SAFEGUARDING OUTSTANDING NATURAL VALUE

The role of institutional investors in protecting natural World Heritage sites from extractive activity

SEPTEMBER 2015

FOREWORD

Aviva Investors

Our stewardship responsibility

We place significant store on our portfolio managers taking wider environmental, social and governance issues into account in their investments. Mismanaged, these can lead to catastrophic loss of value for long term investors. We are also acutely aware of our stewardship responsibilities and the influence that comes with the voting rights attached to the shares we manage. We use our voting and engagement to shape more responsible and longer term behaviour in the companies we invest in. Ultimately, we see this as serving the best long term interests of our clients.

Last year, we saw SOCO International, a UK listed resources company, commit not to drill in the Virunga National Park in the Democratic Republic of Congo (DRC). The company has also committed not to undertake future operations in any other World Heritage Sites. This announcement followed concerted engagement by us and a number of other investors and stakeholders.

While recognising this important step by the company, the broader issue of companies operating in World Heritage Sites remains a concern. A lack of appropriate governance and unsustainable operating practices by companies can significantly impact on their long term value – an issue for us and our clients. A key challenge in addressing this concern is the lack of appropriate information.

We have long advocated for increased and improved disclosure on business critical sustainability issues. World Heritage Sites is one area where there are significant data gaps. This is why we have welcomed working together with WWF and Investec on this report. We hope it will lead to better information and better outcomes – for investors, our clients and the valuable ecosystems protected by the World Heritage Convention.

Euan Munro
CEO of Aviva Investors

Investec Asset Management

Protecting the future is part of fiduciary duty

As an asset manager, we have a fiduciary duty towards our clients to protect and grow the assets entrusted to us in a long-term sustainable manner. We do this by carefully considering all material aspects of an investment, which increasingly reflects the opportunities and risks stemming from a broad range of environmental, social, and governance issues.

Important across the globe, natural World Heritage sites (WHS) are a vital feature of the African continent, where we continue to honour our legacy and aim to make a positive contribution to development. WHS are special areas that must be protected. The value of these areas is crucial for their intrinsic beauty, but also for their incalculable ecological wealth and biological information.

As global investors, we understand the challenges facing the extractives sector. We have seen some progress in the way the industry interacts with communities and the environment - with many companies integrating sustainability commitments into their strategies and overall decision-making; however, the attention to the issue across the sector still varies widely.

Investec Asset Management supports the need for further awareness and clearer disclosure by extractive companies on their exposure to these areas to better inform investment decisions. It will also allow investors, such as ourselves, to engage more effectively with companies and be better placed to address our responsibilities toward our clients who are concerned about this pressing issue.

Finally, we will continue to work internally, and encourage industry peers to join us, to play our part in protecting Natural World Heritage Sites and invest our assets in a way that protects their outstanding universal value.

Hendrik du Toit
CEO of Investec Asset Management

WWF-UK

Finding the balance

All indications suggest that global demand for natural resources will continue to increase in the coming decades – such are the pressures of a growing population with lifestyle aspirations. To satisfy this demand, we are going to the ends of the Earth in the pursuit of more resources – resources that are often becoming more difficult and more expensive to extract. Another consequence of this resource pursuit is encroachment into previously pristine areas largely in emerging economies, and also in OECD nations. Alarmingly, even some of the world's most treasured places, natural World Heritage sites, are threatened by destructive industrial activities that imperil the very values for which they have been granted the highest level of international recognition: 'outstanding universal value'.

Protecting these places is not only important in terms of their environmental worth, it is crucial for the livelihoods and future prosperity of the peoples who depend on them. We cannot simply erect fences around these places and bar all development; equally we cannot risk damaging their potential for long-term prosperity. Indeed, the Sustainable Development Goals challenge us all to define how we achieve fair, equitable and socially-inclusive development, while also protecting this planet, our common home.

Some business leaders in both the finance and extractives sectors are stepping up and taking action to secure greater protection for these sites, and we all have a crucial role to play in setting the boundaries for their conduct on this issue. This report identifies further opportunities for businesses to make a difference, for without their efforts we may lose some of the very places we treasure most.

David Nussbaum,
CEO of WWF-UK

IUCN World Heritage Programme

Some places are too valuable to risk

Natural World Heritage sites are recognised for their 'outstanding universal value' to us all – bringing a responsibility to conserve and protect that value for the benefit of current and future generations. As the official advisory body to UNESCO's World Heritage Committee, IUCN has been monitoring the challenges involved in managing and protecting these sites from a variety of threats that can erode or destroy that value. The Committee has consistently maintained a position that oil, gas and mineral activities are incompatible with World Heritage status. However in recent years IUCN has noted a rise in extractive concessions and operations that could impact natural World Heritage Sites; IUCN's 2014 World Heritage Outlook identified these as amongst the greatest potential future threats.

Through their policies and conduct extractives companies and the financial institutions that supply them with capital for their projects have an opportunity to help reduce these threats. A number of companies have already made 'no go' commitments which is welcome progress. But with threats from extractives increasing, more needs to be done. The 'no go' commitments need to be extended and be consistently applied, and there need to be undertakings that activities outside World Heritage Sites will not impact indirectly either. Greater recognition of such commitments could spur further momentum towards improved business conduct.

This report provides an important contribution – especially for understanding the issue from the perspective of investors and financial institutions. It highlights the heightened business risks for both sectors of a failure to respect the world's most important protected areas. I hope it will encourage more companies to join those who have committed to permanently respecting the idea that some places are too valuable to put at risk.

Tim Badman,
Director of IUCN's World Heritage Programme

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Acknowledgements

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Executive Summary

From expansive national parks to dazzling coral reefs, with flora and fauna that can be traced back millions of years, the world's 229 natural World Heritage sites are an irreplaceable part of both our past and our future. In terms of iconic landscapes, biodiversity and conservation, sites such as the Grand Canyon, Great Barrier Reef and Okavango Delta are some of the most important places on earth. That is why they have been internationally recognised as being of 'Outstanding Universal Value' and protected under the UNESCO World Heritage Convention.

Despite this status, these areas are under increasing threat from the extractives sector. In particular from commercial mining and oil and gas exploration companies who win concessions to undertake activity in and around these precious sites. Extractive sector activities can cause significant and permanent environmental damage both directly to landscape or water sources, and indirectly, by catalysing wide scale social and economic changes – especially in developing countries.

This should sound an alarm bell to any financial institution with exposure to the extractives sector wanting to understand and manage the potential risks of their investment.

Digging deeper

Until now, it has been difficult for any investor to adequately manage risk in this area, due to a lack of information on extractive activity in World Heritage sites, an issue exacerbated by poor and limited reporting by host governments, companies and the World Heritage Committee.

This report is an attempt to change that situation. It is a result of collaboration between WWF-UK, Aviva Investors and Investec Asset Management, and summarises the best evidence available to provide an overview of the issue. The research indicates that as many as 70 of the 229, or nearly 31%, of natural World Heritage sites are currently subject to extractive activity in some form – either with active operations already within their boundaries or through concessions that might bring such operations in the near future. Our research shows that intrusion into natural World Heritage sites is especially high in Africa, where 61% of these precious areas are subject to some form of extractive concession or activity.

