

Mountain Protected Areas

UPDATE



September 2021 # 111

A note from the editor

Welcome everyone to the 111 edition of the Mountain Update. As I write this the Intergovernmental Panel on Climate Change (IPCC) have just released their latest landmark report. This reinforces the message that has been told repeatedly to successive governments - **act now!** As Mountain communities around the world know, the climate crisis is not a theory - it is happening now and is putting environments and livelihoods at risk. Floods, droughts and fire are devastating and 2021 has seen way too many.

No voice or conservation action is too small so please read on for stories from mountain colleagues and organisations around the world.

September 2021



Gros Morne World Heritage Area—
protecting the most southerly reaches of arctic vegetation. What will be left with 1.5 degree warming? What will this little girl experience if she returns as a young woman in 2050?

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Mountain SG Committee

Mountain Update is a quarterly newsletter distributed to members of the Mountain Protected Areas Network.

The Mountain Specialist Group acknowledges the First Peoples and Nations of the lands and waters where we live and work and we pay our respects to their Elders past, present and emerging. We acknowledge and respect the deep spiritual connection and the relationship they have to Country.

The views expressed in this UPDATE are not necessarily those of the IUCN WCPA.

IUCN WCPA Mountain UPDATE # 111 Editor: Gillian Anderson peopleinnature@bigpond.com

From *People and Mountains* around the world:

Global

Political 'horse trading' over World Heritage

Adapted from The Guardian August 2021

Along Thailand's mountainous border with Myanmar, in rich forests filled with rare plants and animals, the indigenous Karen people are fighting for the right to live on their traditional land.

Last month, the UN's human rights agency said the Karen continued to be forcibly evicted from the **Kaeng Krachan** forests. Thailand's application to inscribe the forests as a world heritage site must be denied, the agency said. UNESCO came to a similar conclusion. Yet in a meeting of the world heritage committee, the 21-member countries handed the forests the coveted global status.

Like the decision not to place the Great Barrier Reef on a world heritage "in danger" list, the Kaeng Krachan inscription is part of what conservationists say is a worrying politicisation of world heritage decisions.

During the meeting, Thailand said it also supported Australia's pleas for the reef not to go on the in danger list. At the same time, Australia agreed to block an "in danger" recommendation for Hungary's site in Budapest and to inscribe an ancient rock art site in Saudi Arabia, again going against Unesco's advice.

Unesco had also said more work needed to be done before a site in Madrid should be considered for world heritage status. Twelve committee members devised an amendment to ignore Unesco's advice, and give the site immediate world heritage status.

Spain's ambassador to Unesco, Andrés Perelló, has admitted to striking a deal with Australia in the days before the committee meeting. Spain would support blocking Unesco's advice on the reef and Australia would support the inscription of Madrid's 18th century avenue.

Politics above conservation

Stefan Disko, a consultant on world heritage for the global human rights group the International Work Group for Indigenous Affairs said the apparent deal-making from Australia and other countries on the committee "completely undermines the credibility of the convention".

Two years ago, WWF International released a report saying political interests among committee members was increasingly being placed above conservation.

Peter Shadie is senior adviser on world heritage at the IUCN which is the group that spearheads advice to UNESCO on its natural sites, such as the Great Barrier Reef and **Kaeng Krachan**.

"IUCN and many others have raised concerns regarding the growing gap between the world heritage committee's decisions and the technical advice and recommendations made by advisory bodies," he says.

Villagers bathe on the Thai side of the Salween river in Mae Hong Son province. The indigenous Karen people are fighting to stay on their land. Photo: Lillian Suwanrumpha/AFP/Getty Images



Kaeng Krachan Forest Complex
Photo: © Department of National Parks, Thailand

The Karen People have been tormented since the establishment of the National Park in 1996 without any prior consultation and sowed the seed of conflict in the area. Their survival was brought to the brink by stripping them of their ancestral rights.

In 2021, harassment against the Karen people escalated and over 80 community members were arrested and 28 of them, including seven women and a child, were criminally charged for encroachment.

We are intensely distressed that worse is yet to come as the lives of thousands of Karens hangs on a thread and their culture is being wiped out as the World Heritage Site is implemented.



ASIA INDIGENOUS PEOPLES PACT FOUNDATION

112 Moo 1, Tambon Sanpranate, Amphur Samsai, Chiang Mai 50210, Thailand
Tel. No.: +66(0)53 343539; Fax no.: +66(0)53 343540
Email: appnet@aippnet.org Website: www.aippnet.org



America-north

Tongass National Forest, USA: some welcome news

Taken from Sierra Club News and Treehugger July 2021

The USA President Biden administration [announced](#) a plan in July to fully restore environmental protections to **Tongass National Forest** in Alaska. The plan will not only reverse a Trump-era attack on the Tongass that would have put Alaska’s last vestiges of old-growth forest at risk of destructive logging and road-building, it will extend new safeguards for the forest as well as dedicating \$25 million in federal spending on local sustainable development in Alaska.

In 2019 former President Donald Trump approved plans to open the Forest for logging and other types of development for more than half of the protected lands within Tongass.

The U.S. Department of Agriculture (USDA) recently announced two moves designed to bolster environmental protections in and around Tongass:

1. **end large-scale old-growth timber sales** across the entire national forest; will redirect management resources to support “forest restoration, recreation, and resilience, including for climate, wildlife habitat, and watershed improvement”; and will spend approximately \$25 million on projects that will create “sustainable opportunities for economic growth and community well-being.” The latter in partnership with indigenous communities.
2. take initial steps toward **reinstating “roadless rule” protections** enacted in 2001 by former President Bill Clinton but removed by Trump. With few exceptions, such protections prohibit the construction of roads on large swathes of public land, where transportation infrastructure might facilitate logging, mining, and other industrial activities at the expense of forests and wildlife.



