

# World Heritage and Wilderness

## A brief for the 10<sup>th</sup> World Wilderness Congress (WILD10)

WILD10 provides an excellent opportunity to begin assessing the potential for the World Heritage Convention to contribute to wilderness conservation around the world. This brief<sup>1</sup> provides a starting point for further discussions to be had on wilderness and World Heritage at WILD10, and leading up to the IUCN World Parks Congress in 2014.

### World Heritage

The World Heritage Convention seeks to identify and conserve natural and cultural heritage of outstanding universal value. As of October 2013, the World Heritage List includes 222 natural World Heritage sites, 29 of which are also listed for their cultural values ('mixed sites'). Together, these 222 sites protect almost 2.8 million square kilometers of land and sea, an area the size of Argentina. Natural World Heritage sites are evaluated against criteria that include exceptional natural beauty and outstanding earth science or biodiversity values. IUCN is the advisory body to the World Heritage Committee on natural heritage and has been supporting the identification and evaluation of new nominations and the monitoring and effective management of existing sites since the Convention was adopted in 1972.

### What is wilderness?

Various definitions of wilderness exist. For example, The WILD Foundation defines wilderness areas broadly as the most intact, undisturbed wild natural areas left on our planet<sup>2</sup>. Wilderness areas provide many benefits for the planet and its peoples. They help regulate the climate, support many species and ecosystems, and provide people with fundamental ecosystem services such as water, food, fuel and medicines. They are places for humans to interact with wild nature for their physical, mental and spiritual health.

Many attempts have been made to map such areas globally. Here we assess the overlap of natural World Heritage sites with the 24 wilderness areas defined by Mittermeier *et al.* (2003)<sup>3</sup> to highlight the importance and potential of the World Heritage Convention for wilderness conservation. These wilderness areas are large ( $\geq 10,000$  km<sup>2</sup> each), sparsely populated ( $\leq 5$  people per km<sup>2</sup>) and relatively intact ( $\geq 70\%$  of primary habitat remaining). They include tropical, temperate and boreal forests, mountains, tundra, deserts and wetland areas (see Figure 1 overleaf). Together, the 24 wilderness areas cover 52% of the Earth's land area, and hold c. 3% of the total human population. Five 'high-biodiversity wilderness areas'<sup>4</sup> hold 17% of the world's vascular plant species and 8% of the world's terrestrial vertebrate species as endemics.

### World Heritage and wilderness facts

**Wilderness areas make up 62% of all the land area in natural World Heritage sites.**

Our initial analysis of the overlap of natural World Heritage sites (WHS) with the 24 wilderness areas shows:

- 61 (27%) of the 222 natural WHS overlap with one or more of the wilderness areas (Figure 1 overleaf). The 61 sites are hereafter referred to as '**wilderness WHS**'.
- The size of the 61 sites varies from 1 km<sup>2</sup> to 0.1 million km<sup>2</sup> with a mean wilderness area of 13,851 km<sup>2</sup> and a median wilderness area of 5,847 km<sup>2</sup> per site.
- Over 0.8 million km<sup>2</sup> (62%) of all the land area in natural WHS falls into wilderness areas. The largest number and area of wilderness WHS can be found in Africa, North America, Latin America and the Caribbean, and Europe (Figure 2 overleaf).
- The ten largest wilderness WHS make up 61% of the total wilderness area in natural WHS (Table 1 overleaf). The twenty largest make up 81% of the 0.8 million km<sup>2</sup>.
- 52 (85%) of the 61 wilderness WHS are inscribed on the World Heritage List under more than one natural criterion (sometimes also in combination with cultural criteria) and 45 (74%) of the 61 sites are inscribed under the 'biodiversity criteria' (ix) and/or (x).
- The 'ecosystem criterion' (ix) has been applied to 39 wilderness WHS, the 'species criterion' (x) to 36 sites, and the natural beauty criterion (vii) to 38 sites. 20 of the 61 wilderness WHS overlap with high-biodiversity wilderness areas.

