The Effect of COVID 19 on Mountain Protected Areas
(and some thoughts about the future)

Mountain Protected Areas around the world have been largely closed in response to COVID 19, although this varies somewhat from country to country depending on State policies. For most mountain protected areas there has been no tourism, few visitors and no onground research or monitoring. There has also been a reduction in protected area management presence in many areas. This is starting to soften in June 2020. Comments from WCPA-Mountains Specialist Group Committee members show the impact varies significantly around the world, although there are some common themes. The following are some general observations of current impacts and thoughts about the post COVID 19 situation for Mountain Protected Areas.

The overall effects to mountain protected areas of COVID 19 response have been:

Economic
**Protected Area Budgets:** Tourism revenue often makes up a sizeable portion of budget for mountain protected areas in many countries. This loss of revenue has directly affected protected area operations and activities in many areas particularly where tourism revenue payments from concessionaires to protected area agencies are significant (e.g. Africa). As funds are needed to be found by governments for dealing directly with the costs of mitigating COVID 19, this inevitably impacts on government funds for protected areas. However, in some countries such as Australia and New Zealand, COVID 19 economic stimulus packages have provided additional (albeit temporary) employment as part of environment programs, including protected areas.

**Local Economy:** Communities adjacent to mountain protected areas have been severely affected. Many rural communities, small businesses and livelihoods are dependent on services to tourists entering the parks and the sale of crafts. Local community members are often employed by tourism businesses either directly for ecotourism or indirectly through accommodation and food and beverage services.

Protected Area Operations
**Compliance and regulation:** The lock down has meant that management and enforcement staff have not been in the field, thus providing more chances for illicit users of the park resources to carry out illegal and damaging activities in mountain protected areas such as hunting, livestock grazing and poaching. For example, in the Central Himalaya, poaching for self needs increased, however the supply chain of illegal trade of wild animals and their parts has minimized, therefore, commercial poaching has reduced. Wildlife flourished and could be seen near human settlements.

**Fire management:** Fire management is critical to many mountain ecosystems. Many ecosystems have co-evolved with fire, such as grasslands and heathlands and many are fire sensitive and long unburnt. In counties such as South Africa, seasonal fire management crews have not been procured to undertake fire management, leaving mountain protected areas vulnerable to fires that could devastate large areas. Arson fires have already taken in some mountain protected areas.
Uncontrolled fires pose a great risk to human life, park infrastructure (tourism and management related), biodiversity and neighboring communities.

**Monitoring and Research:** Biodiversity monitoring activities of key biodiversity elements and research and citizen science assistance has ceased or been severely constrained in most countries.

**Pest Plant and animal control:** Control of alien species has ceased or been severely constrained in many countries.

**Communication and education:** Communication, knowledge sharing and networking amongst mountain protected area managers, researchers and stakeholders has been limited by travel restrictions and social distancing, leading potentially to a reduction in knowledge transfer and the development of new ideas and initiatives.

**A Global View**

While many of the impacts have identified important issues that have been operational in nature and effecting economic and onground activities, the crisis exposes more fundamentally, the divide between how richer and poorer countries have been able to respond where in the latter, inherent weaknesses occur in the effective protection and management of mountain areas.

Some countries have reported that they have been struggling to protect the representative segments of some of the more critical mountain ecosystems in the form of protected areas. Of those protected areas their sizes have generally been too small, these are not connected, the potential custodian communities are not being engaged, the conflicts remain to be resolved or managed, and governance system has been too weak. These and other similar deficiencies have shown up rather openly during the current pandemic.

The impact of COVID 19 globally has highlighted the deep divide between how effectively countries resource and manage mountain protected areas and how resilient the protected areas are to deal with a crisis, such as COVID 19. The lack of custodianship at various levels in different locations leaves mountain ecosystems and protected areas with unsustainable protection and management systems.

For example in Australia, protected area agencies are fully government funded and staff have continued to be employed to carry out environment programs (albeit limited by social distancing) and in New Zealand, a $1.1 billion environmental restoration stimulus package has been announced, while revenue reductions in developing countries has severely affected employment and programs. It is notable however that in Pakistan, unemployed day laborers have been given new jobs as "jungle workers", planting saplings as part of the country's 10 Billion Tree Tsunami programme which aims to employ 60,000 people.

Scenarios for the future suggest an opportunity to forge green, inclusive policies for a sustainable recovery and thus improve the prospects for human well-being everywhere. In many countries where financial resources are scarce with poor quality education resulting in poor knowledge application and diversion of what little resource there is without a clear roadmap, this seems rather optimistic without significant support. Developed countries must help developing countries to mainstream global roadmaps and support rural communities to “think globally and act locally”.

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What can we learn from the COVID crisis?

Global Support for Mountain Protected Areas
The COVID 19 crisis has exposed the inadequacy of our global protected area management system where the richer and more developed countries are working in isolation from countries with insufficient management capacities. Some national governments have priorities far from conservation, and the manipulation of the economically rich countries results in conflicts of bias and interest. While the global benefits from protected areas and healthier ecosystems lie in close working together and sharing of experiences between countries with mountain protected areas, some countries such as Pakistan and on the African continent have seen little evidence of this.

It will be important to work to identify the impacts of this deficiency, both from socio-economic and ecological perspectives, to improve the management and resilience of mountain PA’s to major impacts in the future and support the establishment of new mountain protected areas. Improved North-South collaboration for improved management capacities, sharing of lessons and experiences and various tools for sustainable management of mountain protected areas are needed to be resilient to such crises in the future.

Visitor and social Impacts
Prior to the COVID shut down, many mountain protected areas have struggled with overcrowding (eg USA and China parks) and little political will to restrict numbers due to impacts on the economy and business interests. The COVID 19 shut down has given protected areas some breathing space and an opportunity to re-examine the notion of carrying capacity and social distancing and how to apply management systems as mountain protected areas start a phased re-open through the application of limits and reservation systems.

For example, in the process of recovering tourism in mountain areas in China, it is prescribed that daily carrying capacity be no more than the 1/3 of normal visitation. This will be difficult to achieve without systems in place and the density of visitors and the social distancing may exceed tolerance levels and draw criticism and social panic.

Mountain Communities
As reverse migration has started in the mountains (eg Central Himalaya), there will be more pressure on mountain protected areas, therefore, the demand for fuel fodder and timber and poaching for self-consumption will increase. The current situation shows that Illegal trade would minimize if demand from China and related wildlife trafficking from Nepal was continued to be reduced.

Communications
The COVID 19 crisis has significantly affected the traditional means of communication amongst protected area administrators, researchers and academics due to travel and social distancing measures. This has led to an unexpected and unintended breakthrough of communication technologies that have “virtualized” many meetings and workshops. The reaction of various partners and stakeholders has been unexpectedly positive. It is reported that Austrian Biosphere Reserve Managers see the potential for innovation and intend to change the virtual communication mode from emergency to regular operation. This will be of significant importance for rural, in particular mountainous areas; this may lead to smarter management of Protected Areas.
What is the WCPA Mountain Specialist Group doing?

During the response and recovery phase we will continue to share information, stay informed and support the work of the WCPA COVID 19 Task Force.

The work we are currently doing around the Identification of Global Priorities for New Mountain Protected and Conserved Areas will be important in informing the rebuilding phase. The growth of new protected and conserved areas in areas of high value in mountains that are currently inadequately protected, will lead to strengthening and building resilience to further zoonotic virus outbreaks and help to achieve a healthy human and nature relationship.

Compiled by Peter Jacobs; Chair; WCPA-Mountain Specialist Group, from input by Committee members. June 2020