At 16.7 million acres, Alaska’s **Tongass National Forest** is home to some of the last remaining stands of temperate old-growth rainforest in the world. It serves as a hub for tourism, fishing, and outdoor recreation in Southeast Alaska. It is also America’s largest forest storehouse of carbon.

With its enormous footprint, however, come enormous challenges—not the least of which is protecting it from industrial exploitation and development.



Photos: **Tongass** Peakbagger.com (above) & The Guardian (top)

In response the Sierra Club Alaska said:

Southeast Alaska communities can breathe a little easier today knowing that the Tongass National Forest, and the livelihoods, local economies, and wildlife that depend on them will remain protected.

President Biden’s action to restore and strengthen safeguards for the Tongass is a victory for these communities and for our climate.

Ed Note: this is an excellent follow up to the December 2019 Mountain Update article about Tongass National Forest

America

Mountain fires burning higher at unprecedented rates

Taken from Science Daily June 2021 Warming enabled upslope advance in western US forest fires. DOI: [10.1073/pnas.2009717118](https://doi.org/10.1073/pnas.2009717118)

Forest fires have crept higher up mountains over the past few decades, scorching areas previously too wet to burn, according to researchers from McGill University. As wildfires advance uphill, a staggering 11% of all Western U.S. forests are now at risk.

Climate warming has diminished 'flammability barrier'

In a recent study the researchers analysed records of fires larger than 405 hectares in the mountainous regions of the contiguous Western U.S. between 1984 and 2017. The amount of land that burned increased across all elevations during that period, however the largest increase was at elevations above 2,500 meters. Additionally, the area burning above 2,500 meters more than tripled in 2001 to 2017 compared with 1984 to 2000. Over the past 34 years, rising temperatures have extended fire territory in the West to an additional 81,500 square kilometers of high-elevation forests.

Climate change continues to increase the risk of fire, and this trend will likely continue as the planet warms. More fire activity higher in the mountains is yet another warning of the dangers that lie ahead.



The **Fremont-Winema National Forest** of south central Oregon is a mountainous region with a rich geological, ecological, archaeological, and historical history. A fire here was one of 90 wildfires burning across western states of USA in July.

Canada: northern heat exceeds worst-case climate models

From The Guardian July 2021

Few people outside British Columbia, Canada had heard of the small community of Lytton. Nestled by a confluence of rivers in the forested foothills of the **Lillooet and Botanie mountain ranges**, the municipal website boasts: "... the ideal location for nature lovers to connect with incredible natural beauty and fresh air freedom." Over the past seven days, however, the village has made headlines around the world for a freakishly prolonged and intense temperature spike that turned the idyll into an inferno. After the insufferable heat came choking fire.

More people in more countries are feeling that their weather belongs to another part of the world.

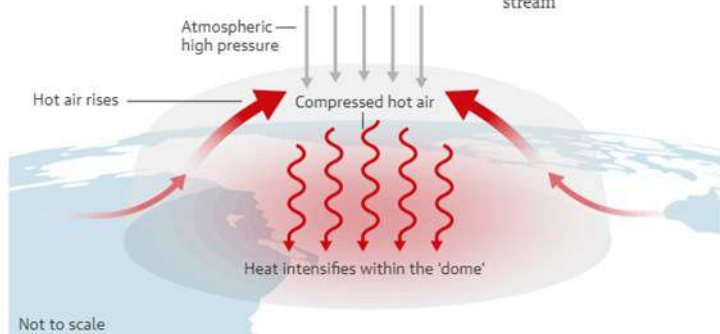
The previous week, northern Europe and Russia also sweltered in an unprecedented heat bubble. June records were broken in Moscow (34.8C), Helsinki (31.7C), Belarus (35.7C) and Estonia (34.6C).

Earth System Science Center at Pennsylvania State University, said this week's unexpectedly fierce heat at Lytton and elsewhere should prompt climatologists to consider additional impacts of human activity.

"We should take this event very seriously," Michael Mann wrote "You warm up the planet, you're going to see an increased incidence of heat extremes. Climate models capture this effect very well and predict large increases in heat extremes. But there is something else going on with this heatwave, and indeed, with many of the very persistent weather extremes we've seen in recent years in the US, Europe, Asia and elsewhere, where the models aren't quite capturing the impact of climate change."

How a heat dome forms and its effect on the jet stream

- 1** Hot air is blown in from the sea and meets existing warm summer conditions on land
- 2** The hot air tries to rise but is trapped and compressed by atmospheric high pressure
- 3** The heat intensifies within this 'dome', to the point where it diverts the jet stream
- 4** Heat dome has diverted jet stream northwards, preventing cooler temperatures coming south



Guardian graphic. Source: netweather.tv. Note: Jet stream forecast and heat map taken at 1pm GMT

Africa

tropical forests in Africa's mountains

From Science Daily August [Tropical forests in Africa's mountains store more carbon than previously thought – but are disappearing fast](#)

Scientists studying tropical forests in Africa's mountains were surprised to uncover how much carbon they store, and how fast some of these forests are being cleared.

The international study (in *Nature*) found that intact tropical mountain (or montane) forests in Africa store around 150 tonnes of carbon per hectare. This means that keeping a hectare of forest standing saves CO₂ emissions equivalent to powering 100 homes with electricity for one year.

The study found that African mountain forests store more carbon per unit area than the Amazon rainforest and are similar in structure to lowland forests in Africa. Existing guidelines for African mountain forests - which assume 89 tonnes of carbon per hectare - greatly underestimate their role in global climate regulation.

The international team also investigated how much tropical mountain forest had been lost from the African continent in the past 20 years. They found that 0.8 million hectares have been lost, mostly in the Democratic Republic of the Congo, Uganda and Ethiopia, emitting over 450 million tonnes of CO₂ into the atmosphere.

