BioOne COMPLETE

The Majella Massif in Abruzzo, Italy: "The Mother of Mountains"

Author: Barron, Patrick

Source: Mountain Research and Development, 26(4) : 367-370

Published By: International Mountain Society

URL: https://doi.org/10.1659/0276-4741(2006)26[367:TMMIAI]2.0.CO;2

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

Sacred *vs* Profane: Conflict Over the San Francisco Peaks

Mount Fuji (Japanese icon and revered mountain), Mount Kailas (sacred to Hindus, Buddhists, Jains, and Bons), Mount Olympus (home of the early Greek gods and goddesses), and many other mountains around the world have special significance that should give them a protective shield against damaging development. However, as spiritual and cultural values seem to erode in our increasingly Westernized, consumerized world, and short-term-profit development scenarios increasingly prevail, this metaphysical protection is proving to be insufficient. Consequently, it is increasingly important to reinforce the mantle of spiritual and cultural security by secular protection through formal designation as national parks, national monuments, or other kinds of strict protected areas. Moreover, those of outstanding international significance may well be listed as UNESCO World Heritage Natural/Cultural Sites, as was the case with Mount Tongariro in New Zealand. The sacred/profane conflict is well illustrated in the case of the San Francisco Peaks, located just north of Flagstaff, Arizona, in the United States.

Rising from the usually dry high plateau of the American Southwest, 4 mountains thrust skyward with a sharpness of outline in the clear air that gives them a supernatural appearance and enables them to be seen from great distances. They are sacred to most of the Native American peoples of this region. One of them, the San Francisco Peaks, is revered by 13 tribes, including the Navajo, Hopi, Havasupai, Hualapai, Zuni, White Mountain Apache and Yavapai Apache. To the Navajo, the Peaks are the sacred mountain of the west, a key boundary marker and place where ceremonial plants are collected. Its name to them in English translation is "Shining on Top." To the Hopi, their "Place of Snow on the Very Top" is, for half of the year, the home of the Kachina spirits who bring gentle rains to thirsty corn plants.

Not only are the "Peaks" valued for their spiritual nature, but the mountain "captures" water in the form of both rain and snow due to the orographic effect, and nourishes surrounding lands with streams, springs, and groundwater aquifers. The City of Flagstaff is dependent on this mountain water. Both plant and animal biological diversity are high. The Peaks are different from the surrounding lands of semi-desert and pinyon pine–juniper woodland and savanna, since they bear closed forests of aspens and conifers. It is indeed a special place in a vast natural landscape and 'spiritscape.'

The San Francisco Peaks are part of the Coconino National Forest that is administered by the US Forest Service. It is listed as a Category VI area on the IUCN/UN List (Managed Resource Protected Area). Over the years, with its mandate for "multiple use," the Peaks have received a small, rustic ski development (Arizona Snowbowl), a pumice mine (White Vulcan Mine), and some timber harvesting. Despite protest and a lawsuit by several Native American tribes, the ski area was expanded in 1983 to include more trails, 4 lifts, parking, and a lodge. The courts ruled that this did not impede the religious rights guaranteed by the 1978 American Indian Religious Freedom Act, even though it offends Indian beliefs. But, also in the 1980s, Native Americans won a victory over proposed expansion of the pumice mine. The US Department of Interior bought out the mining rights, the mine was closed in 2002, and the site restored.

Late in 2002, however, another threat to the sanctity of the Peaks arose with another proposed expansion of the Snowbowl, which had been suffering from declining snow cover and hence profits. (During 2001–2002 the ski area was open for business only 4 days!) To counter unreliable snowfall, it is proposed to use Flagstaff's wastewater to make artificial snow. Signs would be posted, advising people not to eat the snow. Aside from the further enlargement of the ski development, to bring it to the edge of a designated Kachina Wilderness Zone, the use of wastewater is a particular anathema to the Native Americans. Thirteen tribes have united in a "Save the Peaks Coalition" and have been joined by some environmental NGOs, especially the Sierra Club. In April 2005 the Forest Service announced its "finding" in favor of the expansion proposal, despite 2 years of negotiation with and petitions from the Coalition.