By evidencing the extent of this activity, this report aims to encourage further investor-company engagement to help simultaneously safeguard some of the most precious places on Earth and long-term portfolio value.

This report recommends that investors, where possible and appropriate, engage with the issue by:

I. Ensuring they are aware of whether any extractive companies in which they invest (or plan to invest in) currently own concessions or operate within or adjacent to natural WHS, or if they plan to do so in the future.

II. Directly engaging extractive companies in their portfolio that are active in, or adjacent to, natural WHS to encourage them to change their strategy, or to consider divestment if insufficient progress is made.

III. Disclosing when they have divested and the reasons for divestment.

IV. Engaging with the extractive sector at industry level to encourage improved disclosure on the issue and the wider adoption of 'no go' and 'no impact' commitments for natural WHS.

V. Collaborating with other investors to address the issue collectively.

VI. Encouraging the disclosure of extractives concessions data either publicly or in widely used financial data sources (e.g. Bloomberg).

TABLE 1

NEW WWF RESEARCH SHOWING WHS OVERLAPPED BY EXTRACTIVE CONCESSIONS/ACTIVITY BY REGION
(Full table in Chapter 1)

Region	Number of natural WHS	WHS overlapped by extractives concessions/activity
Africa	41	25 (61%)
Arab States	6	1 (17%)
Asia and the Pacific	70	24 (34%)
Europe and North America	71	7 (10%)
Latin America and the Caribbean	41	13 (31%)
Total	**229**	**70 (31%)**

As many as **70** of the **229**, or nearly **31%**, of natural World Heritage sites are currently subject to extractive activity in some form

1 NATURAL WORLD HERITAGE SITES UNDER THREAT

Protected areas[2] are the foundation of modern conservation. Of these, natural World Heritage sites (WHS) are widely regarded to be among the most significant and the most important methods available to protect biodiversity and the natural world.

There are currently 229 natural WHS[3] inscribed under the World Heritage Convention, spread across 97 countries (see Box 1). These 229 sites account for less than 1%[4] of the Earth's surface, yet they support many of the world's most critically endangered species such as mountain gorillas, Sumatran tigers, giant tortoises and white rhinos.

These sites not only protect the environment, they provide local, national and global communities with a wide range of benefits including flood prevention, climate change mitigation and the provision of food and water. They also help support local economies and safeguard cultural and spiritual values.[5] A recent assessment by the International Union for Conservation of Nature (IUCN) identified that:

- **93%** of natural WHS deliver recreation and tourism benefits;
- **91%** provided employment and;
- **84%** contributed to education.[6]

These benefits however, can only be provided if the ecosystems within the natural WHS remain intact.[7]

Increasingly at risk

Natural WHS, face a range of threats from factors such as climate change, invasive species, biological resource use, industrial activity and agricultural expansion.[8] The focus of this report however, is the increasing threat that these areas face from commercial mining, oil and gas exploration and extraction.[9] The World Heritage Committee[10] and the IUCN[11] have repeatedly stated that extractive activities are incompatible with natural World Heritage site status.[12]

Trading long-term sustainable development for short-term economic gain

Exploration and extraction 'concessions' are licences granted to companies or individuals to explore and or extract oil, gas or mineral resources from within a set area for a fixed period of time. When such concessions are granted near or within the boundaries of a natural WHS it can bring with it very tangible, though sometimes narrowly apportioned, economic benefits in the short-term. However these activities also carry heavy risk and have the potential to significantly impair, or even negate the Outstanding Universal Value (OUV)[17] of a natural WHS.[18]

A concession will typically include an agreed license fee, royalty, production sharing contract or some other form of remuneration.[19] This provides host governments with a short-term revenue boost and often brings additional benefits to local communities such as improved infrastructure, investment in community development and employment opportunities – often in very isolated areas.[20] This makes them attractive propositions for governments, particularly in the developing world.

However the quick returns provided by extractive operations, can also undermine the growth of more long-term economic opportunities such as tourism, fisheries and renewable energy. Sectors which, if well managed, can support the livelihoods of local communities in perpetuity. The Škocjan Caves in Slovenia for example, are a natural WHS and vital tourist attraction for the country delivering economic and ecosystem benefits to the region estimated in 2011 to be worth around Đ12.85 million[21] - a significant asset for a region where average income per capita is estimated at ≤ Đ4000 a year.[22]

Limited means to ensure compliance

Unfortunately some governments disregard their wider responsibilities under the World Heritage Convention and issue extractive concessions that may threaten their natural WHS.[23] This issue is exacerbated by the fact that the World Heritage Committee has little or no means to promote and ensure compliance. One of its few practical options if a site's Outstanding Universal Value is under threat is to review its status and list it on the 'World Heritage in Danger List'. Or in extreme cases, to delist it. This action can draw attention to and resolve issues, but its efficacy as a tool for change is limited,[24] exemplified by the fact that the 18 natural WHS currently on the 'in danger' list have, on average, been listed for over a decade without any change to the circumstance that led to their inclusion on the list in the first place.

To protect natural WHS from extractive sector expansion the following four issues must be addressed:

- Willingness of State Parties to sanction extractive activity within their own natural WHS.
- Insufficient funding for the World Heritage Committee to adequately enforce compliance and ensure integrity of natural WHS.
- Lack of knowledge or poor due diligence by extractive companies which leads to them buying concessions and/or operating in, or adjacent to, natural WHS.
- Lack of information within financial institutions which leads to direct or indirect financing of projects that impact upon natural WHS.

WHAT IS THE WORLD HERITAGE FRAMEWORK?

Adopted in 1972, the United Nations Educational, Scientific and Cultural Organization (UNESCO) **World Heritage Convention**[13] aims to protect areas of global importance for all humanity. To date 191 **States Parties**[14] have ratified the Convention pledging to recognise and protect World Heritage Sites within their territory and their national heritage.

For a site to gain World Heritage status, a signatory must independently invest resources to demonstrate to UNESCO that the site is of 'Outstanding Universal Value', measured against a number of objective criteria.[15] Once inscribed, state Parties have an obligation to regularly report to the World Heritage Committee on the state of their World Heritage Sites. The Convention further encourages State Parties to develop scientifically robust, long-term management programmes for sites.

The World Heritage Committee,[16] comprised of 21 representatives of States Parties to the Convention, is accountable for the implementation of the World Heritage Convention. Through the development and revision of the 'Operational Guidelines' the committee provides specific guidelines to State Parties incorporating new concepts or knowledge as required. The Committee has primary responsibility for safeguarding WHS and is responsible for agreeing to new inscriptions on the World Heritage list, deletions from the list, and for deciding what is inscribed on the 'List of World Heritage in Danger'.