If current deforestation rates continue, a further 0.5 million hectares of these forests would be lost by 2030.



Researchers said that better knowledge about how much carbon mountain forests store is especially important for the ten African nations where the only tropical forests they have are those found on mountains. *Image: Virunga News*

The lower temperatures of mountains and the long periods they are covered by clouds should slow tree growth, while strong winds and steep unstable slopes might limit how big trees can get before they fall over and die.

But unlike other continents, in Africa we found the same carbon store per unit area in lowland and mountain forests...large trees remain abundant in these mountain forests, and large trees (defined as having diameters over 70 cm) store a lot of carbon.

Carbon finance mechanisms could help improve conservation interventions on the ground - even within protected areas, deforestation, forest degradation and defaunation remain a challenge.

Study researchers: York, Manchester & DRC universities



Six countries, one forest, one future

From Global Environment Facility

Stretching from the Gulf of Guinea in the west to the Rift Valley in the east, the Congo basin is the beating heart of African biodiversity. Spanning 530 million hectares across six countries—Cameroon, Central African Republic, the Democratic Republic of the Congo, Equatorial Guinea, Gabon and the Republic of the Congo—the basin contains some 70 per cent of the continent's forest cover and is home to one of every five species on our planet.

The forests are also critical for buffering the effects of climate change. Recent estimates suggest that the Congo Basin sequesters more than 60 billion metric tons of carbon, more than all the tropical forests of the Amazon and Asia combined.

While the limited pace of development in the region has 'passively' protected the ecosystems of the Congo Basin in the past, national policies targeting economic emergence in the years ahead, a heavy reliance on natural resource exploitation, and a growing population all threaten the ongoing sustainability of the region's 300 million hectares of forest.

Implemented by UN Environment, the International Union for Conservation of Nature (IUCN), the World Wildlife Fund (WWF), the World Bank and the governments of Cameroon, Central African Republic, the Democratic Republic of the Congo, Equatorial Guinea, Gabon and the Republic of the Congo with the financial support of the [Global Environment Facility](#), the **six-year Congo Basin Sustainable Landscapes Program** will address the drivers of forest loss and degradation in the region.

ED Note: The Mountain Update hopes to hear more about the Congo Basin Sustainable Landscapes Program in the future.

Are we losing the iconic Snow Gum?



From Cam Walker—Friends of the Earth

Snow Gums (*Eucalyptus pauciflora*) are the classic alpine tree of the High Country, generally growing at heights between 1,300 and 1,800m. Anyone who has visited the Australian High Country will know – and probably love – these trees.

In recent decades, wildfire has been devastating huge areas of the Snow Gum forests, with significant fires in the Victorian High Country in 1998, 2002/3, 2006/7, 2013 and 2019/20. More than 90% of Snow Gum habitat in the state has been burnt at least once in the last 20 years.

The species can survive fire and can also regenerate after fire. However, climate change driven fire seasons are leading to more frequent fire, which is causing more death of trees and changes to forest structure. In some instances, localised collapse of Snow Gum woodlands is now being observed. As climate scientist Michael Mann describes it, we are now seeing climate change play out in real time.

Another of our much loved mountain trees is the Alpine Ash. They are also facing potential ‘community collapse’. After a bushfire in 2013 Parks Victoria and DELWP initiated a rapid response forest recovery program, which aimed to restore Alpine Ash forests that had been burnt and where only limited numbers of parent trees had survived. Since then, the program has been expanded considerably as more areas have been burnt multiple times.



Fire killed Snow Gum



Reseeded (aerial) Alpine Ash

A new report:

An Icon at Risk, Current and Emerging threats to the Victorian High Country, ([available here](#)) produced by Friends of the Earth highlights the many risks faced by the Alps, including the potential loss of the Snow Gum forests.

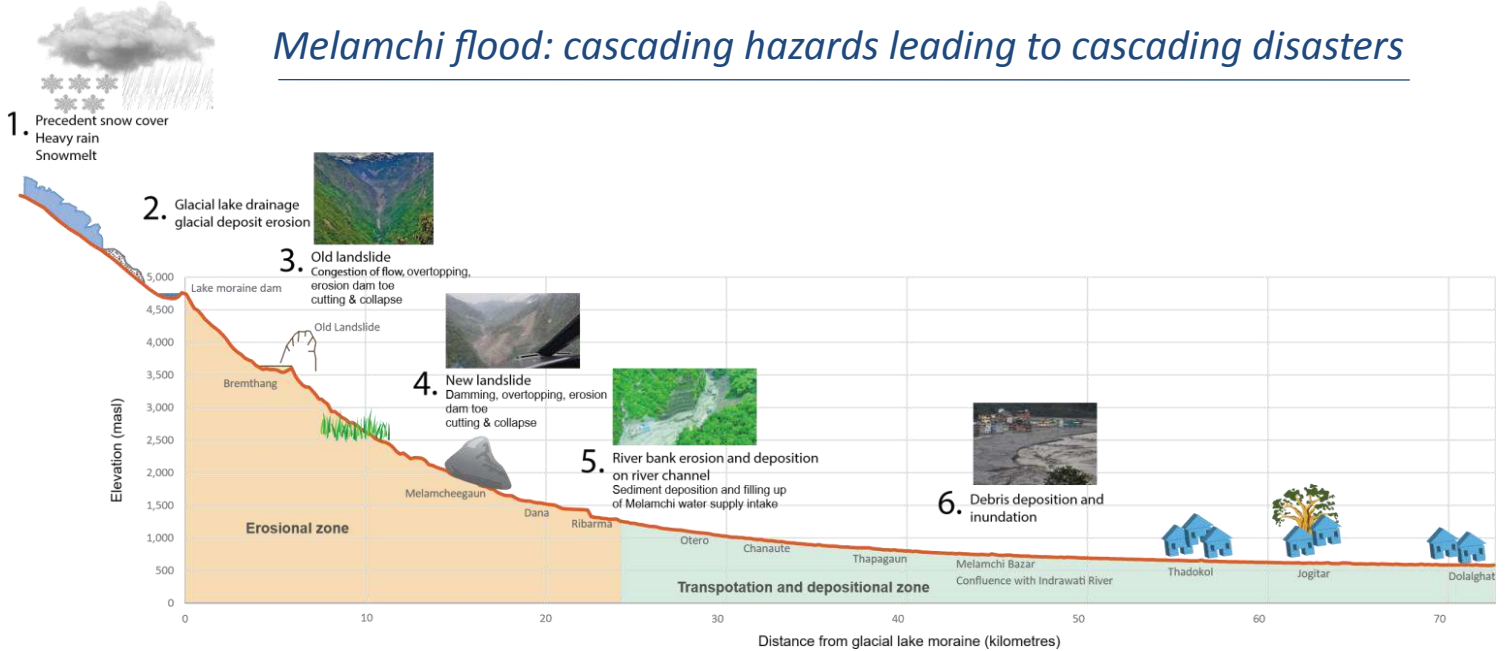
Most of these threats stem from climate change, which is driving more intense fire seasons and drying out the alpine and valley environments.