Of particular concern to the Coalition is the use of Flagstaff's treated sewage water on this sacred mountain. The Hopi are afraid that putting wastewater (not all contaminants such as hormonal compounds and antibiotics are removed by treatment) may cause the Kachinas to abandon their home in the mountain. In an appeal to the United Nations, Navajo President Joe Shirley stated: "The hearts of my people will again be broken, their health will inevitably suffer, and we will again witness the continued erosion of one of the oldest indigenous cultures in North America at the hands of the US Government."

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

The Coalition in August 2005 brought a legal court appeal against the Forest Service decision. In January 2006, a District Court Judge denied the appeal, apparently feeling that the economic interests of Arizona Snowbowl Resorts was more of a priority than the beliefs of hundreds of thousands of Native Americans. This decision was appealed to a Circuit Court of Appeals in San Francisco in September, but as of this writing, no decision has been issued.

Even if the decision is favorable to the Native American case, it is probable that the US Government will appeal to a higher court, given that the present political power is in the hands of neo-conservatives who favor economic development above all else. If the Coalition is allowed to prevail, this landmark case could affect the management of very many areas of public lands where Native Americans have sites of special spiritual value. This is a great fear in government land management agencies. But perhaps it is high time that those making policy and management decisions give more recognition to the inspirational values, power sources, healing powers, and sacredness of mountains, and less to short-term and short-sighted profits.

Thus, it might be well to strengthen official, secular protection for other sites where such current conflicts exist—a road and ski center development on Mount Olympus in Greece; uncontrolled tourism development at Machu Picchu in Peru; a proposed road on the pilgrimage route around Mount Kailas in Tibet; additional observatory infrastructure on Mauna Kea in Hawaii; tourist climbing of Uluru in Australia; and many others. The metaphysical and non-material values of mountains need greater consideration and protection when humans propose to exploit nature in lofty and special places.

Lawrence Hamilton
Senior Advisor, Mountain Biome, World Commission on Protected Areas/IUCN, 342 Bittersweet Lane, 05445 Charlotte, Vermont, USA.
silverfox@gmavt.net

The Majella Massif in Abruzzo, Italy: "The Mother of Mountains"

During the latter half of the 20th century, many mountainous areas throughout the Mediterranean experienced widespread economic and social marginalization. The Majella Massif, perceived for centuries by local inhabitants as a sacred mountain, has since the advent of the Second World War witnessed a steady decline in the population of its surrounding villages and the abandonment of both farmland and pastureland. In 1995 the Majella National Park was established, which includes the mountain and adjoining territory. Despite the area's natural beauty and numerous religious sites, a lack of infrastructure (including hotels, maintained trails, and efficient public transportation) together with insufficient incentives to revive sustainable agricultural and shepherding practices have slowed the development of the park. These trends may be reversed by land use regulations and governmental incentives that take into careful consideration the need to safeguard and develop not only the natural, but also the spiritual and traditional agropastoral resources of the mountain.

Introduction

The Majella Massif has long been one of the most revered mountains in Italy. Its name derives from Maia, the mother of Mercury (or Hermes), who in ancient times was widely worshiped in the Adriatic region. In the 13th century many monasteries and hermitages were built and rebuilt on its slopes, due largely to the influence of hermit Peter of Morrone (later Pope Celestine V). Over 40 of these structures survive, some intact, others in ruins; many are still used by nearby residents for religious purposes such as annual pilgrimages. Due in part to the widespread damage incurred during WWII, and in part to the tremendous postwar industrial boom in Italy, since the 1950s the Majella has become a marginal area, with continuous outmigration and limited economic activity.

After decades of continuing abandonment of villages, farmland, and pastureland, much of the mountain and a portion of territory surrounding it in 1995 were declared national parkland—a change that was greeted with widespread local support (rare in Italy). Long revered by local inhabitants as the "mother of mountains," the Majella is now slowly becoming a known destination for outdoor recreationalists in search of natural "sanctity" as well as physical, mental, and spiritual renewal. It is too early, however, to tell if the livelihood of villages on the mountain will receive a significant boost from this nascent tourism. Improved infrastructure developed to accommodate both religious and outdoor tourism, combined with incentives to stimulate the recovery of local agricultural and shepherding traditions, could assist the recovery and stabilization of the local economy.

The Majella is not a mountain whose shape is easily understood from afar. As one moves around it, at distances from its base varying from 200 m to 10 km, its summits remain largely hidden and its aspect constantly changes. It shows many

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

faces, often appearing at intervals to the peripatetic outsider to have somehow transmogrified into another mountain altogether—a phenomenon seemingly confirmed by a number of early maps, which incorrectly show 3 or more large clusters of peaks separated by areas of blankness instead of the entire, overarching massif.