The Belize Barrier Reef Reserve System remains on the UNESCO 'List of World Heritage in Danger' due to concerns regarding potential oil concessions within the marine area

CASE STUDY 1

Mesoamerican Reef

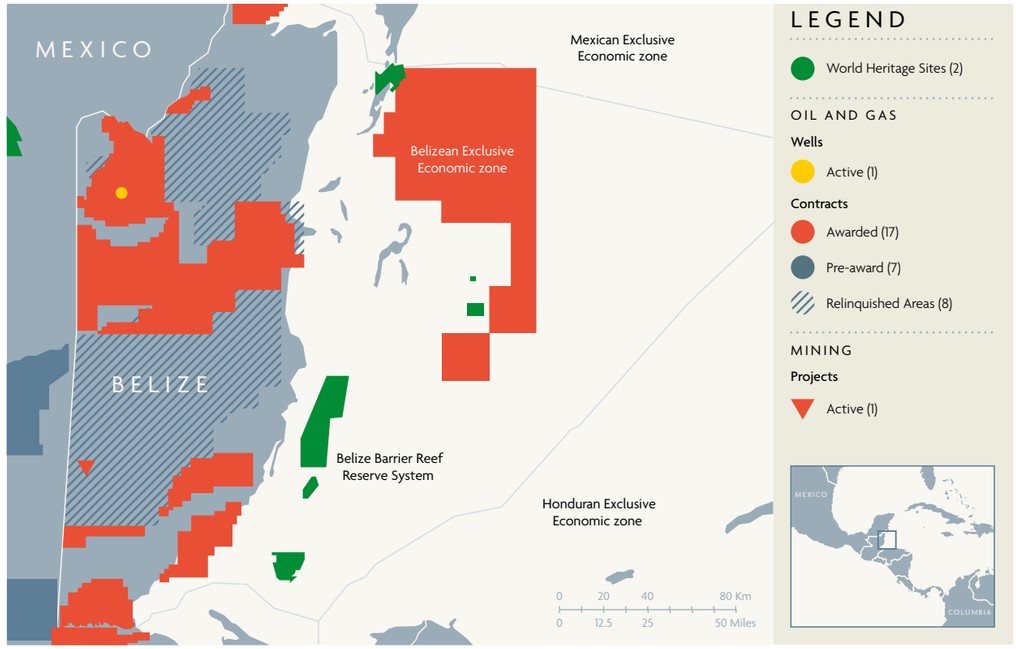
The Mesoamerican reef is a vast reef system in the Caribbean Sea and the largest barrier reef in the Western Hemisphere. It touches the coasts of Mexico, Belize, Guatemala and Honduras and contains a wealth of biodiversity and multiple natural World Heritage sites.[25]

The reef is of particular importance to Belize, where it supports fisheries, ocean recreation and coastal protection services worth an estimated US$221-310 million in revenue and ecosystem services annually.[26] The reef is also critical to Belize's travel and tourism industry, which accounts for more than a third of the country's GDP and total employment.[27] Despite this, the Belize Barrier Reef Reserve System, a natural World Heritage site in the region, remains on the UNESCO 'List of World Heritage in Danger' due to concerns regarding potential oil concessions within the marine area.[28]

Reef systems are particularly sensitive and extractive operations could potentially cause wide spread environmental damage.

FIGURE 1

MAP SHOWING OIL AND GAS CONCESSIONS AND ACTIVITY IN THE IMMEDIATE AREA OF THE BELIZE BARRIER REEF RESERVE SYSTEM



Data source:
World Heritage Sites: IUCN and UNEP-WCMC (2015). The World Database on Protected Areas (WDPA) [On-line], [06/2015], Cambridge, UK: UNEP-WCMC.
Available at: www.protectedplanet.net.
Oil and gas data: DrillingInfo inc.; mining data: SNL Financial Ltd [accessed 20/7/2015]
Author: Pablo Izquierdo (pizquierdo@wwf.no), WWF-Norway, 2015.

The threat of extractive activity to natural WHS

Recent analysis by ZSL [29] of the State of Conservation reports submitted to UNESCO's World Heritage Committee, suggests that the increase in threats posed by extractive activities is outpacing other major threats to natural World Heritage sites

Environmental damage caused by extractive activities can include reduced biodiversity, disturbed ecosystem processes, habitat loss and fragmentation, the introduction of invasive species and pollution.[30] Extractive operations also create a myriad of indirect impacts as a result of associated infrastructure such as roads and railways in previously remote areas as well as the social 'honey pot' effect of the lure of potential employment.[31] Such indirect effects, which are often more pronounced in developing countries, have been seen to lead to impacts such as increased deforestation, agricultural expansion, artisanal mining, illegal hunting, soil erosion and water pollution.[32]

It is difficult to accurately define the prevalence of extractive activity within natural WHS, although a number of studies provide useful insights.[33] These include:

- In 2011, a Geographic Information System (GIS) assessment of all natural WHS in sub-Saharan Africa found oil and gas concessions overlapped with 27% of the 33 natural WHS assessed.[34]

- In 2013, he first global assessment of extractive activity within natural WHS. conducted by the UN Environment Programme's World Conservation Monitoring Centre (UNEP-WCMC) indicated that 13 natural WHS (6%) had or were within close proximity (<1km) to active extractive operations.[35] A subsequent publication by UNEP-WCMC suggested the actual percentage might be higher.[36]

- Most recently in 2014, the IUCN World Heritage Outlook was launched offering a global assessment of the conservation status of all natural WHS, and classified 54 natural WHS (~24%) as currently threatened[37] by extractive activity.[38]

To remove some of the uncertainty surrounding the issue, WWF-UK has conducted its own global assessment, including identifying ownership of concessions. The aim of this ongoing programme of work is to provide the conservation and investment communities with more complete information as to which extractive companies have exposure to natural WHS, and to therefore improve decision-making.

The World Heritage Committee and the IUCN have repeatedly stated that extractive activities are incompatible with natural World Heritage site status

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WWF's global assessment of extractive activity within natural WHS

In July 2015, WWF-UK conducted a global assessment for all 229 natural WHS against extractive operations.[39]

Brief overview of methodology

The challenges were significant, most notably with missing coverage within the source data making a comprehensive global comparison difficult. Indeed, it was not possible to compare 129 natural WHS (~56%) against mining concessions, 3 natural WHS (~1%) against active mining operations and 45 natural WHS (~20%) against oil and gas concessions and active operations. To ensure the robustness of the data expression, a conservative delineation was used to exclude any extractive activity which could be interpreted as a limited threat to a natural WHS, for example excluding any un-owned or expired extractive concessions and any concessions with minor overlap with a natural WHS. For a full overview of the methodology used see WWF, 2015.[40]

Despite the stated data limitations, WWF's analysis arguably provides the most comprehensive assessment of the issue to date, and highlights the pressing need for greater data transparency surrounding extractives operations.

Nearly one in three sites under threat

The research identified a significant volume of extractive activity within natural WHS (See Figure 3). Notably, 38% (38 / 100 WHS) contained mining concessions, 22% (40 / 184 WHS) contained oil and gas concessions and 5% (12 / 226 WHS) contained mining operations.

In total, 70 natural World Heritage sites, or 30.56%, have been identified with one or multiple forms of extractive activity within their boundaries (see Figure 3).[41] These results are considered in greater detail in Table 2, which defines the extent of extractive activity by region and extraction type.

It is important to note, that the assessment is most probably a significant underestimate of the actual extent of extractive activity in natural WHS due to the extensive data omissions in the source data and the conservative interpretation of that data.

