESCO 2012). This finding is crucial, particularly with regard to the more commercial interests that come with WH status candidatures today. Buffer zones are considered a viable means of deflecting pressure on the core zones (i.e., the core values of individual WNH sites), whilst also considering socio-cultural and socio-economic needs (Stræde and Treue 2006: 264; Hjortsø et al. 2006: 91). Since 1997, the operational guidelines for the implementation of the World Heritage Convention also mention the buffer zone as a viable instrument for ensuring the protection of the WNH with “an added layer of protection” (UNESCO 1997: 4).

#### 4.3 Improving management quality

In general, WH status has a notable and positive effect on the management of the area. Over 68 % of respondents indicated that the management quality had improved after inclusion in the WH list; overall, 78 % of all sites that participated in the survey have a functioning management plan and another 15 % are

developing one. This is certainly due to the fact that the operational guidelines of UNESCO (UNESCO 2011) prescribe the existence of an appropriate management plan. Once a site has gained WNH status, state parties often acquire additional funding for professional site management, according to survey participants. Furthermore, the operational guidelines also require “the participation of a wide variety of stakeholders”. Over half of all participating sites noted an increase in stakeholder participation, with participants from national and regional authorities, interest groups and the general population. Also, the cooperation between different stakeholders (e.g., tourism or conservation stakeholders) reportedly increased in 60 % of all WNH sites. Our data show that the relationship between WNH status and professional site management becomes less explicit over time. Of those sites that were inscribed during the first decade, nearly 75 % felt that the WNH status had led to an improvement in management structure and 29 % thought management quality had improved considerably. Of those sites that were inscribed between 2001 and 2011, only 54 % noted a link between WNH status and management quality, 15 % of which thought it was considerable. It can be assumed that these figures show that the effectiveness of the WNH site increases with the period of existence. Yet, they may also be an indication that protected areas today are managed more professionally at their point of inclusion in the list than in earlier times.

At the same time, the importance of WNH sites as central actors in protected area management increases over time. In two thirds of all WNH sites, conflicts over natural resources (such as access to land, exploitation of natural resources, forestry etc.) occur within the protected area. WNH that have been in place longer more frequently indicated that they had a mitigating

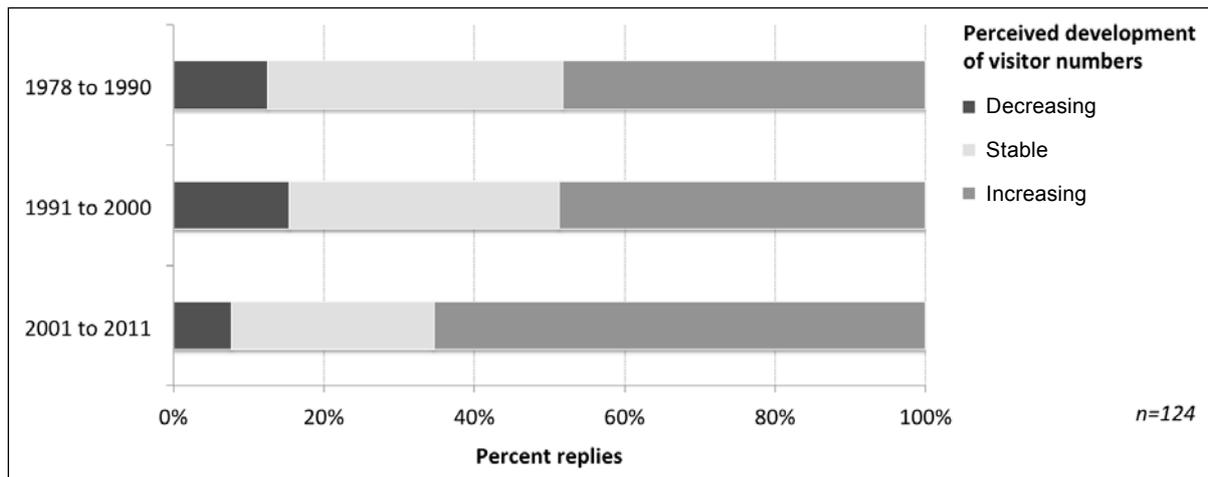


Fig. 5 Perceived influence of WNH status on visitor numbers by decade of inscription