Because the Majella is a complex clustering of 61 peaks over 2000 m in elevation and 75 lower-lying hills conjoined by steep ridges and upland plains, and covers over 250 km^2, it seems "not one but many:" in fact, the Majella is variously considered to be a single mountain as well as a "unified" group of peaks. While individual summits are identifiable at upper elevations, such as the highest point at Monte Amaro (2795 m), distinctions between them are rapidly lost as one progresses towards the base (Figure 1).

The Majella as a Sacred Mountain

The Majella is without doubt an enormous natural boundary, at once separating the lands around it, yet also suturing them together: it may be difficult to travel from Sulmona on its northwestern edge to Lama dei Peligni on its opposite southeastern one, but local residents from each town look up and confront the same mountain. For as far as it can be seen, the Majella exerts a strong influence on the Abruzzesi surrounding it—at once protectively welcoming and also ominously threatening them. With good reason they can be commonly heard to exclaim: "Managgia alla Majella!" (Damn the Majella!)—for the mountain, like a deity, is simultaneously capable of phenomenal beauty and severe destruction.

In addition to supposedly holding sway over immediately personal matters, the "enormous 'wall' of the Majella," as architect Enrico del Pizzo from Lama notes, while currently the object of much hope for "the well-being and prosperity expected to result from 'eco-development,' was also in centuries past the source of many problems and misfortunes for our ancestors. If it hadn't been for this 'natural barrier,' German military tacticians clearly wouldn't have transferred the 'gustav front' here in order to slow the advance of the allied troops from southern to northern Italy." Along with the extensive destruction caused by war due to the mountain's strategic position, the effects of earthquakes and landslides come quickly to mind when surveying its encompassing landscape: the ruins of houses pulled down by collapsing slopes commonly fringe Aventino Valley villages, which are also pocked with vacant lots containing the remains of buildings either bombed or shaken to the ground.

As a marker of extent (and active delimiter) of movement, the Majella bears the signs of oftentimes violent collisions, involving both momentary and drawn-out, active clashes (or merely inconclusive confrontations) between people and the land, one cultural or societal group and another, and between various land masses sliding against or over one another. The past 50 years have been marked by the large-scale abandonment of upland pastures and the subsequent regrowth of numerous species of plants, a process well-ingrained in the minds of the local populace above a certain age.

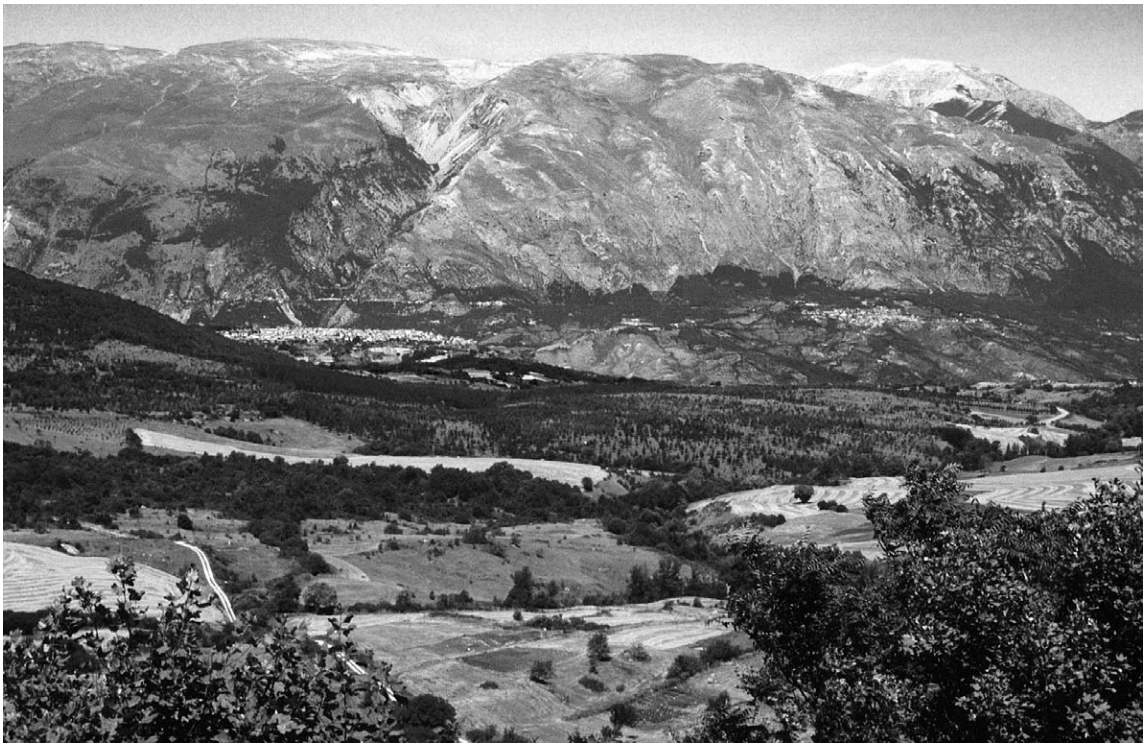
The Majella, while revered, shows many faces to the people that live around it, who variously consider it as potentially and variously imposing, impenetrable, dangerous, unsightly, sublime, uninhabitable, beautiful, tumultuous, peaceful, unpredictable, and demanding of respect. Like all mountains, it is home to strange upland animals and plants, where the soil runs thin and the rocky bones of the earth wildly cascade, splay, or jut out in chaotic arrays. It has often provided temporary (sometimes turning to permanent) refuge to escapees from war, social misfits, and ascetic-minded seekers of spiritual mediation. Embodied by contrasts, it at once protects and destroys, blocks out and closes in, holds up and pushes down.