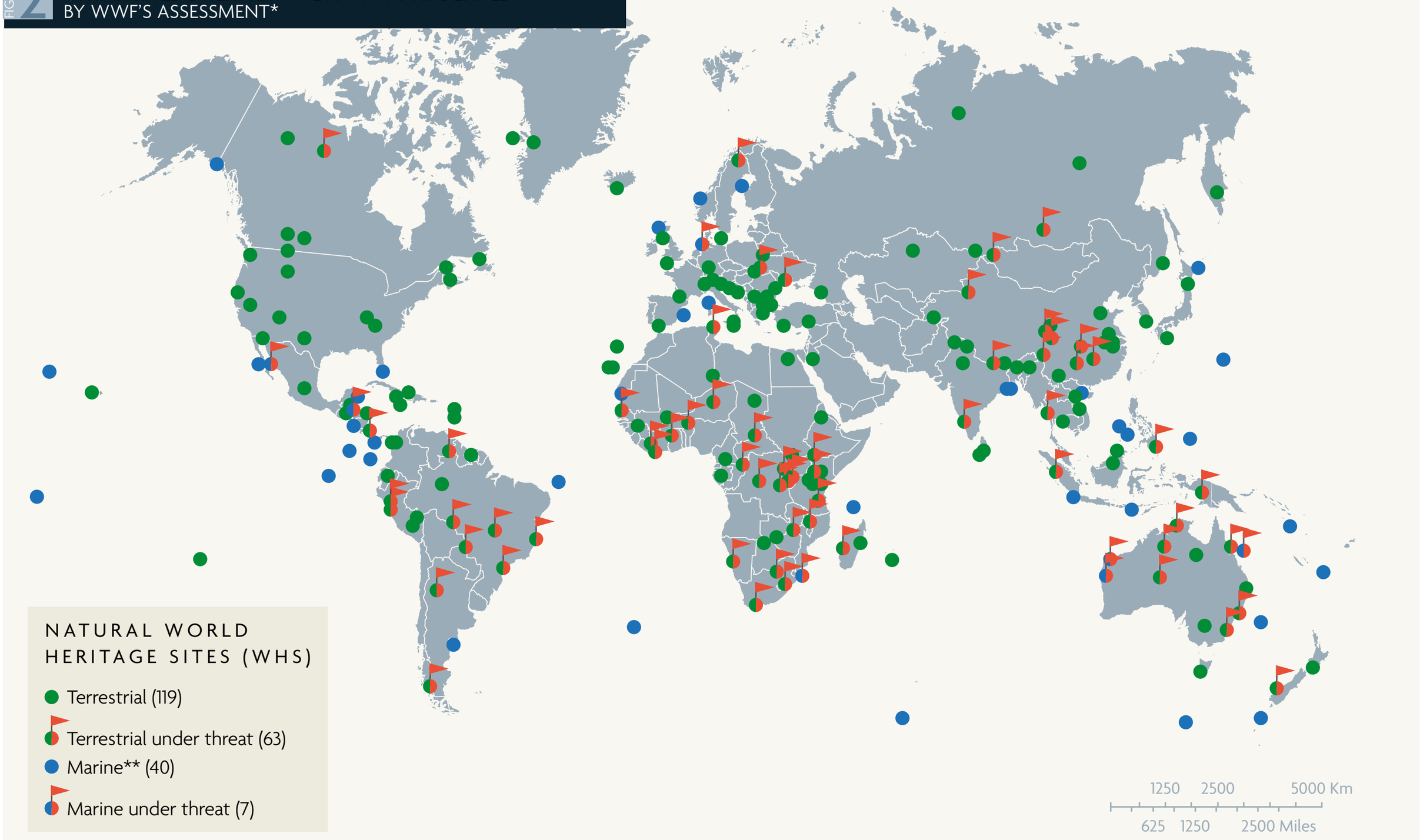
TABLE 2 THE EXTENT OF EXTRACTIVE ACTIVITY BY REGION AND TYPE OF EXTRACTION WITHIN NATURAL WHS AS IDENTIFIED BY WWF'S ASSESSMENT

Region	No. of natural WHS	No. of WHS overlapped by extractive concession/s and or activity (%	WHS with Mine/s	WHS with Mining concession/s	WHS with Oil and Gas Concession/s	No. of Mining Concession/s identified within WHS	Estimated Mining Concession Overlap with WHS (Sq. Km)	No. of Oil and Gas Concessions identified within natural WHS	Estimated Oil & Gas Concession Overlap with WHS (Sq. Km)	WHS with Oil and Gas Pipelines	WHS with Oil and Gas Wells
Africa	41	25 (61%)	3	11	17	196	12,387.38	30	83,267.54	1	3
Arab States	6	1 (17%)	0	0	1	0	0	2	124.42		
Asia and the Pacific	70[1]	24 (34%)	5	15	16	121	4,298.15	28	10,848.62		4
Europe and North America	71	7 (10%)	3	2	3	6	29.40	14	2,985.26		2
Latin America and the Caribbean	41	13 (31%)	1	10	3	121	1,207.67	3	178.84	1	2
Total	**229**	**70 (31%)**	**12**	**38**	**40**	**444**	**17,922.60**	**77**	**97,404.68**	**2**	**11**

[1]The natural WHS 'Uvs Nuur Basin' is a trans-regional site, located across the Europe and Asia and the Pacific region, following UNESCO's delineation the property is counted here as within the Asia and the Pacific region.

FIGURE 2

SHOWING NATURAL WHS POTENTIALLY THREATENED OR IMPACTED BY EXTRACTIVE ACTIVITY AS DEFINED BY WWF'S ASSESSMENT*



Data source:

Oil and gas data: DrillingInfo inc.; mining data: SNL Financial Ltd [accessed 20/7/2015]
Author: Pablo Izquierdo (pizquierdo@wwf.no), WWF-Norway, 2015.

*The results displayed here only highlight extractive activity where data was available. For North America and Russia we were only able to access minimal data. For a detailed overview of the mining and oil and gas concession data coverage, please see the Appendix of the WWF (2015) background report available at http://bit.ly/1H4jDKI