Key recommendations:

- continue to increase funding for national parks across the Alps to ensure adequate fire protection, control of invasive species and management of visitor impacts. Funding to Parks Victoria should be a minimum of 1 per cent of state revenue
- increase the number of career remote area fire fighters to protect national parks and other public lands
- lobby the federal government to establish a publicly owned air fleet of Large Air Tankers.
- assess whether Snow Gum woodlands require the same level of direct intervention that Alpine Ash currently receives through recovery programs
- rapidly develop a plan to assess and manage the scale of dieback of Snow Gum woodlands due to damage caused by beetles
- ensure fire sensitive communities such as peatlands, Snow Gums and Alpine Ash can be protected from future fires through adequate resourcing of ground and air fire fighting capacity
- rule out any further salvage logging in burnt Alpine Ash communities
- carry out a full and independent review of the ecological costs and benefits of fuel reduction burning as a matter of urgency.

Central Asia—Himalayas (Nepal):

Melamchi flood: cascading hazards leading to cascading disasters



Taken from The Melamchi flood disaster: Cascading hazard and the need for multihazard risk management <https://www.icimod.org/article/the-melamchi-flood-disaster/> ICIMOD August 2021

Cascading hazards are becoming more common in Nepal and in the Hindu Kush Himalaya (HKA), demanding a more holistic approach in hazard assessment and risk management.

The nature of floods in the mountainous region of the HKH has been changing in the recent years. These changes and extreme disaster events that have been observed are examples of **cascading hazards leading to cascading disasters**. In cascading-type hazards, one hazard can trigger another hazard with the cumulative impact much greater than that of a single hazard.

The floods in Melamchi, Chamoli, Seti and Uttarakhand can be described as disasters amplified by cascading hazards. Although it is possible to some extent to predict annual floods some days in advance, there is no mechanism to predict cascading hazards in mountainous areas. Unlike events caused by a single hazard such as annual floods, cascading hazards are likely to occur at intervals of several years but the nature of the damage caused is far greater. Considering this, integrated risk assessment is a must. It involves understanding the river morphology, mapping and monitoring hazards, and modelling critical natural processes.



Kathmandu Post June 2021 floodwaters in Melamchi bazaar



Kathmandu Post June 2021

Infrastructure in the mountainous region of the HKH is not designed for such complex disasters. Therefore, readiness before the disaster strikes constitutes a practical approach. It is time that we engaged in a serious discussion of the process mechanism of cascading hazards in the region and invested the necessary resources not only to better understand such events but to better prepare for them in order to prevent the unnecessary loss of human lives and property.

Central Asia—Himalayas (India)

Developing a sustainable ecotourism model in the Tirthan Valley



Images: Himalayan Ecotourism

From Prachi Jetley Business Development & Sustainable Projects, Himalayan Ecotourism

Himalayan Ecotourism (HET) is a company based in the Tirthan Valley, Himachal Pradesh. It's based on the belief of the interconnected and interdependency of communities and their natural environment.

Located at the heart of the Great Himalayan National Park (GHNP), it became important to develop a business model for the communities that would make them independent of the exploitation of the tourism industry and create in them a motivation for conservation of their own land.

In addition to treks and hikes an equally important part of HET's ambitions are its social initiatives. These projects include the Reforestation Program, the Child Development Program and the Women Empowerment Initiative.

Under the Reforestation Program, a plot of barren land stretching across 5 sq km along the west bank of the Tirthan river has been identified to conduct scientific regeneration. Researchers, conservationists and volunteers from all over the world have joined in on the cause and spend anywhere between a few weeks to a few months in the hilly region trying to understand the ecology, suggest a plan for its protection and raise awareness against the intentional setting of forest fires, which has been an age-old custom in the region.

However, the aspiration is to keep community members, especially women at the front of this awareness program and protection of the newly reforested areas. The objective behind this is two-fold – one, community members are in a better position to communicate causes that could severely impact their lives and two, women have traditionally held a secondary status in the rural society. Having them lead the initiative helps reinstate their own faith in their capacities and change the narrative in the region.

There are many ways to get involved in the movement developed by HET and it's always looking for creative, passionate minds to join the cause. Find out how you can be a part on the website www.himalayanecotourism.com. For more details regarding the Teach and Travel Program, write to HET at join-us@himalayanecotourism.com.