Tuan (1974) surveys various esthetic responses to mountains in a number of early cultures, from the Hebrews who "beheld them in confidence … as an index of the divine," to the Greeks and Chinese who "viewed them with fear and aversion." He then outlines a general sequence of shifting attitudes towards mountains over time (roughly held in common between China and the Occident), characterized by a change "from a religious attitude in which awe was combined with aversion, to an esthetic attitude that shifted from a sense of the sublime to a feeling for the picturesque, to the modern evaluation of mountains as a recreational resource."

The full range of these varying sensibilities can be detected in the past and present local populations surrounding the Majella. As "Brother Pio," a resident of Lanciano, remarks to Donald Hall, "there are legends for ever of the Majella. It is feared for the storms that come from it; it is almost worshiped by the Abruzzesi, but it is also loved. In a sense it is still a mountain of sacrifice, which they say it once was" (Hall 1956). Pushed to extremes, even a well-educated person from an industrialized nation with at minimum the vaguest agnostic tendencies is capable of experiencing a mixture of spiritual fear and awe when encountering the mountain's full range of powers at close range. Stand long enough upon the actual edge of a summit featured in a postcard, and the picturesque may suddenly change into the sublime (or at least the panoramic). View the mountain with the current needs of its local population in mind accompanied by a pragmatic and generally ecologically-friendly point of view, and its most recent manifestation as a national park (and source of tourism-generated revenue) suddenly starts to make sense.

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

FIGURE 1 View of the Majella from the east. Two taller peaks of the massif are visible at upper right, but the summit (Monte Amaro)—even at this distance of roughly 8 km from Lama (center right of photo)—is still hidden from view. (Photo by Patrick Barron)



Although this last, more rational vision of the mountain would be the most likely to occur in such a person's mind, the first two reactions would without doubt lurk in the shadows of consciousness, waiting to emerge in a moment of stress, elation, or doubt. To fully perceive a mountain is to be assailed by contrasting and competing thoughts and emotions, some with roots in the deep past and some of relatively recent origin. In the end, the mountain remains dominant, if constantly altered—the central "hub" in myriad ways directing the progress (and bearing the brunt of the effects) of the teeming human and nonhuman movement around and within it.

The Majella is also a place long venerated in Christian tradition, notably during the 13th century when Peter of Morrone built numerous monasteries in hidden valleys and canyons. Ignazio Silone's book *L'avventura di un povero cristiano* (The Adventure of a Poor Christian) is an account of the aged hermit's last years of life, when to his great surprise (and later dismay) he was called down from his airy retreat on the Majella to Naples to be crowned Pope Celestine V in 1294 by quarreling, corrupt cardinals and church officials. He did not last long: unable to reconcile the demands of the spirit with the exigencies of office he resigned and escaped—only to be captured and imprisoned for the short remainder of his life.