**Note marine sites often contain a significant terrestrial component

CASE STUDY 2

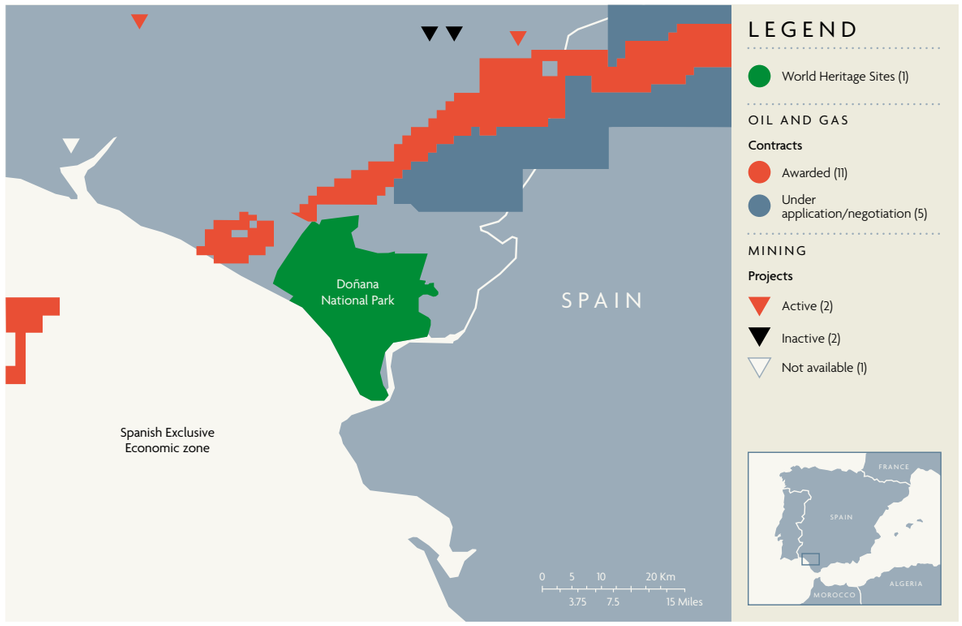
Doñana National Park

Doñana National Park situated on the estuary of Guadalquivir River in Southern Spain is a protected area of marshland, shallow streams and sand dunes. Despite covering just 135 square kilometres it contains one of the most important wetlands in Europe and is home to a unique and diverse array of flora and fauna. In recognition of its importance Doñana National Park was afforded natural World Heritage site status in 1994.[42]

A dam failure at the Los Frailes mine in 1998 led to an estimated 4-5 million cubic meters of toxic mining waste to be released into the nearby Guadiamar River.[43] This toxic waste caused significant ecological damage to the region and reached the boundary of the Doñana National Park.[44] Recently concerns have been raised over proposals to reopen the mine.[45] The site is highly exposed to potential impacts of refinery/port or tanker traffic accidents and pollution in the access of the extended La Rábida oil refinery at Huelva, and there have been minor oil spills already. Because of the proximity (ca. 35 km) and size of the facility, this is a high potential threat. All these activities and extractives related pressures accumulate around the Park, increasing the risk that the Outstanding Universal Value of the Park is permanently damaged or negated.[46]

FIGURE 3

A MAP SHOWING EXTRACTIVES CONCESSIONS AND ACTIVITY IN THE IMMEDIATE AREA OF DOÑANA NATIONAL PARK



Data source:
World Heritage Sites: IUCN and UNEP-WCMC (2015). The World Database on Protected Areas (WDPA) [On-line], [06/2015], Cambridge, UK: UNEP-WCMC.
Available at: www.protectedplanet.net.
Oil and gas data: DrillingInfo inc.; mining data: SNL Financial Ltd [accessed 20/7/2015]
Author: Pablo Izquierdo (pizquierdo@wwf.no), WWF-Norway, 2015.

2 THE ROLE OF INSTITUTIONAL INVESTORS

Too much risk, not enough reward

Most investors are legally bound to deploy capital in accordance with their fiduciary duty. Historically this has been interpreted narrowly to mean investors must focus solely on the generation of short-term returns. However, over the last ten years this narrow definition has been challenged and the understanding of investor's fiduciary duty is increasingly expanding to insist that factors such as environmental, social and governance (ESG) issues are considered during the investment process.

A significant number of reports and bodies, such as the UK law commission[47] and the UNEP Finance Initiative[48], have argued strongly that considering financially material ESG factors is not only consistent with fiduciary duty but that failure to do so could be a breach of fiduciary duty. To manage this broader scope, investors need access to information that helps them easily understand the wider environmental and social contexts of their investments.

The surge in extractive companies operating, or intending to operate, within natural WHS creates potential reputational risks that could cause significant material damage for investors. The results of a 2015 YouGov poll conducted by WWF-UK show that nearly 95% of people believe it is important to protect natural WHS from extractive operations.

As was evident with Virunga National Park a company's intent to operate within a natural WHS alone can be enough to generate substantial reputational risk, in turn generating potential material damage for the company and its investors.

Lack of data

Information moves markets and if the information that an investor receives is shallow and limited then their investment decisions may suffer as a consequence. Lack of relevant information can create uncertainty and puts financial institutions in a compromising position. This is why access to information is such a key factor for investors and why it is important to encourage all major extractive companies to publish key information on any activity they conduct, or intend to conduct, in or near a natural WHS.

The business risks of World Heritage site operations

Extractive companies face a range of risks, which can significantly impact financial results and the value of its securities. Extractive companies choosing to operate within natural WHS expose themselves to additional risks including loss of concessions, reputational damage, litigation, compensation claims, shareholder divestment and potentially reduced access to financing. It may also cause sustained social opposition, which can lead to the loss of their 'social licence to operate'. All of these risks can impact investor reputation and, ultimately, investment returns.

TABLE 3 A LIST OF EXTRACTIVE COMPANIES WITH 'NO GO' COMMITMENTS AND THEIR MARKET VALUE IN 2015

Data correct as at 23 July 2015.

Company	MSCI Adj. Market Value - July 2015 (US Millions)	MSCI World Metals and Mining Index Wt. (%)	MSCI World Energy Index Wt. (%)	MSCI AC World / Metals & Mining Wt. (%)
ICMM members:[1]				
African Rainbow Minerals Ltd	611.2	N/A	N/A	0.11
Anglo American plc.	17,486.1	4.10	0.05	3.20
AngloGold Ashanti Limited	2,678.5	N/A	N/A	0.49
Antofagasta plc.	3,847.9	0.87	0.01	0.70
Areva	N/A	N/A	N/A	N/A
Barrick Gold Corporation	8,257.4	1.90	0.02	1.51
BHP Billiton	98,667	22.35	0.28	18.07
Codelco	N/A	N/A	N/A	N/A
Freeport-McMoRan, Inc.	14,183.7	3.27	0.04	2.60
Glencore plc.	37,997.7	8.62	0.11	6.96
Gold Fields Limited	2,258.9	N/A	N/A	0.41
Goldcorp Inc.	10,436.5	2.40	0.03	1.91
JX Nippon Mining & Metals	N/A	N/A	N/A	N/A
Lonmin	N/A	N/A	N/A	N/A
Mitsubishi Materials Corp.	3,955.8	0.89	0.01	0.72
MMG	N/A	N/A	N/A	N/A
Newmont Mining Corporation	9,311.2	2.15	0.03	1.71
Norsk Hydro ASA	5,090.9	1.18	0.02	0.93
Polyus Gold	N/A	N/A	N/A	N/A
Rio Tinto	65,596.1	15.04	0.19	12.01
South32 Ltd.	6,769.2	1.59	0.02	1.24
Sumitomo Metal Mining Co. Ltd	6,833.7	1.55	0.02	1.25
Teck Resources Limited	4,331.5	0.99	0.01	0.79
Royal Dutch Shell	175993.9	N/A	0.51	N/A
Soco International	N/A	N/A	N/A	N/A
Total SA	104,878.7	N/A	0.31	N/A
Percentage with 'no go' commitment		**66.88%**	**1.67%**	**54.63%**
Percentage without 'no go' commitment		**33.12%**	**98.33%**	**47.37%**

1 ICMM industry association committed its members to *inter alia* 'no go' in WHS. http://www.icmm.com/document/43
2 http://www.shell.com/global/environment-society/environment/biodiversity/protected-areas.html
3 http://d2ouvy59p0dg6k.cloudfront.net/downloads/soco_wwf_statement_11_june_2014.pdf
4 http://www.total.com/en/media/news/news/unesco-welcomes-totals-renewed-commitment-not-conduct-operations-world-heritage-list

Finding solutions

Ensuring zero impact of extractive operations on natural WHS requires a wide range of stakeholders. It needs governments to balance economic development with environmental goals, pro-active leadership from international bodies such as UNESCO and responsible behaviour from extractive companies themselves. It also requires financial institutions to promote change within their spheres of influence.[49]

Given their significant control over global flows of capital, investors can play a central role in safeguarding some of the most important natural sites on earth. They must engage with the companies in which they invest to ensure responsible conduct around World Heritage Sites.

