

Mountain Protected Areas UPDATE



No. 91 September 2016



Jigme Dorji National Park, Bhutan

In this issue:

New Members

People and Mountains around the world:
Global

- New WH Sites
- Mountains at IUCN WCC
- Hitching a Ride
- Rights of Nature

America

- GWS & *Dave Harmon*
- Peel Watershed
- Mountain Institute - Peru

Africa

- Itombwe Protected
- Rwanda's 4th NP

Central Asia

- Ecotourism in Bhutan
- Snow Leopard Sanctuary
- Mining Sacred Mountains

Australia

- Alps Climate Futures

Europe

- Catalunya-Pedrera Foundation
Scree and Talus

Recent Publications of Interest

Meetings and Events / Links

**Mountain UPDATE is a quarterly newsletter
distributed to members of our Mountain
Protected Areas Network**

WCPA Mountain Specialist Group Chair:

Peter Jacobs

WCPA Senior Advisors: **Larry Hamilton &
Graeme Worboys**

*Spirit is a land of high white peaks and glittering jewel-like lakes
and flowers. Life is sparse and sounds travel great distances.
There is soul music, soul food, and soul love... People need to climb
the mountain not simply because it is there but because the soulful
divinity needs to be mated with the spirit. **Dalai Lama***

A note from the editor

Welcome to the 91st edition of the Mountains UPDATE; coming to you a little earlier due to the IUCN World Conservation Congress in Hawai'i starting on 1st September – and not even attending the WCC should stand in the way of the UPDATE.

This edition highlights the reoccurring themes of science, management and communities working together and the current and projected impacts of climate change on our mountain protected areas.

And a special thank you to our Network friends that provided news and reports from Africa.

Finally the IUCN WCPA Mountains Biome has now become the WCPA Mountain Specialist Group with *Peter Jacobs* taking over the position of Chair from *Graeme Worboys* who is 'retiring' in September.

But you will be relieved to know that Graeme will be around as a WCPA Senior Advisor plus continue to dedicate an inordinate amount of time and energy to working on global Connectivity Conservation.

Please read on – and don't forget, articles about your mountain protected area or area of interest are always welcome.

New Members

Welcome to a number of new members starting with a bunch of Australian alpine researchers, ecologists and park managers.

Anita Wild, Keith McDougall, Ben Kefford, Gabriel Wilks, Susanna Venn, Dick Williams, Marie Keatley, Dan Brown, Fei Ji, Daniel Jamieson and John McRae.

John is the new Program Manager for the Australian Alps national parks Cooperative Management Program. The Program Manager role rotates between the respective cross border states; with John (Australian Capital Territory) taking over from *Andrew Nixon* (Victoria). Thanks Andy for a great job keeping the Alps together!

Dan Plumley, a Partner in Adirondack Wild USA. Dan works also in Siberia, Russia, China, Mongolia, and recently Kazakhstan.

Madeleine Nyiratuza, Projects Manager Vital Signs and Tropical Ecology Assessment and Monitoring Wildlife Conservation Society (WCS), Rwanda.

Madhav Karki, is Executive Director of CGED-Nepal as well as Co-Chair, IPBES Regional Assessment of Biodiversity & Ecosystem Services in Asia Pacific, South Asia Chair, IUCN/Commission on Ecosystem Management (CEM) and IPBES Task Force member on Indigenous and Local Knowledge (ILK) – quite a list!

I have attempted to put Network *members names* are in italics throughout the UPDATE.

From People and Mountains around the World:

Global

New Natural World Heritage sites (announced Istanbul 2016)

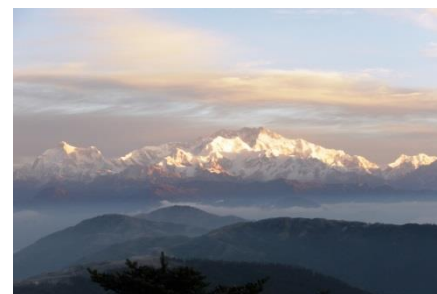
The World Heritage Committee followed IUCN's advice to inscribe nine new natural World Heritage sites including two mountain protected areas - India's **Khangchendzonga National Park** and China's Hubei **Shennongjia**.

"Among this year's World Heritage inscriptions are some of the most impressive landscapes and most important natural areas for the conservation of iconic species on Earth" Peter Shadie, Head of IUCN's delegation at the World Heritage Committee.

India's **Khangchendzonga National Park** in the Himalayas includes the world's third highest peak, Mount Khangchendzonga, and one of Asia's largest glaciers. The park boasts an unusually diverse flora and fauna, with many rare and endangered species such as the snow leopard, red panda and Asian wild dog. It is also a place of great cultural and spiritual significance to many ethnic peoples and religious beliefs across and beyond the Himalayas.

Hubei Shennongjia protects the largest primary forests in central China and is home to globally impressive numbers of species. As many as 3,767 vascular plant species have been recorded in the area, which contains a remarkable 63% of the temperate plant species groups found across all of China – home to the world's greatest diversity of these species. More than 600 vertebrate species live here, including the golden snub-nosed monkey, clouded leopard and the world's largest amphibian – the Chinese giant salamander.

The Chinese giant salamander is the largest amphibian in the world and at US\$280/kg it is regarded as a luxury food and therefore a target for poaching.



Mount Khangchendzonga (from near Darjeeling, India)

Proposals to inscribe five more sites on the World Heritage List were approved by the World Heritage Committee, although IUCN's evaluations had pointed to additional work needed to secure their conservation to World Heritage standards. These included the **Western Tien-Shan**, a set of seven protected areas in Kazakhstan, Kyrgyzstan and Uzbekistan.

Mountains at the IUCN World Conservation Congress (WCC) Hawai'i

From **Peter Jacobs: Chair: IUCN/WCPA Mountains Specialist Group**

The “**Mountains Protected Areas: Leadership for adapting to a changing world**” Knowledge Café is being held at the World Conservation Congress on 4 September. Link to website: <https://portals.iucn.org/congress/session/10360>

The key discussion topics will be prioritizing for action the protection of currently unprotected Key Biodiversity Areas in Mountains and how support may be given to protected areas in the Alpine Belt as they change and adapt to the impact of climate futures. Many and varied experienced mountain folk have already indicated their willingness to participate by leading conversations around those topics and the UNEP World Conservation Monitoring Centre (WCMC) has kindly provided access to the latest data and maps.