Although relatively small the Great Himalayan NP and ecozone have a complex geography with large variations in altitude. This allows them to sustain a huge range of species, characteristic of south-east Asian forests, the Siberian and Asian steppes, and ranging from the subtropical to the alpine.

Few ecological sanctuaries of similar size encompass such diversity.

Great Himalayan web site

Europe

Extreme weather, floods, fire and rain: not too mention COVID!



Greenland ice cap

From ABC News August 2021

Rain falls on the Greenland ice cap for first time in recorded history

Scientists say rain falling on Greenland's highest point for the first time on record is another worrying sign of warming for the ice sheet, which is melting at an increasing rate. [Read the full story](#)

The world's second-largest ice sheet, behind Antarctica, had several hours of rainfall on August 14 at its 3,216-metre summit. In total, 7 billion tonnes of rain fell across Greenland over three days, from August 14-16 — the largest amount since records began in 1950. Indrani Das, a glaciologist with Columbia University's Lamont-Doherty Earth Observatory, said rain on the ice cap was a bad sign.

"This alarming rain at the summit of Greenland is not an isolated event," according to Twila Moon, deputy lead scientist with the US National Snow and Ice Data Center.

Along with rising floods, fires, and other extremes, it is one of many "alarm bells" signalling the need to reduce greenhouse gas emissions, she said.

"We really have to stay laser-focused on adapting, as well as reducing the potential for those to become truly devastating."

Melting in Greenland threatens to significantly hamper humanity's efforts to mitigate climate change. That's because, after a certain point, it may create catastrophic "feedback loops".

To look at the issue in more detail: "What Greenland's record-breaking rain means for the planet" — [Greenlands Record Breaking Rain](#) The Conversation

This year, 2021 has been an ominous one for the enormous ice sheet that, along with the Antarctic ice sheet, make up 99% of the Earth's freshwater reserves.

In February, researchers warned that Greenland's ice sheet was barreling toward a tipping point beyond which large parts of it could melt even without further increases to global temperatures, Live Science previously reported.

In July, the ice sheet suffered a massive melting event, losing 9.37 billion tons (8.5 billion metric tons) of ice from its surface per day — twice its normal average rate of loss during summer — over the course of the week .

From LiveScience



The rate of ice loss in both Greenland and Antarctica is accelerating. Shutterstock

Suggested Posts

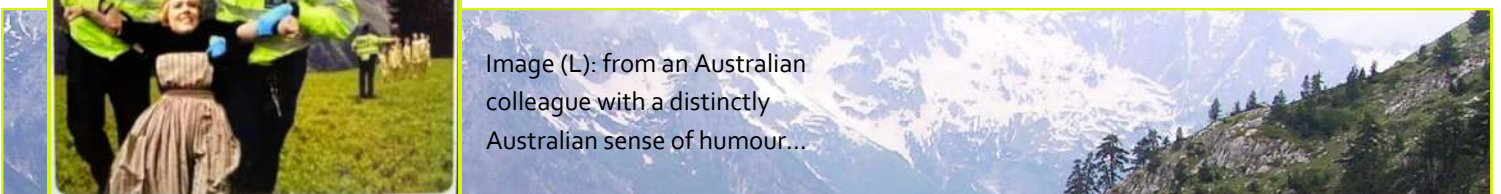
Older Posts

"Not today, love..."

"The hills are closed"



Image (L): from an Australian colleague with a distinctly Australian sense of humour...



Scree and Talus

First for continental Africa

From Afromontane Research Unit News

This research finding on lizard pollination which reads like a fairy tale with its mountain islands, hidden flowers, nectar and little dragons, shows that there are still many unknown and surprising interactions that need to be discovered and conserved to ensure a healthy ecological system.

With the flowers filled with nectar (up to 2 ml per plant) and strongly scented, one concludes that, just as with other flowers, these flowers must be visited by a pollinator. The question asked by academics was, is it a bee, a bird, perhaps a mouse or non-flying mammal? But no it's the **Drakensberg Crag Lizard**.

This first for continental Africa – a plant being pollinated by a lizard – is a discovery by a research group from University of the Free State (UFS), in collaboration with the Pollination Ecology Research Laboratory and Centre for Functional Biodiversity at the University of KwaZulu-Natal.



'Hidden Flower', true to its name, is a plant species with flowers hidden at ground level, underneath the leaves of the plant. Like the leaves, the flowers are also green.

Bhutan's rapid Covid vaccine rollout: a great success story

Bhutan has inoculated most of its eligible population with second doses of Covid-19 vaccinations in a week (in July). More than 454,000 shots were administered over the past week in the **remote Himalayan kingdom** – more than 85% of the eligible adult population of about 530,000 – after a recent flood of foreign donations.

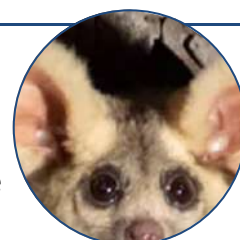
If there's anything that UNICEF Bhutan hope the world that can learn, is that a country like Bhutan with very few doctors, very few nurses but a really committed king and leadership in the government mobilising society – it's not impossible to vaccinate the whole country. Bhutan has reported just under 2,500 Covid-19 infections and two deaths so far.



On foot or mule is the commonest way to reach many Bhutanese villages . Photo: *peopleinnature*

Greater Glider Taken from *The Conversation* August

In just five years, greater gliders — fluffy-eared, tree-dwelling marsupials — could go from vulnerable to endangered, because Australia's environmental laws have failed to protect them and other threatened native species. [New research](#) found that after the greater glider was listed as vulnerable to extinction under national environment law in 2016, **habitat destruction actually increased** in some states, driving the species closer to the brink. Now, they meet the criteria to be listed as endangered.



Wildlife Corridor to Connect Grizzly Bears in Montana, USA Taken from *Y2Y & Treehugger* August

[Wildlife corridors](#) are like safe highways for animals. These untouched areas let species move about freely to feed, breed, and migrate without interference from humans.