Even if most current visitors to the mountain are merely escaping from the developed world for perhaps a day or two, rather than for months (if lucky) or years (if not) from military or police persecution, the Majella retains an aura of shelter. To enter the folds of such an enormous boundary is to meet innumerable smaller boundaries, each pointing towards an increasingly chaotic sense of the wild infinite.

Anyone choosing the life of a hermit on the Majella would certainly have a pick of many bucolic (if crumbling) shelters, built and rebuilt from stone and sometimes wood over the centuries by generations of shepherds and the occasional monk. While the Majella may seem at first glance to be a vast and uninhabited alpine realm, the ruins of many of these huts, enclosures, and improvised constructions within shallow caves, dot its slopes and upland plains—testimony to the mountain's formerly integral role in the agricultural-pastoral economy of the villages encircling its base.

Now that the mountain falls almost entirely within the boundaries of a national park, evidence of its former use as pastureland, while still widespread, is becoming more difficult to identify. The commonest signs—the animals and their caretakers—are now nearly all gone, while other evidence, such as fragile drywall constructions and the pastures themselves, is quickly receding as dense meadows and the forests slowly regain their footing. Such upland territory, unsuitable to permanent inhabitation and inhospitable to year-round use (even the shepherds descended in the fall), has always resisted human occupation.

As an object of beauty and a preserve for wild plants and animals, the mountain is still a player in the region's economy: hopes are high that tourist money will begin to flow in as the park becomes better established and well-known. Many Italians and some foreigners now familiar with the massif would never have been introduced to it had the park not been founded. For the first time in years (since the early 20th century, when the Via Frentana was a well-traveled, cross-mountain road that

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

required frequent, overnight stops) Lama recently opened the doors to a hotel. During a stay in the summer of 2003, I met a few initial, overnight visitors. Although most trails up the Majella are poorly signed "goat trails," and the Aventino River remains largely unadvertised and unsought with the exception of the odd kayaker, the fact remains that rooms were being rented and the restaurant modestly frequented. Tourists continue to trickle in, with small steps seemingly made each year to improve accessibility.

Perhaps the much touted "ecodevelopment" that accompanied the boosterism of the formerly-nascent park is finally taking root. This hopeful note should be tempered with the commentary of a resident from Colledimacine, who when asked if the park was a positive development, responded by saying, "You know, Colledimacine is a part of the park now, but we don't have anything positive. Over there in Lama, yes, they have the chamois, and the mountain right there that gives life to this park. The park also comes around and contains these little villages here, and these forests. But here, nobody visits, and the park gives us no work."

The slopes of the Majella and the inhabited lands within or adjoining the park are difficult to define as being either "natural" or "artificial" (Lefebvre 1991); likewise, the challenge of deciphering the complex web of social relations inherent therein is doubtlessly difficult. And yet it may very well be that a key to helping guide positive development of the region lies in working to protect and sustainably use not only its natural and recreational, but also its religious and agropastoral resources. Perhaps an acceptance of past traditions revived in meaningful forms along with new land uses shaped by enduring reverence for the mountain will bring about wise development that will benefit both the diverse populations of flora and fauna for which it is celebrated and the human communities that have for centuries dwelt around its flanks.

If reverence is indeed the key, perhaps such development is possible. Once within the upper folds of the Majella where the lowlands are lost to sight, wandering along the barely legible tracings of trails that once held up to 6 head of sheep walking abreast, it is difficult not to feel dwarfed by the mountain. The eerie feeling that part of it may come suddenly crashing down, or that somehow the mountain is able to sway your innermost thoughts and emotions, often comes welling up. And yet, this sensation is not lost once you descend the slopes again, but only mildly subdued; no matter where you are within its purview, the massif remains lurking and omnipresent.

As the form-giver to the valleys that encircle it, the well-spring of their water, and the ancient source of their soil, the Majella continues to give—as well as take back. Once host to innumerable flocks of sheep, goats, and cows—so thick that one elderly resident compared them to maggots swarming over a block of cheese—it is now home to an increasing variety and number of wild animals and plants. Moving down its slopes towards the Via Frentana, which sometimes straddles, sometimes parallels, the boundary between ethereal mountain park and mundane lowland valley, the distinctions between the two zones tend, however, to blur. The nagging, yet unanswerable question, "where does the valley begin and the mountain end?" comes easily to mind. Perhaps it is better to ask where the two meet, and then look for the innumerable and overlapping fragments of evidence. These links, like subtle tendons lying across the landscape binding it together, are splayed about almost everywhere one seeks them out.