The outcomes will guide the future priorities and actions of the IUCN/WCPA Mountain Specialist Group and we look forward to reporting on the discussions soon.

Hitching a Ride along Mountain Roads

From **Mountain Research Initiative (MRI Europe), Mountain Invasion Research Network (MIREN) and Research Centre for Applied Alpine Ecology (Australia)**

A new paper from the **Mountain Invasion Research Network (MIREN)** shows that mountain roads all over the world host busy plant traffic. With the help of thorough plant surveys along roads in eight mountain regions, they show how the elevational ranges of a wide variety of plant species change along these roads.

That non-native species would use the mountain roads to expand their ranges towards higher elevations in the mountains does not come as a surprise anymore. These species have the reputation of being fast at following humans wherever they go. Expanding their ever-growing ranges into high mountain areas is just as predicted. This new study however expands on this by showing how several native species mimic this behaviour of upward movement and occur at higher elevations in mountains along roads than they do in the natural vegetation. Even more surprisingly, a group of high elevation species expands its range in the opposite direction, towards lower elevations.

A number of (MIREN) Australian alpine ecologists have also been studying this movement of native species along road sides into new thermal niches including Mountain Network member *Keith McDougall*.

The range expansion to colder environments might be an early indicator of native species responding to changing climates, and highlights that native species are taking advantage of the dispersal and establishment opportunities afforded by roadside verges (just as many weeds do).

They also concluded that there is little or no policy to guide management of native species when they arrive in new environments.

Rights of Nature

Larry Hamilton reports on a ‘ground-breaking, paradigm-changer’ idea.

The **Global Alliance for the Rights of Nature** is a worldwide network of individuals and organizations committed to transforming our human relationship with our planet. Recognizing Rights of Nature is a new legal structure that fundamentally changes the legal standing of ecosystems.

The Alliance is committed to disseminate this, and it is convinced of the importance of promoting Rights of Nature Tribunals as an efficient tool to communicate how the world will be a very different place if Rights of Nature were recognized and guaranteed. They also serve to share the worldwide experiences of Rights of Nature recognition in countries like Ecuador, Bolivia, USA, New Zealand and others. Tribunals have been held in Ecuador, Peru, France, and most recently (mid-August), in Montreal, Quebec, Canada.

Rather than treating nature as property under the law, Rights of Nature acknowledges that nature in all its life forms has the right to exist, persist, maintain and regenerate its vital cycles.

America (north – central - south)

From *Larry Hamilton* in the north

George Wright Society and Dave Harmon

The **George Wright Society (GWS)** is losing its long-serving (27 years) Executive Director, *David Harmon*, who is stepping down. The strength of GWS today is to a large extent due to this valued friend and colleague. Dave will continue to serve part time, as co-editor of the **George Wright Forum** and producer of the Society's website as a contractor. www.georgewright.org GWS is the organization that unites North American professionals in the field of protected areas, through its journal and its lively conferences, both largely thanks to Dave and his fine co-workers.

The organization derives its name from George Mendes Wright, an early National Park Service biologist who began his career as an assistant park naturalist in Yosemite NP. He initiated the first scientific study of wildlife in the NP system, and was involved with the international commission working on Mexico/USA PAs along the border. During this work, at age 32 he was killed in an automobile accident. He brought a new rigor to park management in a holistic way. In July, Linda and *Larry* were in Acadia NP and saw the relatively new building bearing his name (George Mendes Wright Hall), at the Research and Education Institute facility.

But back to Mt PA Network member *Harmon*... *Dave* has been very active in IUCN as a WCPA member, and has been a stalwart in the MtPA Network for around 20 years. He played a major role in the last mountain workshop that *Larry* organized in the **Drakensberg Mountains** of South Africa in 2003, and co-edited with *Graeme Worboys* the resulting product, Managing Mountain Protected Areas: Challenges and Responses for the 21st Century (2004).

Peel River Watershed & Y2Y

As the northern anchor of the now legendary **Yellowstone to Yukon Conservation Initiative** there exists a very large wild area of mountains, boreal forest, wetlands and a river that drains about 14 percent of the Yukon Territory, the **Peel River Watershed** is of key importance for protection.

This area is roughly 16 million acres (6.8 million hectares), essentially roadless and uninhabited but currently only about 29 percent protected in two National Parks (**Ivvavik and Vuntut NPs**) and a few Territorial Parks. There are fine mountain ranges: **Mackenzie, Ogilvie** and **British/Richardson**, all needing further safeguarding.

A coalition of Canadian NGOs has been fighting to strengthen a government-adopted Land Use Plan that fails to protect 80 percent of this large area. This group includes: Nacho Nyak Dun and Tr'ondek Hwech'in First Nations, Yukon Conservation Society, and Canadian Parks and Wilderness Society. It has brought a lawsuit into the courts, challenging the territorially approved Plan.

The good news - in June the Supreme Court of Canada announced that it will hear the appeal brought by the group.

The main threat is mining, one of the most common problems faced by many MtPAs, even World Heritage Sites. The Plan would open to mining about 70 percent of the largely roadless wilderness area. Having 80 percent protected would double the area that has been brought into official conservation status in Y2Y since it began in 1997.

We wish this group every success in this lawsuit.



Images from Yukon News (Mike Thomas) and CBC News.

IUCN WCPA Mountain Update # 91

Editor: Gillian Anderson peopleinnature@bigpond.com

Glaciers & Mountain Ecosystems Gain Higher Profile in Peru

From MRI blog by Bryan Mark, Associate Professor and State Climatologist at Ohio State University

With the creation of the **National Institute for Research in Glaciers and Mountain Ecosystems** (INAIGEM) Peru's national government is strengthening its role in investigating the nexus of climate change, glacial recession, natural hazards, and the management of water and other mountain-based ecosystem services in the Central Andes.