These safe byways are getting harder to maintain as animal habitat is often lost to new roads, subdivisions, and farms. But a land purchase in Montana will keep a critical area open for grizzly bears and other wildlife.

The Vital Ground Foundation and Yellowstone to Yukon Conservation Initiative (Y2Y) bought 80 acres this week near the confluence of the Bull River and Clark Fork River in Montana mountains. This project, while relatively small in size, is of continental importance to grizzly bears and other wildlife.

'One of the most damaging invasive species on Earth': wild pigs release the same emissions as 1 million cars each year And they possibly turn over the same amount of soil as the area of Taiwan. Wild pigs are on every continent, except Antarctica.

Scree and Talus cont.

Pikas survive the winter by eating yak poop From Science Daily July

Pikas, with their round, furry bodies and Micky Mouse ears, may look like cartoons come to life, but they're [tougher and more resourceful](#) than they appear, *National Geographic* reports. New research suggests these small rabbit relatives—which live in mountainous regions in North America and Asia—survive the subzero winters of the Tibetan Plateau by supplementing their diets with [undigested nutrients found in yak feces](#).

The small mammals, which don't hibernate, also slow down their metabolism to expend 30% less energy when the plants they typically eat are scarce.



Pikas

Australian ecosystems showing evidence of collapse



Leading scientists working across Australia and Antarctica have described 19 ecosystems that are collapsing due to the impact of humans and warned urgent action is required to prevent their complete loss.

A [groundbreaking report](#) details a list of damaged ecosystems that extends beyond the continent to include subantarctic tundra of world heritage-listed Macquarie Island and moss beds in the east Antarctic. 19 out of 20 ecosystems examined were experiencing potentially irreversible environmental changes, including the loss of species and the ability to perform important functions such as pollination.

'Blood snow' in the Alps from WAtoday July

French scientists have expressed concern about more Alpine snow turning from white to pinkish red, warning that the colour shift could be a marker of accelerating climate change.

As the snowy slopes of the Alps warm with the approach of northern summer, some mysteriously turn various shades of orange, red and pink. Locals call the phenomenon "sang de glacier", or "glacier blood", while others refer to it as "watermelon snow".

In fact, the pinker shade of white is caused by blooms of normally invisible algae. French researchers say they change colour to protect themselves from ultraviolet light and may be proliferating due to global warming—preliminary findings in *Frontiers in Plant Science*.



Researcher sampling snow in the French Alps
Photo: NYT (also reported in Mtn Update 2020)

New Zealand's Alpine Fault (read whole article) ABC News June

Pressure is building along one of the most active fault lines in the world and New Zealand is in a race to be ready. The Alpine Fault runs along the country's South Island and it has a history of sudden movements.

Scientists can read the lakes and old-growth forests in the foothills of the Southern Alps and learn about what's come before.

What they have found reveals a great earthquake, one of the biggest in New Zealand's modern history, is due.



Gaunt Creek (L): the fault line extrudes from the ground. It's one of the few places on earth where you can touch a fault.

Scree and Talus cont.

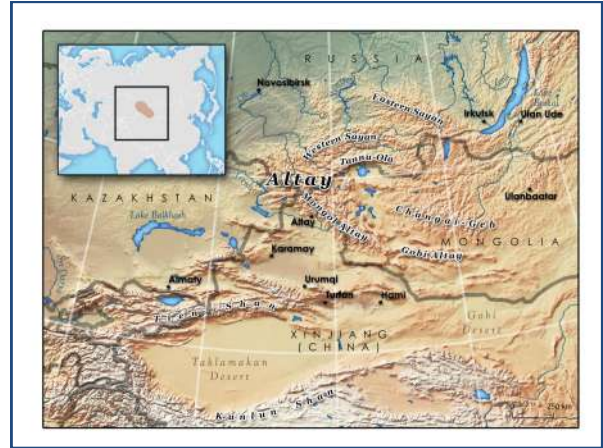
[In a Siberian Cave](#) From The Conversation June 2021

In the foothills of the Altai Mountains in southern Siberia lies Denisova Cave. It is the only site in the world known to have been inhabited by the eponymous Denisovans and their close relatives the Neanderthals (*Homo neanderthalensis*) — which overlapped at times — as well as by some of the earliest modern humans (*Homo sapiens*) to have dispersed into northern Asia.

Archaeologists dug through 300,000 years of sediment to recover the complex DNA history of the cave's residents over the millennia. The result is a detailed timeline of habitation by animals and three species of human: not only Neanderthals and modern humans, but also the elusive Denisovans.



Denisova Cave, Altai Mountains Russia



Altai Mountains

[NZ Alpine Parrot](#) (read whole article) from The Guardian June

New Zealand's rare, highly endangered alpine parrots may have headed for the mountains to avoid people – and researchers say their adaptability could help them survive the climate crisis.

The kea is considered the only alpine parrot in the world. But scientists analysing DNA sequencing and fossil records have found kea were once present in other parts of the country.

Kea have certainly come into conflict with New Zealand's human populations. They are a particularly intelligent, mischievous and inquisitive species, known for their love of attacking rubber windshield wipers on the cars of mountain visitors. Over the years, they've made headlines for rummaging through tourist bags, stealing wallets and in one case, making off with an unlucky Scottish tourist's passport.

But among farmers, they acquired notoriety for attacking and occasionally killing sheep. The attacks so incensed early New Zealand sheep farmers that the government put up a 'bounty' on kea beaks – a policy that continued for about 100 years, until 1970.



Researchers speculated that the kea's adaptation to alpine environments may have been helped along by its personality. The change in habitat, they wrote, "may have facilitated – or have been facilitated by – the evolution of the kea's unique behavioural repertoire, which includes learning and problem-solving abilities".