REFERENCES

Hall D. 1956. *Eagle Argent: An Italian Journey.* London, United Kingdom: Methuen.
Lefebvre H. 1991. *The Production of Space.* Translated by Donald Nicholson-Smith. Oxford, United Kingdom: Blackwell.
Tuan Y. 1974. *Topophilia: A Study of Environmental Perception, Attitudes, and Values.* Englewood Cliffs, NJ: Prentice-Hall.

Patrick Barron
University of Massachusetts, Wheatley Hall 06-93, 100 Morrissey Blvd, Boston, MA 02125, USA.
patrick.barron@umb.edu

The International Society for Alpine History (AIHA)

Association Internationale pour l'Histoire des Alpes
Associazione Internazionale per la Storia delle Alpi
Internationale Gesellschaft für historische Alpenforschung

Do the Alps—and mountain areas more generally—have a history, other than a geological one? That is to say: do the societies that dwell in mountain regions, exploiting their resources and dealing with their imperative nature, have a past, near or far, that characterizes them as different from the populations of the plains, metropolitan centers, and maritime coasts? A past which merits the attention of historians?

For a long time, up to the mid-20th century, the answer to this question was always "no." Or more precisely, it did not even seem useful to raise the question. In the works of Western historians, mountain ranges, and the Alps in particular, appeared as a kind of *no man's land*, a natural obstacle that sometimes had to be traversed—with an army, with goods, for the sake of a pilgrimage, or for a simple journey to a pleasant destination. The fact that the Alps "traversed" were also Alps "inhabited and animated" did

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

not arouse curiosity. Therefore, the historical sciences only rarely raised questions about the modalities of populating mountain areas; forms of occupying territory and making use of resources; the constraints of altitude, climate, and steepness of slopes; collective and family behavior; encounters of civilizations from both sides of a mountain range and the original cultures born of such encounters; and many other aspects.

Since the Second World War such questions have been gradually touched upon, albeit in a dispersed manner, and almost always in a narrow framework, national or regional. The major conference on "The Alps and Europe" held in Milan in 1973 assigned a significant role to history, and proposed outlines of possible scientific cooperation. However, it was not until 7 October 1995 that a coordinated effort began: on that date, a group of mostly young historians, coming from all the Alpine countries (France, Italy, Germany, Switzerland, Austria, and Slovenia), gathered in Lucerne (Switzerland) to found the *International Society for Alpine History*, often called by its French name: *Association Internationale pour l'Histoire des Alpes* (AIHA).

The AIHA aims to be interdisciplinary and open to everyone (researchers and amateurs). It is interested in all historical periods, beginning with pre-historic times. Beyond the traditional aspects of history (political, institutional, economic, social), the Association also aims to include archeology, anthropology, art history, religious history, linguistic aspects, etc. It organizes biennial conferences (Grenoble in 1997, Trento in 1999, Kempten, Germany, in 2001, Innsbruck in 2003, Bovec, Slovenia, in 2005; the next one will be held in Switzerland in 2007) on specific subjects: spatial mobility; mountains and cities; material culture; tourism; food and health issues; etc. The AIHA publishes an annual journal (11 issues so far, with nearly 3000 pages) which alternately takes up the subject of the conference in one year and presents a region in the next—to date the Slovenian Alps, the Aosta Valley and the Valais, the Maritime Alps, Inner Austria. Various subjects are planned for the coming years. The journal is multilingual, with English abstracts.

At the outset the AIHA had no institutional base and no infrastructure. It organized and financed its activities one by one. This changed in January 2000, thanks to the hospitality of the *Università della Svizzera italiana* (USI) in the Canton of Ticino, Switzerland. Based on an agreement between the AIHA and USI, we founded the *Istituto di Storia di Alpi*, which, in 2006, was better integrated into the University structure under the name *Laboratorio di Storia delle Alpi* (LabISAlp, Laboratory for Alpine History).

On the one hand, LabISAlp hosts the secretariat of the AIHA, coordinates its activities, and edits its journal (which is no minor thing). On the other hand, it has its own activities: conferences and series of talks; it offers a framework for encounters and inspiration for a group of young "associate researchers" in the universities in the Alpine Arc. It also initiates research projects, or participates in them—for instance, on the differences in the modes of perception of Alpine populations and town dwellers; about the Alps during war times; about the increasingly illuminated night landscapes in the Alps; etc. Since LabISAlp is now integrated in the University's Department of Architecture, studies in future will probably focus more on questions touching on territory and its practical and cultural management—issues where there is much to be done.