Backing 'no go' commitments

One important area of action for investors is to encourage more 'no go' commitments from the extractive companies in which they invest. These commitments provide an indication that the company consider natural WHS to be out of bounds and state a company will not explore for or extract resources from or create impacts on natural WHS.

In 2003 the International Council on Mining and Metals (ICMM), then representing fifteen[50] of the world's largest mining companies committed its members to adopting a 'no go' policy for WHS, albeit with qualifications.[51] As shown in Table 3 this included major firms such as BHP Billiton, and Rio Tinto.[52] To date in terms of market share, over two thirds (66.88%) of the MSCI World Metals and Mining Index has 'no go' commitments mostly made up of a small number of major players in the sector. Royal Dutch Shell also made a 'no go' commitment soon after ICMM[53] and it was expected that such commitments would be made by other extractive companies and become industry standard. However that has not proved to be the case. It wasn't until 2013 that the issue was reenergised in part as a result of SOCO's operations in the-Virunga National Park and resulting investor engagement[54] [55] and campaigning by WWF and other NGOs. Total SA became the second oil and gas company to make a 'no go' pledge not to operate in natural WHS. Soco International also followed suit in 2014, although the threat to Virunga from oil and gas exploration remains critical as the government continues to look for ways to explore for oil in Virunga National Park. As of July 2015 in the MSCI Energy Index 1.67% of market share was represented by companies with WH 'no go' commitments. 'No go' and 'no impact' commitments, including any extensions to commitments, should be formally communicated to the UNESCO World Heritage Committee for recognition.

Supporting greater transparency

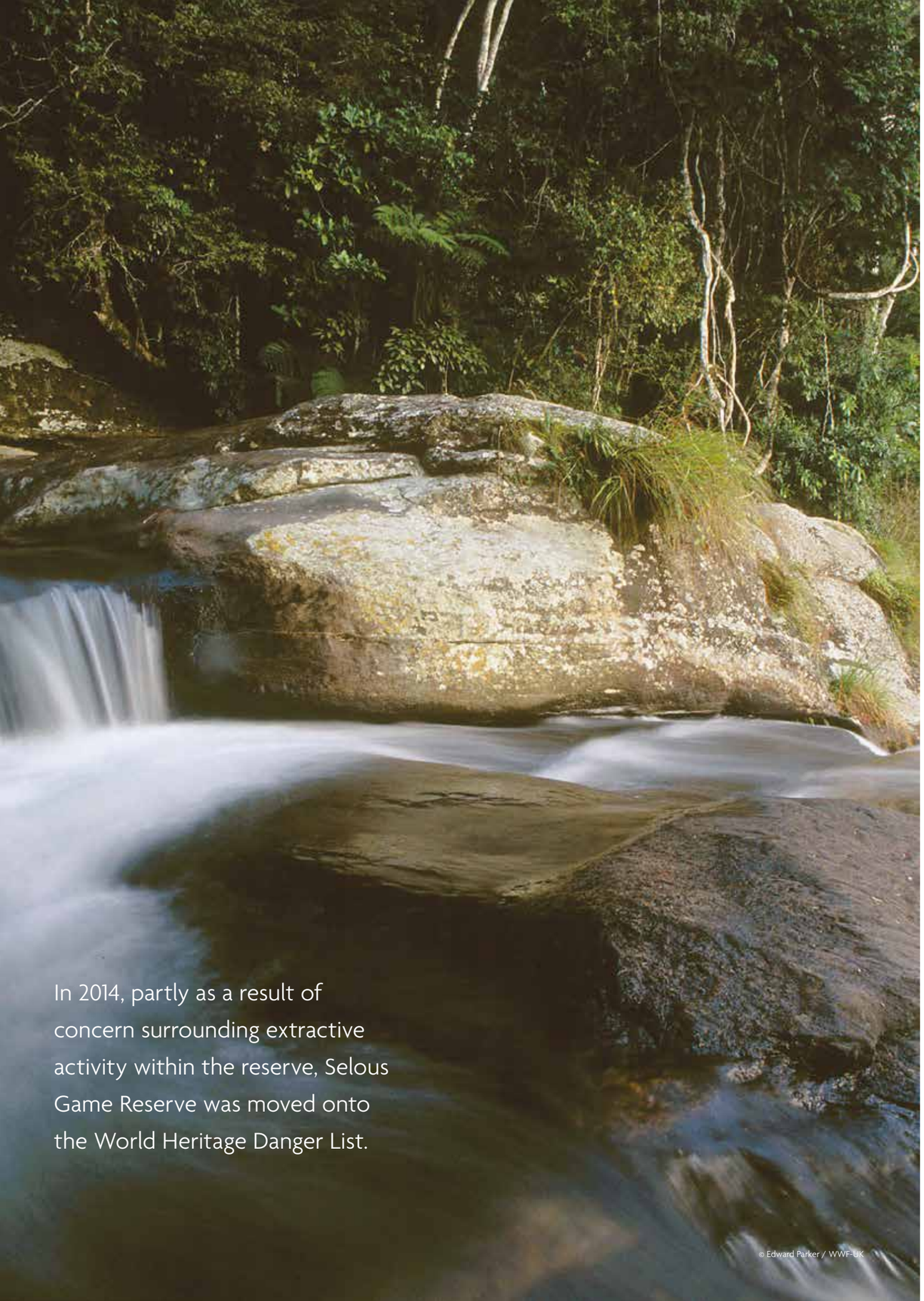
Spatial data transparency is central to addressing the issue of extractive companies impacting natural WHS.[56] To improve the data available on this issue, investors should push for extractive companies and data providers to disclose the details of any operations that impact natural WHS. Ideally this data should be disclosed in a standardised way across the sector.

It can also be difficult to link those license holders to a listed parent company. More transparency to help make these matches would be helpful.

WHAT SHOULD INVESTORS EXPECT FROM EXTRACTIVE COMPANIES?

1. Proactive disclosure of active or intended activity within or adjacent to World Heritage sites.
2. Where any existing operations are found to be within or adjacent to World Heritage sites operations should be suspended. An independent assessment should be made of any impacts made on the Outstanding Universal Value of the WHS. The company should then be transparent with investors about any future intentions for the site.
3. Adoption of a company 'no go' commitment and 'no impact'[57] commitment for World Heritage sites, evidenced by a letter confirming the policy sent to the World Heritage Committee via the UNESCO World Heritage Centre.
4. Collaboration with other extractives companies through industry bodies to address the World Heritage issue collectively.