[Naked Hiking Day! \(don't forget the sunscreen\)](#) From Great Walks www.greatwalks.com.au

Each year, the unofficial Naked Hiking Day is observed on June 21, the day of the summer solstice. Outdoor enthusiasts everywhere celebrate the longest day of the year by trading in their typical wool and synthetic prisons in favour of their birthday suit.

(Next June?) Check out Germany's Harz Mountains and try the *Harzer Naturistenstieg*, an 18km hiking trail dedicated to those who like to bushwalks sans clothes! The route runs through the Harz Mountains in the centre of Germany and is receiving praise for giving nudists an opportunity to express themselves more freely. The trail is fenced with warning signs, so as not to frighten the locals.

Tools, Publications and other Media

[Highlighting the sustainable management of mountain grasslands](#) From Mountain Partnership News

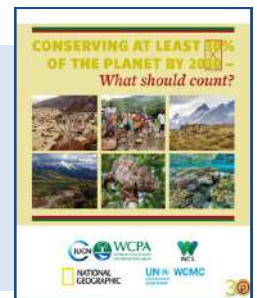
A booklet showcases 31 examples of good practices for the sustainable management of mountain grasslands: examples aim to inspire farmers, breeders and other local actors to increase the biodiversity of mountain grasslands, tackle climate change impacts and better market their products. Learn more about past [Euromontana](#) activities related to the OREKA MENDIAN project and pastoralism on the project's website at: www.lifeorekamendian.eu

[The Stalker and the Outcast: Sharing the Landscape with Predators in the High Himalaya](#) by Dr. Saloni Bhatia From **Shepherds of Himalayas**

The nuances of interactions between predators in the Himalayas (mainly Snow leopards and Wolves) and Ladakhi communities. Though villagers go through serious economic and psychological hardships due to predators they empathize with them, stating "Animals are like people. They have the same needs and feelings."

[Conserving at least 30% of the Planet by 2030: What should count?](#) From IUCN WCPA

Parties to the Convention on Biological Diversity are discussing the new Global Biodiversity Framework to be agreed at COP15 in Kunming next year. Protecting and conserving at least 30% by 2030 must be addressed in the context of recognizing the rights of Indigenous Peoples and Local Communities, and combined with applying effective sustainability measures across the remaining 70% of the planet. [Download the Publication](#)



From ICIMOD

[The Afghan Hindu Kush in 1965: A research expedition of the international hydrological decade](#)

As long ago as 1965, an expedition from the University of Newcastle upon Tyne studied the heat and water balance of a glacier in the Hindu Kush. This was possibly the first attempt to scientifically evaluate what was happening to the glaciers in the Hindu Kush–Karakoram–Himalaya region.

[Earth Observation Science and Applications for Risk Reduction and Enhanced Resilience in Hindu Kush Himalaya Region: A Decade of Experience from SERVIR.](#)

This open-access book is a consolidation of lessons learnt and experiences gathered from our efforts to utilize Earth observation science and applications to address environmental challenges in the Hindu Kush Himalaya region.

TAKE A JOURNEY: UNEP's Wild for Life is ready to take you on a journey...through 6 distinct ecosystems-OCEANS, PEATLANDS, SAVANNAHS, FORESTS, DESERTS, AND MOUNTAINS.

[Mountain Journey](#) Unearth the allure of mountain landscapes as you drift between trophic levels and explore how producers, herbivores, and consumers work in harmony in some of the world's most biodiverse ranges.



GMBA co-chair and founder Christian Körner published the third edition of his seminal book "Alpine Plant Life: Functional Plant Ecology of High Mountain Ecosystems". A must read for mountain biodiversity scientists. [To the book...](#)

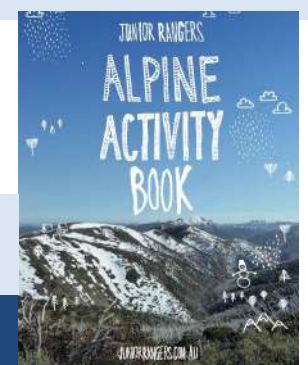
Professor *Fausto Sarmiento* (Mountains Specialist Group Committee member) reports that at the **34th International Geographical Congress** the **Symposium of Mountain Studies** submitted several important reports based around Montology, the complex science of mountains, and the relationship between man and the mountain landscape.

Fausto who is Chair of the Commission of Mountain Studies (IGU), says one of the ways to energize the message worldwide of the importance of mountain research is the planned publication of an edited book series on Montology. The first volume scheduled for release 2022 will eventually constitute an updated textbook of Mountain Geography after Price et al. in 2013. For the full report on mountain studies that were presented at the Congress email Fausto: fsarmien@uga.edu

[Adaptation Solutions](#) - The portal has been designed to meet the needs of decision-makers and practitioners looking for solutions they can implement. The measures shared encompass a wide variety of adaptation approaches and cover a wide variety of climate risks.

The portal: <https://adaptationaltitude.org/solutions-portal>

A little book with a big heart for kids (Junior Rangers) visiting the mountains...[Activities Junior Rangers](#) (visit parks Victoria web site)




Events

WCC 3 - 11 September 2021 France

The [IUCN Congress](#) provides a platform for scientists, policy experts, business and government leaders and professionals from around the globe to come together to share their latest insights and forge new partnerships. IUCN Members work to define the global conservation agenda and collaborate with Congress participants to find solutions to the pressing environmental challenges our planet is facing.

The WCPA Mountain Specialist Group will be presenting (*on line speakers pitch* to those that have registered) their paper and decision support tool: *Identification of Global Priorities for New Mountain Protected and Conserved Areas* [Mountains Paper and Decision Support Tool](#) . There is an e-poster (below) and 'call to action' 10 minute video which will eventually be on the WCPA Mountain web site.