The Alps are a large space full of life, and therefore of history. To expand our perception of the Alps, it seemed useful to compare this space with other mountain areas or ranges such as the Himalaya or the Andes, though not through own research, ie done or ordered by the AIHA or LabISAlp, but through exchange with historians from other mountain systems. On two occasions so far, in the framework of large international conferences, we have organized sessions dedicated to mountains, with the participation of historians from other continents: in 2002 at the International Economic History Conference in Buenos Aires; and in 2005 at the World History Conference in Sydney (the session dedicated to the sacredness of mountains was the starting point for the articles in the Research section of the present issue of *Mountain Research and Development*). These contacts will be further developed and extended.

Our ambition is great, but legitimate today: historical knowledge about mountain life, in the long run, is indispensable for a better understanding of the problems we face today in mountains and for gaining a balanced perspective on sustainable development.

The members of the Board of the AIHA in 2006 are: Jean-François Bergier, president, Switzerland; Arthur Brunhart, Liechtenstein; Gauro Coppola, Italy; René Favier, France; Laurence Fontaine, France; Luigi Lorenzetti, secretary general and coordinator of LabISAlp, Switzerland; Jon Mathieu, Switzerland; Franz Mathis, Austria; Brigitte Mazohl-Wallnig, vice-president, Austria; Darja Mihelic, Slovenia; Reinhard Stauber, Germany-Austria; Luigi Zanzi, vice-president, Italy.

Jean-François Bergier
Professor emeritus, Swiss Federal Institute of Technology, Zurich (ETHZ); Honorary President of the International Economic History Association (IEHA).
Laboratorio di Storia delle Alpi (LabISAlp), Accademia di architettura, Università della Svizzera italiana, Largo Bernasconi 2, CH–6850 Mendrisio, Switzerland.
E-mail: labisalp@arch.unisi.ch
Web site: www.labisalp.unisi.ch

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

Mountain Research Across Boundaries

A Portrait of the International Scientific Committee on Research in the Alps (ISCAR)

ISCAR
International Scientific Committee on Research in the Alps

A basis for coordinated action: the Alpine Convention

The (European) Alpine Convention is a commitment with the status of international law, signed in 1991 by all Alpine states. The parties—Austria, France, Germany, Italy, the principalities of Liechtenstein and Monaco, Slovenia, and Switzerland, and the European Union—have agreed to cooperate with regard to sustainable development in the Alps. The domains and modalities of cooperation are designed by a framework convention and 8 sectoral protocols (energy, soil, etc.).

Impacts of the ForumAlpinum

Research cooperation among all Alpine states—but without a specific thematic focus—is one of the tasks listed in the framework convention. To encourage such cooperation, the Swiss Academies of Sciences (SAS) and Swiss Academies of Humanities and Social Sciences (SAHS) invited scientists and stakeholders from all Alpine countries to the first ForumAlpinum in Disentis in 1994. The ForumAlpinum aims to bring together scientists from all Alpine countries (to be international), from all disciplines (to be interdisciplinary), and stakeholders from society, politics, and the economic sphere (to be transdisciplinary). The result of the first ForumAlpinum was an Action Plan for Alpine research. The concept of the ForumAlpinum has been successful in 3 areas:

1) Biennial forums

In subsequent years, the biennial ForumAlpinum was organized in all larger Alpine states: in Chamonix (France) in 1996, Garmisch (Germany) in 1998, Bergamo (Italy) in 2000, Alpbach (Austria) in 2002, and Kranjska Gora (Slovenia) in 2004, dedicated to different topics of broad scientific and social interest (see: www.alpinestudies.ch/iscar/forumalpinum)

2) Research cooperation

In all organizing states, the ForumAlpinum initiated national cooperation and organization in Alpine research. Today, all Alpine states have national or supra-regional bodies (boards, committees, or even institutes) for Alpine or mountain research.