influence on those conflicts. Of those sites that were listed during the first decade, 51 % stated that they felt WNH status contributed to mitigating conflicts. Of the sites that were listed only recently (2001-2011), 75 % thought they had no influence on these conflicts. Again, this is an indication that the importance and effectiveness of WNH status increases with time, i.e., that in many cases sites become established and accepted institutions with time.

#### 4.4 Rising visitor numbers

WNH status is very closely linked to tourism, and the significance of heritage sites for tourism is growing. Of all participating sites, 57 % stated that visitor numbers have increased since WNH status was granted. The most recent global assessments for WNH sites with regard to tourism figures date back to the turn of the 21<sup>st</sup> century (Hall and Piggin 2001; Tisdell and Wilson 2001). However, regional case studies confirm the link between WNH status and tourism (see e.g. Buckley 2004; Rakic 2007; Li et al. 2008; Engels et al. 2011; Marcotte and Bourdeau 2012). Timothy and Nyaupane (2005) argue that WNH tourism is among the fastest-growing kind of tourism worldwide. The number of tourists reported at WNH sites adds up to almost 100 million per year (UNEP and WCMC 2010); of these, however, 35 million are counted at the Wadden Sea between Germany and the Netherlands and another 17 million at the Great Barrier Reef area in Australia. WNH sites today are important players in the global tourism market, and attaining World Heritage status introduces sites into an exclusive group of particularly recommend-

able destinations (Marcotte and Bourdeau 2006). Yet, only every 10th visitor to a WNH site is counted in the “Global South” (own calculation, based on UNEP and WCMC 2010). Furthermore, the influence of WH status on visitor numbers depends on numerous factors, i.e. accessibility (Jha 2005), the profile of an area before WH status (see e.g. Scherer et al. 2005) or the motivations of the WH management.

The importance of WNH status for attracting tourists has increased over time, with the most recently inscribed sites appearing to benefit the most from the WNH label (Fig. 5). Similar findings have been made by Marcotte and Bourdeau (2006: 85), who, in a study of the websites of 120 destination marketing organisations, found a statistically significant relationship between the year the label was obtained and its use for marketing purposes. However, the large increase in visitor numbers may also be attributed to the relative “newness” of the status; a significant increase in visitors at older WNH sites may simply have taken place earlier.

WNH status influences tourism beyond the mere attraction of additional visitors. Nearly two thirds (62.5 %) indicated that the range and quality of tourism offers improved after attaining WH status. Deliberate efforts were made to make tourism more sustainable, i.e. by increasing compliance of tourist offerings with existing sustainability standards, by elaborating own sustainability standards, by improving social standards or tourism policies, or by combining awareness raising and education offers. The influence of WNH status on the quality and range of tourism offers decreases with time (sites inscribed earlier have a larger and more positive influence in this regard). However,

no clear tendency is found with regard to the effect of WNH status on the sustainability of tourism, despite the fact that sustainable tourism has been on UNESCO's agenda for a long time (Pedersen 2002). In order to improve the sustainability of tourism around WH sites, UNESCO launched the "World Heritage and Sustainable Tourism Programme" in November 2012 (WHC 2010; UNESCO 2014).

The large increase in visitors to WNH sites, which are, after all, protected areas, is not unproblematic. Engels et al. (2011) have evaluated periodic WH reports and found that since 2003, 2 to 8 % of sites admitted having problems with tourist activities. Issues include increased traffic and infrastructure development, water, air and noise pollution, erosion and the endangering of flora and fauna, among others. In the present survey, over a third of all participating sites mentioned tourism as a potential threat to the site; about a quarter of sites complained about the high to very high pressure on World Heritage regions caused by tourism. Nearly 40 % of all sites over the entire time span noted that the pressure on the environment caused by tourism was increasing.