PROTECTING MOUNTAINS:

WHERE WILL THE NEXT MOUNTAIN PROTECTED AREAS COME FROM?

Peter Jacobs - Chair WCPA Mountain Specialist Group



30% X 2030 WHAT DOES IT MEAN FOR MOUNTAINS?

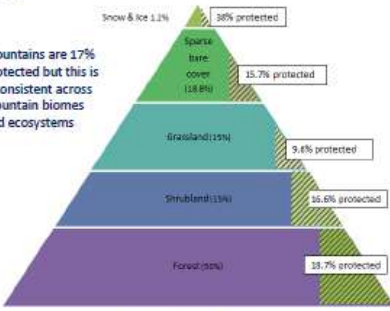
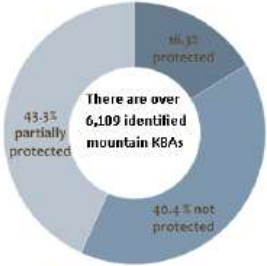


WHAT'S IMPORTANT?


Levels of protection of Key Biodiversity Areas (KBA's) and mountain biomes and ecosystems are initial indicators of high environmental values and how well they are protected or conserved. In addition biodiversity hotspots, IUCN red listed ecosystems and species and a range of other values including OECM's have been taken into account when identifying and ranking priorities.

The world's system of protected areas includes many outstanding areas within the global mountain landscape; but significant mountain areas are not adequately protected. As the world conservation movement advocates to expand the global coverage of protected areas over the next decade toward 30%, identifying priorities for new mountain protected and conserved areas will be most effective if it takes a strategic approach to ensure areas of highest ecological value and most in need of protection are identified.

Employing a range of indicators, a new decision support tool helps determine where protection or conservation efforts need to be focused.



Mountains are 17% protected but this is inconsistent across mountain biomes and ecosystems



MAKING IT HAPPEN: JOIN US!

The Decision Support Tool (Microsoft Excel document) and Paper can be found on the IUCN WCPA Mountains web page here: [Mountains Paper and Decision Support Tool](#) The Decision Support Tool contains up to date datasets on levels of protection and built-in selection and scoring functions, plus references for information as one works through the six steps.

Some upcoming events: 2022

Southern African Mountain Conference March 2022

The Southern African Mountain Conference (SAMC 2022) will be the first truly southern African regional mountain conference, targeting the African region south of the Congo Rainforest (DRC) and Lake Rukwa (Tanzania), but including Madagascar, Comoros and the Mascarenes.

[View brochure](#)



[Aspen International Mountain Foundation \(AIMF\)](#) will host the Sixth Global Meeting of the Mountain Partnership in Aspen, Colorado, USA September 2022, as decided by vote of the Mountain Partnership Steering Committee.

[International Mountain Conference 2022](#) The next International Mountain Conference is in the making.

September 11-15, 2022, Innsbruck, Austria [Stay tuned](#).

Looking for Mountain Research? Try [Global Mountain Biodiversity Assessment \(GMBA\)](#), [Mountain Research Initiative](#), [ICIMOD](#) and [Mountain Partnership](#)—to mention a just few great sources of mountain information!

Important links

IUCN World Commission on Protected Areas for an outline of the role of Mountain Specialist Group [IUCN WCPA Mountains](#) and [Mountain UPDATE](#)

IUCN World Conservation Congress [IUCN World Congress](#)

Protected Area Governance and Management (book) [Management Book ANU Press](#)

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. [Mountain Partnership](#)

WCPA Mountain Specialist Group Committee		
Executive Committee	Name	Email
Chair	Peter Jacobs	Buffalo_springs@bigpond.com
	Patrizia Rossi	patriziarossi.rossi@gmail.com
	Mike Tollefson	miketollefson1@gmail.com
	Fausto Sarmiento	fsarmien@uga.edu
Editor Mountain Update	Gillian Anderson	peopleinnature@bigpond.com
WCPA Regional Representatives	Name	Email
Southern Africa (Eastern & Southern)	Clinton Carbutt	Clinton.Carbutt@kznwildlife.com
West and Central Africa	Sonigitu Ekpe	sonigitu.ekpe@graduateinstitute.ch
North Africa, West Asia & Middle East	Dawud M.H. Al-Eisawi	aleisawi.d@gmail.com
East Asia	Chaozhi Zhang	zhchzhi@mail.sysu.edu.cn
North Eurasia (Central Asia)	Marc Foggin	marc.foggin@gmail.com
Oceania	Shane Orchard	orchard.dse@gmail.com
South America	Matias Ayarragaray	matiasayarra@gmail.com
South Asia (Pakistan)	Ashiq Ahmad Khan	ashiqahmad@gmail.com
South Asia	Pradeep Mehta	pmehtanainital@gmail.com
South Asia	Ruchi Badola	ruchi@wii.gov.in
Europe (Austria)	Michael Jungmeier	jungmeier@e-c-o.at
Europe (eastern)	Oğuz Kurdoğlu	oguzkurdoglu@gmail.com
North America	Erik Beever	ebeever10@gmail.com
Central America—Caribbean	Rolando Ramirez	rolandorami2010@gmail.com
Young Professional Group	Shailyn Drukis	shailyn.drukis@gmail.com

While Mountain Network members can choose not to be WCPA members and still be involved and receive the Mountain UPDATE, the WCPA Chair Dr Kathy MacKinnon, and Mountain Specialist Group Executive and would like to encourage all to become WCPA members. This helps to secure good governance and management of the WCPA and the Mountains Group and enlightens all members to the wider activities of the WCPA.

To learn more about WCPA membership go to: [Get involved - World Commission on Protected Areas | IUCN www.iucn.org › commissions › get-involved](#)

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

I look forward to hearing from you soon!