The establishment of INAIGEM within the Ministry of the Environment (MINAM) marks a significant renewal and expansion of Peru's legal and institutional support for mountain and glacier research in a country that features the majority of the planet's remaining tropical glaciers, as well as a long history of glacier-related catastrophes.

The legal formulation of the new INAIGEM includes tasks similar to those conducted over a half century by the Glacial and Hydrological Resources Department, including conducting inventories of glaciers, lakes and wetlands in the **Cordillera Blanca** and Peru's numerous other Andean subranges.

INAIGEM has a staff of over 50 including geologists, civil, agricultural and environmental engineers, a meteorologist, foresters, agronomists, anthropologists and public relations/publicists. They envision establishing themselves as the premier such institute within Latin America.

INAIGEM hosted the International Glacier and Mountain Ecosystems Forum in Huaraz, (August 2016).



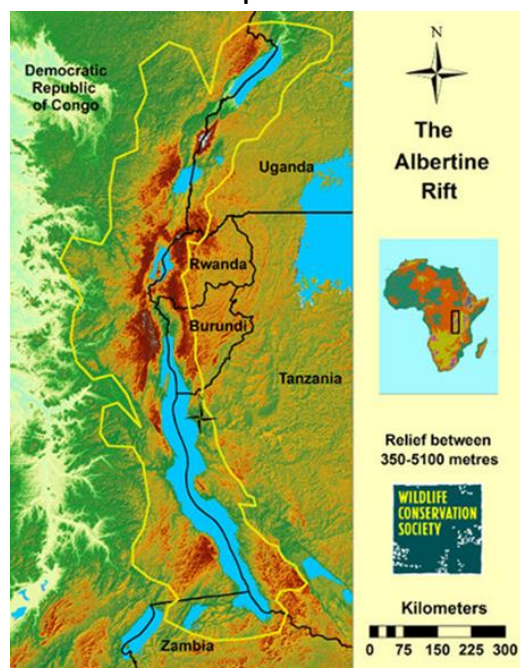
Huascarán NP – taken from near Huaraz

With dozens of summits over 6000 m., the Cordillera Blanca is Earth's most glacierized tropical mountain range and a region plagued by destructive glacial lake outburst floods (GLOF) and other glacier-related disasters. The core of the Cordillera Blanca is also home to Huascarán National Park, one of Peru's flagship parks and a UNESCO World Heritage Site and Biosphere Reserve.

Africa

Albertine Rift – where is it?

The UPDATE often reports on issues around the Albertine Rift – but you may wonder what makes up this special landscape?



From north to south the mountains include the **Lendu Plateau, Rwenzori Mountains, Virunga Mountains** and **Itombwe Mountains**. The range covers an area 120 kilometres long and 65 kilometres wide. This range includes Mount Stanley at 5,119 metres, Mount Speke at 4,890 metres and Mount Baker at 4,843 metres.

The **Virunga Massif** along the border between Rwanda and the DRC consists of eight volcanoes.

Isolated mountain blocks further to the south include Mount Bururi in southern Burundi, the Kungwe-Mahale Mountains in western Tanzania, and Mount Kabobo and the Marungu Mountains in the DRC on the shores of Lake Tanganyika. Most of the massifs rise to between 2,000 metres and 3,500 metres.

Itombwe - One of the most Biodiverse Parts of Africa Protected

Important news from Network member **Andrew Plumtre** of **WCS (Wildlife Conservation Society)** Albertine Rift Program

“Itombwe is one of the most important sites for conservation in Africa and it is great news that the Government of DRC and the communities that live in the massif have finally fully established this unique protected area”

- The **Itombwe Reserve’s** boundaries have been formally approved by Provincial Decree in the Democratic Republic of Congo, a significant step towards effective protection of this important site
- Itombwe is one of the richest sites for biodiversity in the Albertine Rift, which contains the highest number of endemic and threatened vertebrates in Africa
- Reserve protects several unique species that only occur in Itombwe as well as an important population of Grauer’s gorillas, which WCS surveys recently revealed to be in crisis following a crash in population in the last 20 years

The **Itombwe Reserve** in the Democratic Republic of Congo (DRC), one of Africa’s most biodiverse sites, had its boundaries formally approved in June this year. The move follows requests by WCS and its partners to finalize the reserve’s establishment in order to conserve the Grauer’s gorilla.

By DRC law, formal boundaries are needed to effectively work on the ground to protect the 5,732 square kilometre reserve.

The importance of engaging the people living in the Itombwe massif – who have a vested interest in protecting the forest they depend on - has been a critical component of obtaining agreement on the reserve boundaries.

The Itombwe massif is one of the most biodiverse sites in Africa and to date 756 terrestrial vertebrates and 1,036 plant species have been documented. The site has only been visited a few times by scientists and it is likely many more species will be found in the future.

Of these known species, 108 are found only in the Albertine Rift region of Africa with several of these species found only in Itombwe. At least 53 globally threatened species (Critically endangered, endangered or vulnerable on the IUCN Red List) are found in Itombwe.

A process of zoning of the reserve is underway as it is critical to define with the communities where conservation, sustainable use and human development will take place within the Reserve.

Fourth national park for Rwanda: Gishwati-Mukura

Abbreviated from an article by **Madeleine Nyiratuza** - **Wildlife Conservation Society (WCS) Rwanda**

Rwanda is located in the highlands of the Albertine Rift a generally mountainous region heavily dissected by a complex network of rivers, lakes, and wetlands; thus the name “the land of a thousand hills”. The highest peak is Karisimbi (4,507m), one of 8 major volcanoes in the Virunga Mountains.

In 2016 Rwanda gazetted the fourth national park called **Gishwati-Mukura**. It consists of **Gishwati Forest Reserve** (1,570 hectares) and the **Mukura Forest Reserve** (1,988 hectares), both home to world-wide recognized endangered, vulnerable and threatened species.

The other three national parks are **Nyungwe, Volcanoes** and Akagera. Apart from Akagera the rest of the parks are mountain rain forests along Congo-Nile divide. It is likely that historically these ecosystems were connected. **Nyungwe National Park** borders with **Kibira National Park** in Burundi and **Volcanoes National Park** borders with **Virunga National Park** in Democratic Republic of Congo and **Mgahinga Gorilla National Park** in Uganda.