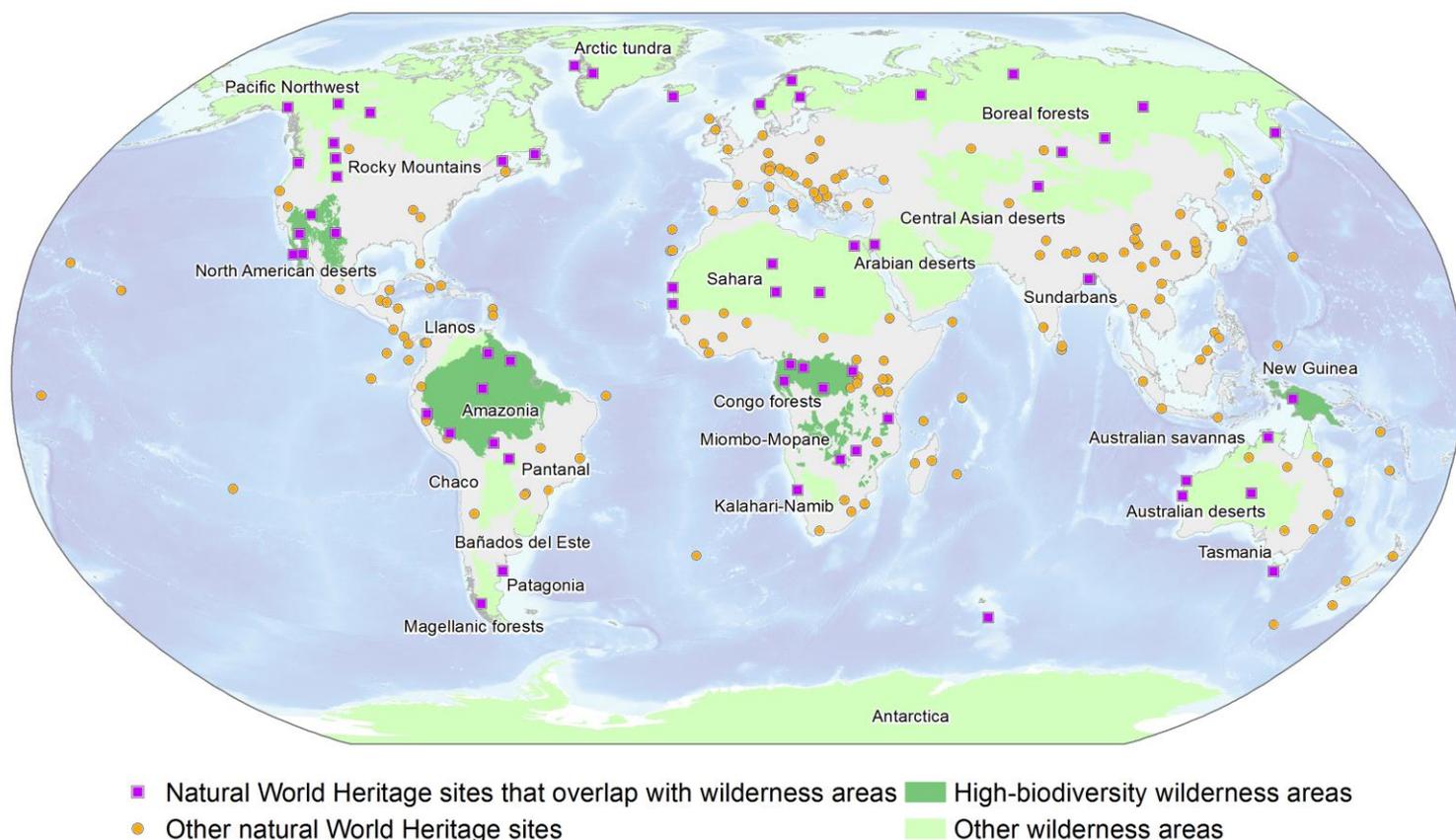
<sup>1</sup> Prepared by Bastian Bertzky and Yichuan Shi with input from Tim Badman, Cyril Kormos and Tilman Jaeger.

<sup>2</sup> <http://www.wild.org/main/how-wild-works/policy-research/what-is-a-wilderness-area/>

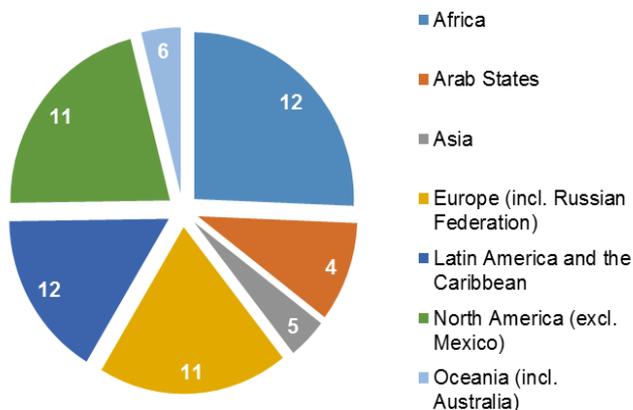
<sup>3</sup> Mittermeier, R.A. *et al.* (2003) Wilderness and biodiversity conservation. PNAS 100 (18): 10309-10313.

<sup>4</sup> Each holding  $\geq 0.5\%$  of the world's vascular plant species as endemics.

**Figure 1.** Distribution of the 61 wilderness World Heritage sites (purple squares) and 161 other natural and mixed World Heritage sites relative to wilderness areas and high-biodiversity wilderness areas as defined by Mittermeier *et al.* (2003).



**Figure 2.** Total number and wilderness area (size of slice) of wilderness World Heritage sites by region.



**Table 1.** The ten largest wilderness World Heritage sites (based on land area that falls into wilderness areas).

Site	Country	Criteria	Wilderness area (km <sup>2</sup> )
Kluane / Wrangell-St Elias / Glacier Bay / Tatshenshini-Alsek	United States and Canada	(vii)(viii)(ix)(x)	82,951
Air and Ténéré Natural Reserves	Niger	(vii)(ix)(x)	78,696
Tassili n'Ajjer	Algeria	(i)(iii)(vii)(viii)	75,713
Central Amazon Conservation Complex	Brazil	(ix)(x)	51,313
Wood Buffalo National Park	Canada	(vii)(ix)(x)	44,607
Lake Baikal	Russian Federation	(vii)(viii)(ix)(x)	41,852
Volcanoes of Kamchatka	Russian Federation	(vii)(viii)(ix)(x)	37,979
Selous Game Reserve	Tanzania	(ix)(x)	37,380
Salonga National Park	DR Congo	(vii)(ix)	35,322
Virgin Komi Forests	Russian Federation	(vii)(ix)	28,703

## Concluding remarks

This initial analysis highlights the importance and potential of the World Heritage Convention for wilderness conservation. At present the World Heritage List includes at least 61 natural and mixed sites that contain wilderness areas. Overall, 22 of the world's 24 terrestrial wilderness areas are represented on the List, including all high-biodiversity wilderness areas. This analysis did not consider marine wilderness areas. However, it should be noted that the Convention does not apply to vast wilderness areas such as the high seas, or mainland Antarctica. IUCN is planning to launch a more comprehensive study on wilderness World Heritage at the IUCN World Parks Congress in 2014. Please contact Tim Badman ([tim.badman@iucn.org](mailto:tim.badman@iucn.org)) or Cyril Kormos ([cyril@wild.org](mailto:cyril@wild.org)) for more information.