Nevertheless, the relationship between tourism and WNH is not just negative. Many of the sites stressed tourism's contribution to conservation efforts (63 %), the opportunity to raise environmental awareness (85 %) and the value of using WNH status to help sites develop improved tourism management practices (64 %). In the Kilimanjaro region, for instance, funds generated through entrance fees to the Kilimanjaro WNH site are redistributed among other protected areas (see Conradin et al. 2014).

#### 4.5 The contribution of WNH sites to sustainable regional development

The term sustainable development was introduced by the World Commission on Environment and Development (WCED) in 1987 and defined as "[...] development that meets the needs of present generations without sacrificing the ability of future generations to meet their needs" (WCED 1987: 43). Lonergan (1993) was probably one of the first to introduce the region – in between the national and the local – as a meaningful frame of reference, arguing that the element of space was crucial for the analysis of sustainable development, as the definition of development varied according to specific circumstances. Liechti et al. (2010: 727) and other scholars (Wiesmann and Messerli 2007: 126; Liechti and Wiesmann 2004; Kates et al. 2005: 17) have further discussed the normative nature of sustainable development. With regard to the WNH debate, the contribution to safeguarding resources for future generations is particularly important. However, as an additional institutional layer whose aims are directly related to many sustainability goals, WNH status also influences the social and economic spheres. Sustainable regional development can therefore be understood as encompassing all processes and developments that contribute to an advancement of environmental, economic and social issues within a defined region (Siegrist et al. 2009: 103). In the context of the present research, the region was understood as a functional spatial unit, i.e. the area around the WNH site where WNH status has a substantial influence.

WNH sites that were inscribed in the list earlier note a stronger effect on regional development (Fig. 6).

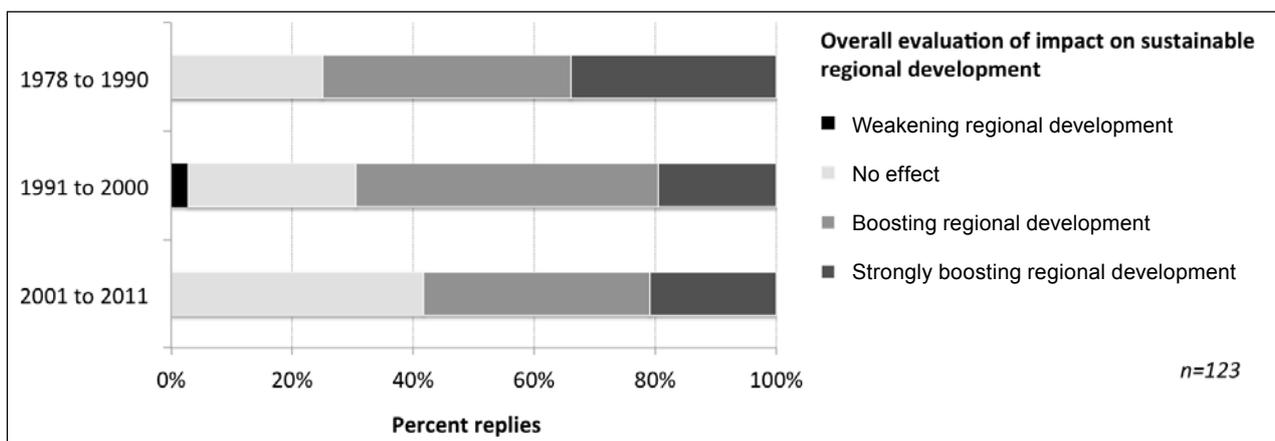


Fig. 6 Perceived influence of WH status on regional development by decade of inscription

This is in line with survey findings regarding the respect in which WNH status had an influence on regional development (e.g., environmental conservation, economic development, a contribution to regional identity or regional pride, the formation of networks and cooperation, a raised profile for international investors/donors, spatial planning, infrastructure development etc.). In all these areas, sites that were inscribed in the first decade featured the highest proportion of positive ratings. It is reasonable to assume that the impact of WNH status on regional development is not a fast gain, but rather something that takes many years to develop.