Rwanda photo by *Elaine Thomas*

The creation of the new park is a big achievement for the country and a reward to Forest of Hope Association (FHA), a National Non-Government Organization that worked hard with different government institutions to make this happen.

Gishwati Forest has gone from 98% forest reduction to significant restoration, has preserved biodiversity, increased community support and gained important institutional recognition with the gazetted law establishing **Gishwati-Mukura National Park**.

Human encroachment of the **Mukura Forest Reserve** for mining, livestock grazing, crop cultivation, firewood collection and charcoal making led to forest degradation and the loss of ecosystem services. **Mukura Forest Reserve** lost all primates due to lack of protection for several years. The forest currently remains with 77 bird species that include seven endemic to the Albertine Rift and three IUCN threatened species. The future of this forest is now promising with the creation of one national park. For more information: www.fharwanda.org

Gishwati Forest Reserve home to:

- eastern chimpanzees (*Pan troglodytes schweinfurthii*, IUCN Red List),
- golden monkeys (*Cercopithecus mitis kandti*, listed as Endangered),
- mountain monkeys (*Cercopithecus lhoesti*, listed as Vulnerable),
- bush babies, tree squirrels, and
- more than 130 species of birds that include 14 endemics to Albertine Rift and two IUCN Vulnerable species: Martial Eagle (*Polemaetus bellicosus*) and Grey Crowned Crane (*Balearica regulorum*).

Mukura Forest Reserve home to:

- Grauer's Rush Warbler (*Bradypterus graueri*, listed as Endangered on the IUCN red list);
- Grey Crowned Crane (*Balearica regulorum*, listed as Endangered on the IUCN red list); and
- Kivu Ground Thrush (*Zoothera tanganjicae*, listed as Vulnerable on the IUCN red list)

Zebras all have stripes but...

From AfroMont – Research Network for Global Change in African Mountains

Not everyone will know that there are many different species of zebra in Africa, and that some are more threatened than others.

Although these zebra all resemble each other in many ways there are some differences, notably whether they live in grasslands and savannas, referred to as 'plains' zebras, or whether they live in mountains.

While the plains zebra are still numerous throughout Africa, the mountain zebras are at greater risk.

There are two subspecies of mountain zebra in southern Africa, the Cape Mountain Zebra (*Equus zebra zebra*) in the arid areas of South Africa, and Hartmann's Mountain Zebra (*Equus zebra hartmannae*) in the mountains of Namibia.

The Cape Mountain Zebra which was once plentiful in the mountain ranges of the Eastern and Western Cape almost became extinct in the 1930s when hunting and extermination reduced their numbers to only 30 individuals.

The species was saved by the 1937 proclamation of the **Mountain Zebra National Park**, in the Eastern Cape Province. This move was very unpopular with local farmers as the zebras competed with their sheep for grazing.

Today only three naturally occurring populations still exist. The Kamanassie mountains, the Gamka mountains in South Africa and the Mountain Zebra National Park where it is now plentiful enough (almost 5000 individuals) for the South African National Parks agency to consider applying for the CITES rating to be amended so that they can offer a few annual trophy hunting permits. Strangely effort this will generate cash for the Parks Board and for private land owners who have invested in the Mountain Zebra preservation.



Australia

Australian Alps Climate Futures Forum

Reported by *Peter Jacobs*; Chair, WCPA Mountains Specialist Group

The Australian Alps science management forums have been hosted by the Australian Alps national parks Co-operative Management Program for over 10 years, with in kind support from IUCN/WCPA Connectivity Conservation and Mountains Theme. This year the theme was Climate Futures. Over 60 people from a wide range of backgrounds including protected area managers, researchers, agency experts and alpine ecologists attended the forum in Canberra in July.

The forum heard that recent fine scale (at 5 km grids) climate data projections for the Australian Alps indicate that on the current emissions trajectory, by 2100 there will be:

- an increase in mean annual temperature of 4 to 5°C with hottest summer days ~5°C warmer in the future;
- an increase in minimum daily temperature from 3 to 6°C; and
- up to 20% decrease in annual precipitation with significantly decreased snowfall.

The forum considered the expected impact of these climate futures on key biodiversity features of the Australian Alps and the alignment of current biodiversity programs with climate futures thinking.

The forum heard that impact on biodiversity features will vary significantly as some features will change and may be lost while others will persist. The greatest changes may be expected to be on Alpine Peatlands and water recharge systems, Montane Forests and alpine specialist fauna, due to increased temperature and reduced water and snow availability. Increased fire frequency will be a key vector of change.

Two concepts were introduced to consider future interventions and management actions:

- **Adaption pathways:** ability to accept change though multiple pathways and developing climate ready objectives; and
- **Typology of change:** assessing the rate and magnitude of change.

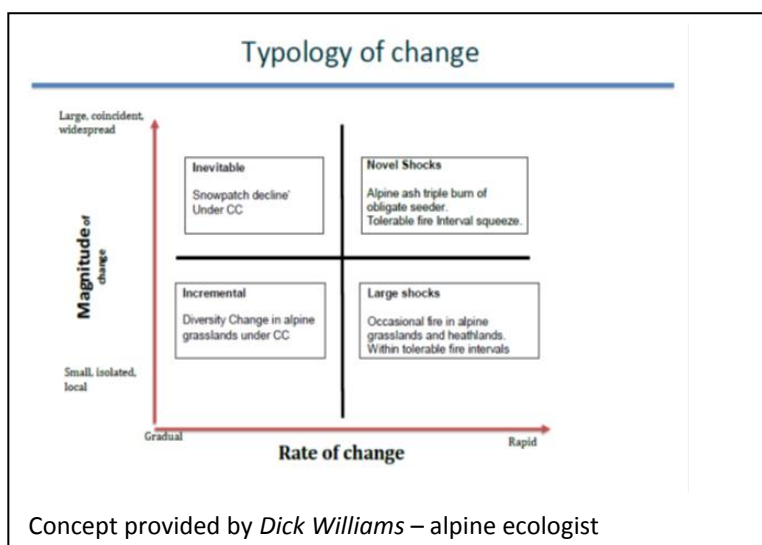
The challenge put to agencies was they may be accepting climate change and working on building resistance and resilience to stressors rather than actively planning and adapting to climate change. Some new thinking was encouraged to determine what changes may be best allowed to happen and where interventions are more critical.