Given their significant control over global flows of capital, investors can play a central role in safeguarding some of the most important natural sites on earth



In 2014, partly as a result of concern surrounding extractive activity within the reserve, Selous Game Reserve was moved onto the World Heritage Danger List.

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CASE STUDY 3

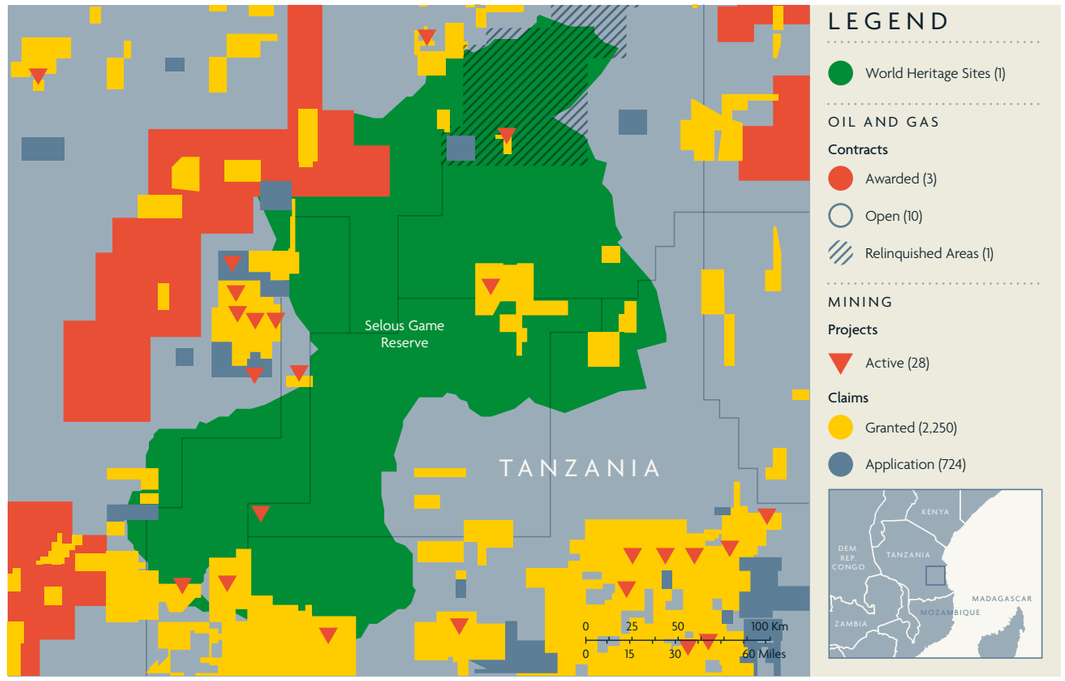
Selous Game Reserve

Selous Game Reserve (SGR) in Tanzania was inscribed as a World Heritage Site in 1982. It covers an area larger than Denmark and is one of the few remaining examples in Africa of a relatively uninhabited and undisturbed natural area.[58]

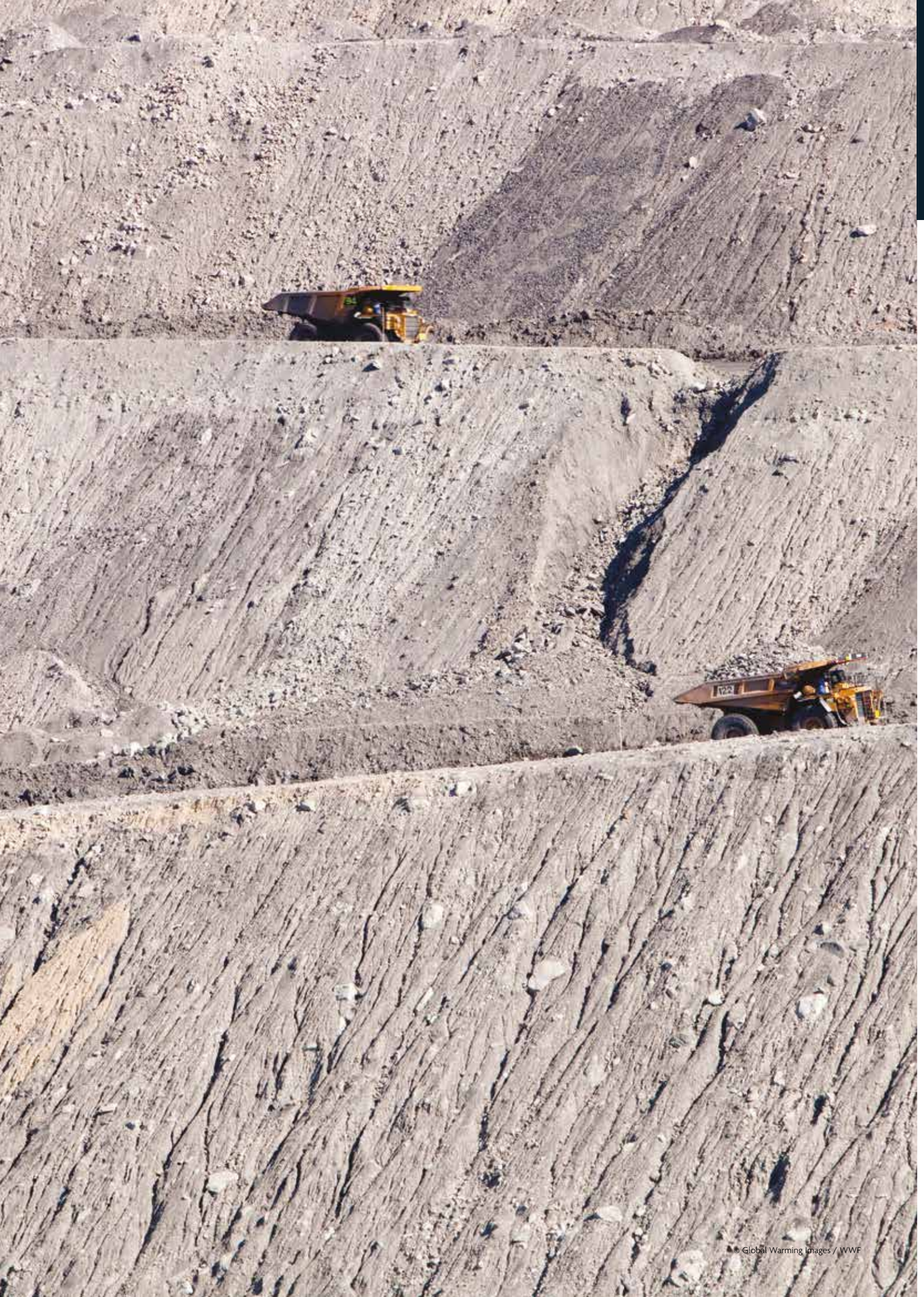
A 2009 legislative revision means that extractive concessions can now be licensed within Tanzania's game reserves.[59] As a result, the extent of extractive activity sanctioned within SGR has skyrocketed. (Figure 5). Our analysis identified five active mines and over a fifty mining concessions, owned by 23 direct owners, and six oil and gas concessions (one owned), which could potentially impact the Selous Game Reserve. **The reserve was added to the World Heritage Danger List in 2014 in part due to concerns regarding extractive activities within the reserve.**[6]

FIGURE 5

A MAP SHOWING EXTRACTIVE CONCESSIONS AND ACTIVITY WITHIN AND OVERLAPPING SELOUS GAME RESERVE



Data source:
World Heritage Sites: IUCN and UNEP-WCMC (2015). The World Database on Protected Areas (WDPA) [On-line], [06/2015], Cambridge, UK: UNEP-WCMC. Available at: www.protectedplanet.net.
Oil and gas data: DrillingInfo inc.; mining data: SNL Financial Ltd [accessed 20/7/2015]
Author: Pablo Izquierdo (pizquierdo@wwf.no), WWF-Norway, 2015.