Interestingly, survey participants demonstrated a more complex and comprehensive understanding of sustainable regional development than is found in the term's more common economic connotation (see Pike et al. 2014 on this issue). Often, the preservation of natural resources forms the core of their understanding of sustainability, which is comprehensible given that WNH sites are frequently "resource-rich islands in marginalised surroundings where pressure on natural resources is high" (Liechti and Wiesmann 2004; Conradin 2014), particularly in the tropics and subtropics.

Overall, these findings suggest that WNH status can influence sustainable regional development, especially because large spatial units like WNH sites allow to steer development in a certain direction (Hammer 2003; Liechti and Wiesmann 2004; Mose 2007; Galvin and Haller 2008; Galla 2012). Today, there is a growing tendency to use an integrative, ecosystem-based approach that "turn[s] protected area management from 'boundary thinking' [...] to an understanding of the spheres of influence that affect parks beyond the administrative boundary" (Slocombe and Dearden 2002: 302).

## 5. Conclusion

Clearly, attitudes toward conservation and protected areas management have changed over the past four decades. These changes are reflected in how WNH sites are currently perceived and managed. Today, WNH status is no longer only about conserving the world's most valuable natural sites. Instead, World Heritage status has become an international label valuable for both tourism and regional (economic) development. These developments are increasingly reflected within

UNESCO policies: With its decision to include also cultural landscapes in the WNH list, UNESCO acknowledges the value that culturally formed landscapes can have with regard to biodiversity and the outstanding universal values. As such, the paradigm of conservation through use, known from other conservation approaches such as Biosphere Reserves, is increasingly valued also within UNESCO. This adaptation complies with the insight that conservation efforts rarely succeed unless they consider human needs. Furthermore, UNESCO stakeholders currently debate intensely on how WNH can contribute to sustainable regional development (see e.g. Galla 2012).

At the same time, the past forty years have brought with them a large-scale professionalisation of management approaches in protected areas around the world. WNH status, with its emphasis on participatory management plans, has certainly contributed to this development.

Protected areas today have to comply with a multitude of expectations, including the conservation of functional ecosystems and relevant species, visitor awareness and education, and the contribution to or maintenance of regional development and cultural landscapes. Yet, the article also indicates that such an understanding of the responsibilities of protected areas may become problematic if there is no clear distinction between what is to be conserved and what is to be developed, and if conservation becomes a secondary aim. Similarly, the value of the WH seal may fall if the distinction between conservation and promotion becomes blurred.

In contrast, the core understanding of WNH within the WH convention is still the one of an international treaty for the conservation of nature. This corresponds only partly to reality. A dialogue about incorporating sustainable development into the WH Convention has recently started within UNESCO. The present research shows that it is crucial that the Convention, and the operational guidelines in particular, are adapted gradually so that it is mutually compatible with the aim to conserve the natural values at stake and the aim to integrate WNH sites into sustainable regional development strategies. For only sites that are well integrated in regional policies can contribute effectively to sustainable development goals. And on the other hand, sites that are embedded in regions that focus overall on sustainable development are at the least risk of being endangered.

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## Notes

<sup>1</sup> Please refer to *Schmitt* 2009 for a discussion on the different notions (realistic; social-constructivist) of the term “outstanding universal value” as used by different UNESCO stakeholders.

<sup>2</sup> A general remark: The findings have to be relativised insofar as they are qualitative statements by the respective respondents. After all, comparative historic data (e.g. on the motivations for inscription) are not available. In order to corroborate the validity of the present findings, specifically the relation between the date of inscription and the effectiveness in different fields, results were always placed in context to existing studies in the same field.

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