The future relationship and institutional partnerships between scientists, researchers and management agencies is critical to address climate ready thinking. A proposal for an Australian Research Centre for High Mountain Futures was presented to consolidate the science and research network with good links to management.

The summary report for the Science Management Forum is available for download on the Australian Alps website. <https://theaustralialps.wordpress.com/>



Increased fire frequency will be a key vector of change in **Australian Alps**



Central Asia – Himalayas

Tigers, Tourism & Gross National Happiness - Sustainable Tourism in Bhutan

Adapted from an interview with *Karma Tshering* by AEN - Mountains Network member and board member of recently founded Asian Ecotourism Network (AEN)

Bhutan, though a developing country, has given top priority to the conservation of the natural environment with an extensive network of protected areas, covering almost half the size of the nation's land (among the highest proportions in any country).



Karma Tshering

Tigers

The findings from The Tiger Conservation Project, initiated in 1995, prompted the Bhutan government to take a landscape approach to conservation through the declaration of several biological corridors that connect the country's protected areas.

While these were significant achievements for conservation in Bhutan, *Karma* realized that saving the tiger required a greater focus on people. To protect the tiger meant first knowing where exactly they were and interviewing local communities was the major source of gathering data.

The Tiger Project affirmed my belief that people are at the center of conservation, and hence their support and cooperation is critical. I have been a firm advocate of a people-centered approach for conservation ever since.
Karma Tshering

Tourism

Unlike many other countries, Bhutan's conservation policy allows people to reside within the protected areas. This circumstance demanded an integrated approach to conservation and development. Identifying projects that ensured long-term commitment and benefits to both people and conservation were essential. That's when *Karma's* attention was drawn to tourism.

Through my research I was able to demonstrate that sustainable tourism development is a viable option to stimulate the support of the public for biodiversity conservation and cultural preservation, and that such development is necessary for the sustainability of the protected areas in Bhutan. Karma Tshering

Bhutan's Gross National Happiness

The four pillars to the vision of happiness are:

- the conservation of the natural environment;
- the preservation of the cultural heritage;
- equitable socio-economic development; and
- good governance.

While the country seeks to focus development based on each of the happiness pillars, in *Karma's* view Bhutan cannot focus on each pillar in isolation but will need an integrated approach that combines all four pillars resulting in an overall positive impact.

Tourism programs have the prospect to provide this critical link.

Especially for a country with limited potential for industrialization, but with a unique culture and an intact natural environment, the capacity of tourism as a major force for its development is apparent. There are several examples around the world where tourism is becoming the driving force for conservation.

The stringent conservation policies weigh heavily on the local people living in and around the forests and parks with increased wildlife predation impacting their subsistence livelihood. This problem has been alleviated through seed funding established for livestock compensation established through tourism, other interventions and promoting of community based tourism to provide supplementary income.

Sustainable tourism development is able to generate positive benefits for conservation of the cultural and natural heritage while offering socio-economic benefits to the local people. This symbiosis contributes to happiness.

Sacred Mountains and Buddhist Sites threatened by mining

From Tibet Post International (TPI), a Tibetan news service based in Dharamshala, India. TPI was formed in 2008 under the auspices of the Himalayan Literacy Trust.

Local Tibetans have been gathering in **Yulshok Gargye**, Minyak County, Kham Province of eastern Tibet to demand an end to a Chinese mining project and calling for urgent action to protect environment and wildlife.

Yulshok Gargye is a sacred place located in the Minyak County, close to Pa-Lhagang, which is one of the holiest sites in Tibetan Buddhism.

Tibetan nomads have protested the Chinese mining operations, which kill large numbers of fish, poison drinking water and kill herd animals. The operations also have caused landslide, severe damage to local forests, and grasslands. Waste from the mines has been dumped in the rivers, and mining activities have polluted the air.

The protest site is also located near **Mt Minyak Gangkar** (7556m), one of the highest mountains in Kham region of eastern Tibet, which is located near Dartsedo City. The town of Dartsedo was an important trade center between Tibet and China, and for centuries its importance lay on the tea-horse trade.

Mt Minyak Gangkar is also one of the most sacred snow capped mountain in the Kham region.



From Hunting Reserve to Snow Leopard Sanctuary

Adapted from Wildlife Watch National Geographic by Adam Cruise

Saving Kyrgyzstan's snow leopards is a high priority for the species. Earlier this year Kyrgyzstan's president set aside a former hunting reserve as a protected natural habitat for the animals.

For the elusive snow leopard in Kyrgyzstan, a satisfying meal consists of an ibex or an argali. As it happens, these wild relatives of goat and sheep—bearers of spectacular, curved horns—are also the quarry of trophy hunters. Although a quota system has been in place to regulate the number of animals taken for trophies, until recently intense illegal hunting in Kyrgyzstan has severely depleted these ungulates, according to the IUCN. And as their main prey animals have grown scarcer, the numbers of snow leopards, which are endangered globally, have fallen too.

But this year President Almazbek Atambayev ordered a hundred-square-mile (260-square-kilometer) former trophy hunting concession called **Shamshy**, in the northern **Tian Shan Mountains**, to be set aside as a fully protected natural habitat for the cats.

According to the [Snow Leopard Trust](#), a United States-based nonprofit that works through local communities to protect the animals, mountainous Kyrgyzstan—which offers ideal habitat for the leopards—now holds no more than 500 of them. That's about 10 percent of the worldwide total, estimated at between 4,000 and 6,500 in Russia and 11 Central Asian countries.

Without trophy hunting of the wild ungulate population **Shamshy** has the potential to become a key snow leopard stronghold.