© Global Warming Images / WWF

Recommendations for investors

This report recommends that investors, where possible and appropriate, engage with the issue by:

I. Ensuring they are aware of whether any extractive companies in which they invest (or plan to invest in) currently own concessions or operate within or adjacent to natural WHS, or if they plan to do so in the future.

II. Directly engaging extractive companies in their portfolio that are active in, or adjacent to, natural WHS to encourage them to change their strategy, or to consider divestment if insufficient progress is made.

III. Disclosing when they have divested and the reasons for divestment.

IV. Engaging with the extractive sector at industry level to encourage improved disclosure on the issue and the wider adoption of 'no go' and 'no impact' commitments for natural WHS.

V. Collaborating with other investors to address the issue collectively.

VI. Encouraging the disclosure of extractives concessions data either publicly or in widely used financial data sources.

GLOSSARY OF TERMS

Artisanal mining — Informal mining activities conducted by individuals, groups or communities, often illegally.

Biodiversity — The variety of life on Earth. The variability among living organisms including diversity within species, between species and the ecosystems within which they live and interact.

Concession — A licence issued by a government to permit a company, or in some cases a private individual, to explore for and produce oil, gas or mineral resources within a defined spatial area, for an agreed time period. The grant is usually awarded in consideration of some type of remuneration provided to the host government for a specified period (Schlumberger Oilfield Glossary, 2015).

Ecosystem — A community of plants, animals and smaller organisms that live, feed, reproduce and interact in the same area or environment (IUCN, 2010).

Ecosystem services — The goods and services provided by healthy ecosystems such as, food and water, flood and disease control, spiritual, recreational, and cultural benefits or nutrient cycling that maintain the conditions for life on Earth (IUCN, 2010).

Extractive activity — Commercial exploration, extraction and processing of minerals, metals, hydrocarbons and other geological materials.

Habitat fragmentation — The process and result of separating an area of contiguous habitat into distinct patches.

Invasive species — A species introduced outside its normal distribution where its establishment and spread modifies the local ecosystem (IUCN, 2010).

IUCN — The International Union for the Conservation of Nature and Natural Resources is an international organization working in the field of nature conservation and sustainable use of natural resources.

'No go' — A public commitment by a company to not carry out or support extractives activities within a World Heritage Site (ZSL, 2014).

'No impact' — A public commitment by a company to not carry out or support extractive activities that may have adverse impacts on World Heritage Sites regardless of the location of the activity (ZSL, 2014).

Outstanding Universal Value — The central requirement for inscription of a site on the World Heritage List, defined as *"cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity"* (UNESCO, 2013).

State of Conservation Reports — Reports submitted to the World Heritage Committee by State Parties documenting the condition of their World Heritage Sites.

World Heritage Committee — The UNESCO World Heritage Committee, comprised of 21 representatives of States Parties to the World Heritage Convention, is accountable for the implementation of the World Heritage Convention.

ENDNOTES

1 The natural WHS 'Uvs Nuur Basin' is a trans-regional site, located across the Europe and Asia and the Pacific region, following UNESCO's delineation the property is counted here as within the Asia and the Pacific region.

2 IUCN 2013.

3 Of these 32 have 'mixed' status as they meet the criteria of being both of natural and cultural significance

4 Natural WHS are estimated to cover 279 million hectares, the Earth's surface is roughly 51 billion hectares as a result natural WHS cover an estimated 0.54% of the Earth surface, commonly reported as ≤1% of the Earth's surface (IUCN, 2015b).

5 Stolton et al. 2015.

6 Osipova et al. 2014b.

7 Ibid.

8 UNESCO 2015.

9 Turner 2012; ZSL unpublished data.

10 The United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Committee is the body accountable for the implementation of the World Heritage Convention

11 The International Union for Conservation of Nature (IUCN) is the advisory body to the World Heritage Convention on natural World Heritage.

12 World Heritage Committee 2013; 2014; IUCN 2013b.

13 UNESCO 2015b.

14 UNESCO 2015d.

15 UNESCO 2015e.

16 UNESCO 2015c.

17 Outstanding Universal Value (OUV) is the central requirement for inscription of a site on the World Heritage List and refers to "cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity" (UNESCO, 2013).

18 Turner 2012.

19 Schlumberger Oilfield Glossary 2015.

20 UNDP 2015.

21 Actum 2011; Osipova et al. 2014b

22 Möllers, Fritzsch and Buchenrieder 2008; Osipova et al. 2014b;

23 ZSL 2015 unpublished data; IUCN, 2013b.

24 ZSL unpublished data.

25 WWF 2015b.

26 Cooper, Burke, and Bood 2009.

27 The Authority on World Travel & Tourism 2014.

28 UNESCO 2015g.

29 ZSL unpublished data.

30 Butt et al. 2013; Edwards et al. 2014.

31 UNEP-WCMC, 2014; Butt et al. 2013.

32 Osti et al. 2011; Butt et al. 2013.

33 For a more detailed overview of the literature documenting this issue see Turner 2012.

34 Osti et al. 2011.

35 UNEP-WCMC 2013.

36 UNEP-WCMC 2014.

37 Threatened by either 'Oil / Gas Drilling' or 'Mining / Quarrying'

38 IUCN 2015.

39 WWF 2015

40 For an overview of methodology used see, WWF, 2015 .

41 For a detailed overview of the results see, WWF, 2015 .

42 UNESCO 2015h.

43 Olías et al. 2006.

44 Prat et al. 1999.

45 The Guardian 2015.

46 bit.ly/1S4EzdZ.

47 The Law Commission (UK), 2014

48 UNEP 2009

49 For a detailed overview of how the major stakeholders can engage with the issue see Turner, 2012.

50 As of May, 2015 the ICMM represents 21 major mining and metal companies and an additional 35 national and regional mining associations which it should be noted are not bound by the 'no go' commitment.

51 It is important to note that the ICMM 'no go' commitment relate to future sites and projects and does not deal with legacy projects which may still be operating within or nearby to natural WHS.

52 ICMM 2003; UNESCO, 2003.

53 Shell 2015.

54 EIRIS 2015

55 EIRIS 2014

56 ZSL 2015 unpublished data.

57 ZSL 2014.

58 IUCN 2014c.

59 IUCN 2014b.

60 UNESCO 2014.

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