In 2014 the Kyrgyz government signed a memorandum of understanding with the Snow Leopard Foundation of Kyrgyzstan, the Snow Leopard Trust, and the David Shepherd Wildlife Foundation to enhance snow leopard conservation during the next decade. Part of the understanding is the [Citizen Ranger Wildlife Protection Program](#), aimed at encouraging rangers and members of the local community to apprehend poachers and law-breakers. The program has already begun to stanch overhunting of wild ungulates and assisted the conversion of **Shamshy** from a hunting concession to a nature reserve.

Europe

The Foundation...what will it attempt next?

An update from Mountain Network member *Miquel Rafa* of the “Catalunya- La Pedrera” Foundation

The Foundation (since 2013 called “**Catalunya- La Pedrera**” Foundation) is now financially self-sustaining and fully independent from banks or other major public or private institutions.

This allows the Foundation to properly take care of all the lands purchased in the past (Espais Natura Network) as well as opening new visitors centres (in Alinyà Mountain, in Montserrat and in the Mont-rebei Gorge). These are a help for visitors but also a good way to generate income to maintain the reserves.

The Foundation model is unique not only in Spain/Catalonia but for other European countries and was presented as a case study at the first International Land Conservation Network in Berlin last October 2015.

www.landconservationnetwork.org/sites/default/files/Proceedings

The long-term vision of the “**Great Mountain Corridor Cantabric-Pyrenees-Alps**” is still on the move and alive. The Foundation submitted a LIFE project proposal last year with a group of French, Spanish, Andorran and Portuguese partners (public and private), which was not successful, but will be submitted again this year, with the collaboration of IUCN Mediterranean Office and French and Spanish IUCN Committees.

One of the connectivity projects “on the ground” has been very successful with the final release of the last 5 Black (Cinereous) Vultures finishing the reintroduction project of this species in the Pyrenees. Now (2016 season), we have an almost-viable population of 10 breeding pairs in the area (Boumort- Alinyà), which grows every year with animals from Iberian and Southern France populations.

The latter, together with the recent release of one adult male of Brown Bear in the Alt Pirineu Natural Park, the success of the reintroduction of Ibex in the French Pyrenees (with animals getting into Catalan side as well), and the planned experiment to release 4 Boreal Lynx in the Aran Valley, make a great progress on the rewilding of apex species in the Pyrenees.

The Foundation is also planning to establish a herd of semi-wild Auroch in our site of Alinyà to substitute the cows and to research on the vegetation/ecosystem dynamics of the forest and pastures, in collaboration with the Dutch Taurus Foundation.

www.fundaciocatalunyalapedrera.com



The Taurus Program, a partnership of ecologists, geneticists, historians and cattle breeders backed is seeking to re-create the aurochs by crossbreeding modern cattle in a process known as back breeding. Aurochs once ranged across Europe and much of Asia. A combination of hunting and conversion of wild pastures to farmland reduced Europe’s wild aurochs to a small remnant population in a Polish forest, where it was protected by royal order until the last one died in 1628.

Located in the beautiful landscape of the Valls d’Àneu, in the culd, MónNatura Pirineus is a center that offers unique facilities in the Pyrenees that allow visitors to fully live the high mountains and discover its attractions, placing value on the culture of sustainability and providing identification and respect for the different elements that make up the landscape.



Scree and Talus

*Happy Anniversary US Parks from **Larry Hamilton** and the MtPA Network!*

It would be unthinkable to allow 2016 to go by in UPDATE without mentioning that this year is the 100th anniversary of the **US National Park Service**. There have been many events, and much written and broadcast in celebration.

Incidentally it is also the 100th anniversary of the establishment of **Acadia NP**, a park visited each year by *Larry and Linda Hamilton*. **Acadia NP** contains Cadillac Mountain, the US east coast's highest mountain and the park gets more than 2.8 million visitors per year.

Those of us who looked for substantially increased park agency funding in this centennial year are deeply disappointed. Funding is as miserly as ever in spite of all the hoopla! But, media coverage has been great, and sometimes in surprising places. One could expect some notice in "National Geographic" magazine and in "National Parks" (magazine of the National Parks Conservation Association). The latter featured a series of tales or stories from past visitors, and of the 17 stories, 13 of them were from Mt PAs (people love mountains).

But it is of interest to see that the science journal "Natural History" for July- August used a park or park research in every article. One of them, on "Heirloom Vegetation" had a major section on the two Hawaiian MtNPs (of interest to those attending the IUCN WCC) **Hawai'i Volcanoes** and **Haleakala NPs**. Of the 72 endangered plants on the islands, 49 occur in these two places, all endemics. There are only 23 other endangered plants known in all of the other US NPs.

The USNPS sees one of its greatest challenges as making parks valued by millennials, all ethnic backgrounds and young people, so that public love and support is unfailing. Its campaign this year is "Find Your Park" and implementing the White House "Every Kid in a Park" program.

Appalachian Corridor

A new organization has been formed to protect the forested landscape of Mont Brome in the Eastern Townships of Québec as part of the large **Appalachian Mountains** bioregion. **Société de Conservation du Mont Brome** then becomes the 17th affiliate with **Corridor Appalachien**, the umbrella organization working for connectivity of Mount Orford to Sutton Mountain and then south across the border to Vermont's **Northern Green Mountains**.

Much of the work is with private landowners in trying to secure gifts or conservation easements, creating in essence buffer zones around the National Parks of **Mounts Orford and Sutton**. This is all part of a larger vision for the **Northern Appalachian/Acadia Bioregion**, involving 3 Canadian provinces and 5 US states.

More information: www.corridorappalachien.ca

Increased Mountain Collaboration in the Yukon Territory

from Network member **Shailyn Drukis**

A Yukon Initiating group has recently been established as part of the **Canadian Mountains Network**. Established in 2016, The Canadian Mountains Network collaborates with various partners to address the diversity of challenges that face the countries mountainous regions. The Yukon Initiating Group will play a vital role in determining mountain research needs in the territory, and will provide opportunities for network participation and collaboration. More information about this initiative can be found at:

<http://www.eco.gov.yk.ca/science/canadian-mountain-network-yukon.html>



Kluane NP, Canada - image by *Shailyn Drukis*

The more traditional role of the ranger in these parks has changed significantly over past few decades – often becoming one of military style combat with poachers.

In the past 10 years alone it's estimated that over 1000 park rangers have been killed, 80% of them by commercial poachers and armed militia groups.

The **Thin Green Line Foundation** provides park rangers with essential anti-poaching equipment and training to assist them in patrolling on the front-line of conservation.

They also provide financial support to the widows and orphans of park rangers killed in the line of duty. Along with their close partner the **International Ranger Federation** (IRF) the Thin Green Line pay tribute to rangers in this video link: <https://www.youtube.com/watch>



Ranger training – South Africa

WCPA Membership reminder

All current World Commission of Protected Areas (WCPA) members will be contacted and asked to reconfirm their membership after the IUCN Congress in Hawai'i in September. It is vital if you wish to be a member in the 2017-20 quadrennial that you take this step.

It will also be a good time for members of Mountain Protected Areas Network that are not WCPA members to join via their respective regions. But more about this in the next edition when details become available.

International photography contest of sacred natural sites

The theme of the contest is natural (not built) sacred sites: sacred groves and hills, water bodies, trees, stones and other natural objects where our ancestors used to pray, heal, sacrifice, commune and perform other rituals. Mountain protected areas feature strongly here...

The contest's grand prize is 1,000 euros. In addition, a number of special prizes will be handed out in other sacred site categories. Winners will be honored at an award ceremony in Tartu, Estonia, at the end of 2016.

Photos can be uploaded until 31 October 2016 to: www.maavald.ee/en/image-contests/2016#submit-your-image



Mt Ararat, Turkey photo by Martin Gray (example of sacred mountain image from contest)

The IUCN considers sacred natural sites to be the oldest natural protection areas of humanity. Many indigenous peoples have sacred natural sites that belong to a common heritage of humanity.

Flowering in Castelluccio Sibillini Mountain National Park

Between late May and early July, the plateau of **Castelluccio** is a witness to an event of major importance, Flowering. The species of flowers that dye the Pian Grande and Pian Perduto in this period are countless, walking along the paths we can find: gentianellas, daffodils, violets, poppies, buttercups, daffodils, purple eugeniae, clovers, shamrocks and much more.

Several months ago *Patrizia Rossi* sent in this note about the beautiful flowering of the **Castelluccio Sibillini Mountain National Park**. Now as I write this I hear of the devastating earthquake that has struck this mountainous region of Italy. I have no doubt all Mountain Network members will join me in wishing the people of area well and that they may once again enjoy the colours of the **Castelluccio** plateau.



Some Recent Publications of Interest

The Impact of Nepal's 2015 Gorkha Earthquake-Induced Geohazards (2016)

Shrestha, A. B.; Bajracharya, S. R.; Kargel, J. S.; Khanal, N. R. ICIMOD

The publication summarizes key findings about geohazards induced by the 2015 Gorkha earthquake that struck Nepal and neighbouring countries. The main quake—a massive M7.8 event—on April 25, 2015, was followed by hundreds of aftershocks. The main shock and aftershocks killed about 9000 people in Nepal. The quakes triggered more than 4300 landslides and large ice avalanches, but fortunately no significant glacier lake outburst floods were triggered. The report presents impacts of earthquake induced geohazards on people and infrastructure. The report is aimed at helping policy and decision makers in Nepal and other regional member countries in their efforts to prepare for geohazards and improve geohazard management.

Baffin Island: Field Research and High Arctic Adventure, 1961-67

A MtPA Network member and geographer with extensive research experience in the Canadian North, *Jack D. Ives* has written a lively and informative account of several expeditions to Baffin Island during the "golden age" of USA research to study glacial geomorphology and glaciology. Their fieldwork resulted in vastly increased knowledge of the Far North—from its ice caps and glaciers to its lichens and microfossils. *Jack Ives* has produced a highly readable book that seamlessly combines research and adventure. University of Calgary Press

World Heritage and Tourism in a Changing Climate, 2016

Includes both Natural and Cultural Sites with case studies of "at risk" properties which include such MtPAs as: **Bwindi Impenetrable Forest NP** (Uganda), **Huascarán NP** (Peru), **Yellowstone NP** (USA), **Sagarmatha NP** (Nepal), and Cape Floral Region (South Africa). Available at UNESCO or UNEP.

The George Wright Forum, Vol. 33, No.2, 2016.

This issue has a theme of "Scaling Up: Large Landscape-scale Conservation in North America", organized by guest editor Brent Mitchell. Several of the articles are pertinent to MtPA Network members. Of interest also is Rolf Diamant's editorial dealing with the initial local resistance to national park creation which has since become enthusiastic support. Other Network contributors include *Jodi Hilty*, *Gary Tabor* and *Dave Harmon*.

Climate Change in Wildlands: Pioneering Approaches to Science and Management

A unique collaboration between scientists and managers, the book sets out to understand how climate and land use changes affect mountain landscapes of the Rockies and the Appalachians, and how these findings can be applied to wildlands everywhere.

The book assembles cutting-edge research and twenty-first-century technologies, examines past and expected future changes, and provides new, collaborative management approaches.

If you'd like to purchase a copy from [Island Press](#), use the code **4PIONEER**, which is good for a 20% discount. Andrew Hansen, Ecology Department, Montana State University

The Book

Graeme Worboys reports that the **IUCN WCPA Protected Area Governance and Management** book continues to be very popular, with 22,579 downloads to the end of July 2016. Many in the MtPA Network contributed so we should be very proud. Your word of mouth/passing on the message is important. Please encourage people to download themselves rather than pass on downloaded copies. Download at <http://press.anu.edu.au/?p=312491>

IUCN WCPA Mountain Update # 91

Editor: Gillian Anderson peopleinnature@bigpond.com

Eco-mont Vol 8 Number 2 July 2016 online version <http://dx.doi.org/10.1553/eco.mont> Journal on Protected Mountain Areas Research. This article discusses the capacity of Scientific Councils within the European Alpine Arc to bring useful science to Protected Areas.

Potential impacts of climate change on alpine vegetation - management and policy implications - the Victorian International Tundra Experiment (ITEX) and associated projects 2004-2012

Globally, ITEX studies assess the effects on vegetation of higher temperatures (through artificial warming in open-topped chambers). Victorian ITEX followed the same international methodology, augmenting the study with new techniques (altitudinal gradient sites and genetics) and the incorporation of themes of importance in the Australian context, such as fire and drought. State of Victoria (Australia) report (DELWP and Parks Victoria (updated 2015))

For a copy email DELWP Customer Service Centre: customer.service@delwp.vic.gov.au

Some forthcoming meetings and events of interest

IUCN World Conservation Congress, September 1-10, 2016. Convention Center, Honolulu, Hawai'i, USA. See above re the Mountain Group hosting a Knowledge Café.



Program details: www.iucn.worldconservationcongress.org

The Future of Wild Europe September 12 – 14, 2016. University of Leeds, UK. Further questions: *Zoltan Kun* kun.zoltan@innosystem.hu

Hands Across Borders September 13-18, 2016. Glacier Park Lodge at East Glacier Park Village, Montana, USA. A weeklong event to commemorate the 100th anniversary of the National Park Service and celebrate and advance transboundary conservation and international peace parks. The event includes an intensive workshop for Transboundary conservation practitioners, field trips in **Waterton-Glacier International Peace Park**, and the 84th Waterton-Glacier International Peace Park Assembly. Contact: Wylie Project Coordinator wylie.carr@umontana.edu

Monitoring and Management of Visitors in Recreation and Protected Areas (MMV), September 26-30, 2016. Novi Sad, Serbia. The 8th MMV will focus on the sub-theme “**Cooperation across borders and scales**” with the emphasis on policies, problems, practices and innovative solutions that connect different areas and regions in order to collaborate on the same focus. For more information: mmv8@dgt.uns.ac.rs or <http://www.dgt.uns.ac.rs/mmv8/>

Future of the Carpathians: Smart, Sustainable, Inclusive. September 28-30, 2016. Bucharest, Romania. For details: www.forumcarpatcium.org and www.carpathianscience.org

AlpWeek 2016. Alps and People; Living Culture October 11-15, 2016. Grassau, Germany. Organized by CIPRA with the Alpine Convention and others. Organizational and individual contributions are invited on themes: demography, culture, and quality of life. There should be space under this umbrella for MtPA topics. www.alpweek.org/2016

The World Mountain Forum – Mountains for Our Future October 17-19 Mbale, Uganda

- followed by the Fifth Global Meeting of the Mountain Partnership on 21-22 October (Mountain Partnership members only)

The World Mountain Forum brings together mountain stakeholders from around the globe, and provides a platform for exchange, promotion of collaborative action and fostering political dialogue among different levels of society. Website <http://wmf.mtnforum.org>.

The Forum will cover four themes:

1. Mountains and Climate Change
2. Mountain Communities and Livelihoods
3. Mountain Ecosystem Services
4. Sustainable Mountain Agriculture

Mountain Climate Conference 17-21 October 2016, Leavenworth, USA will continue its decade-long tradition of excellence working at the intersection between climate and a host of other scientific disciplines including hydrology, ecology, and glaciology.

This 7th Mountain Climate (MtnClim) Conference will explore the central theme: **Mountains Without Snow: What are the Consequences?** Contact: info@mtncim.org

Mountain Environmental Education in Alpine Protected Areas 18 – 19 October 2016 Mercantour National Park, France Small targeted workshop for staff in charge of environmental education in Alpine protected areas. More information ALPARC info@alparc.org or www.alparc.org

International Mountain Day 2016 “Mountain Cultures: celebrating diversity and strengthening identity”

International Mountain Day 2016 (December 11) provides an occasion to highlight the variety and richness of mountain cultures, promote the vast array of mountain identities and ensure that indigenous rights are recognized and traditional ways endure. In the coming months communication materials will be made available on website and distributed as hard copies to those who request them. Please contact sara.manuelli@fao.org with news of the celebrations you are planning so they can be posted on the interactive map.

George Wright Society Conference (19th) 2 -7 April 2017, Norfolk, Virginia, USA Abstracts accepted until September 30 this year. In Larry Hamilton’s experience these are among the very best of large conferences he has attended - well organized, lively, lots of young professionals from both PA planning, management and policy, plus academics.

Long but interesting theme: **Connections Across People, Place, and Time: Advancing Thought and Practice in Parks, Protected Areas and Cultural Sites**. There is plenty of latitude for MtPA Network members to contribute. Contributions from outside of North America are always welcome. As a matter of fact, our mighty leader, *Graeme Worboys* has been invited to give a presentation, and will be there.

The [International Innovation Scientific and Technological Centre "Sustainable Development of Mountain Territories"](#) (IISTC) is holding a series of events for the implementation of the main conclusions of "Synthesis report of the Secretary General on the post 2015 sustainable development agenda" of the UN, dated 4 December 2014, and in preparation and to carry out the Year of Ecology (2017), proclaimed by the Government of the Russian Federation.

IISTC invites scientists and specialists within the Mountain Partnership network to participate in the scientific forums. The IX International Scientific and Practical Conference "**Mountain Ecosystems: Priority Focus Areas of Environmental Development**" September – October 2017

Important Links

IUCN World Commission on Protected Areas for an outline of the role of Mountain Specialist Group www.iucn.org/protected-areas/world-commission-protected-areas/wcpa/what-we-do/mountains

IUCN World Conservation Congress www.iucnworldconservationcongress.org

Protected Area Governance and Management (book) <http://press.anu.edu.au/?p=312491>

The **World Parks Congress** in Sydney provided ideas on how protected areas will progress the IUCN agenda of a just world which values and conserves nature. The key outcomes can be found at: http://worldparkscongress.org/about/promise_of_sydney.html

The Mountain Partnership is a United Nations voluntary alliance of partners dedicated to improving the lives of mountain peoples and protecting mountain environments around the world. www.mountainpartnership.org

For any relevant mountain protected area news, please email me (Gill) on peopleinnature@bigpond.com

I look forward to hearing from you soon.