3) Founding of ISCAR

International cooperation resulting from the organizing committee of the ForumAlpinum finally led to the founding of the International Scientific Committee on Research in the Alps (ISCAR). In 1999, the following—mainly national—research institutions signed the ISCAR Convention:

Austria:
Austrian Academy of Sciences, Vienna
France:
Pôle européen universitaire et scientifique, Grenoble
Germany:
Bavarian Academy of Sciences, Munich
Italy:
National Mountain Institute, Rome
Slovenia:
Slovenian Academy of Sciences and Arts, Ljubljana
Switzerland:
Swiss Academy of Sciences (SAS), Berne
Swiss Academy of Humanities and Social Sciences (SAHS), Berne

All partners delegate 2 members to the Committee and contribute to the costs of the Committee's office, hosted by SAS in Berne. The Presidency remains in the country that organizes the ForumAlpinum or the AlpWeek (see below) for 2 years.

The ISCAR Convention has 4 main objectives:

- To stimulate scientific research of relevance to the Alps, as well as its implementation within international or mountain research programs;
- To promote interdisciplinary research on the Alps as well as the transfer of scientific knowledge to the authorities in charge and to the general public;
- To ensure the continuity and the scientific quality of the ForumAlpinum to promote international cooperation in Alpine research;
- To take up research topics in the interest of the Alpine Convention and advise the authorities responsible for the Convention.

Main ISCAR activities since 2000 and outlook

In 2000, the Alpine Conference (biennial Ministerial Conference of the Alpine Convention) recognized ISCAR as an official observer of the Alpine Convention. In this function, ISCAR represents research in the official bodies of the Alpine Convention, takes up research needs related to the Convention, and cooperates with other observers such as CIPRA, EUROMONTANA, and the Alpine Club. Since 2000, ISCAR has developed several activities beyond the traditional ForumAlpinum.

In 2001, ISCAR proposed the elaboration of a thematic Atlas of the Alps, to compare different situations in the Alpine space. Professor Axel Borsdorf (Innsbruck, Austria) started the first projects (GISALP,

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

DIAMONT) that provide important information for a thematic Atlas of the Alps. This Atlas will be a contribution to the Information and Observation System (SOIA) of the Alpine Convention.

In 2002, together with CIPRA and the Network of Alpine Protected Areas, ISCAR joined the Alpine (ecoregion) program of the World Wide Fund for Nature (WWF). In a joint workshop, about 70 scientists identified 23 priority areas for biodiversity conservation in the Alps. A next step will identify the main features of connectivity that link certain areas with important biodiversity (protected areas, priority areas, lowlands, other mountain ranges).

In 2004, ISCAR collaborated with CIPRA, the community network "Alliance in the Alps," and the Network of Alpine Protected Areas to enlarge the concept of Forum-Alpinum to the concept of AlpWeek, oriented mainly towards debates among scientists, politicians, administrators, stakeholders, and NGOs. The first AlpWeek took place in Kranjska Gora, Slovenia. The next Alpweek will take place in France in 2008 and deal with innovation for sustainable development in the Alps.

In 2004, the Alpine Conference approved a multi-annual work program (2005–2010). ISCAR took up key issues of this multi-annual program and analyzed them from a scientific perspective. About 50 scientists from a wide range of disciplines participated in 2 workshops and 2 consultations. The result was a list of 22 topics, for which specified research goals, actions, and stakeholders exist. The Research Agenda builds a bridge between topics of both political and scientific relevance. The Research Agenda of the multi-annual working program of the Alpine Convention 2005–2010 will be published in early 2007.

The Mountain Research Initiative (MRI) and the UNESCO Man and the Biosphere Program released a Research Strategy on Global Change in Mountain Regions in 2005. ISCAR and MRI established a Network for Global Change Research in Europe in 2006 to help implement this Research Strategy. The main partners are mountain biosphere reserves and protected areas, as such areas will make it possible to conduct long-term research along altitudinal and land use gradients. In this context, cooperation between ISCAR and Alpine protected areas will be closer in future: for 2007, ISCAR and the Network of Alpine Protected Areas are planning the installation of an international research council for the latter (Schwarztorstrasse).

ISCAR has so far been successful in interceding and providing scientific expertise for socially motivated projects, and in sharing competence with the Alpine Convention and its observers. In future, ISCAR will focus its activities on research related to issues of sustainable development in the Alps and European mountain areas.

Heinz Veit
President, ISCAR
Thomas Scheurer
Managing director, ISCAR, Schwarztorstrasse 9, 3007 Berne, Switzerland.
E-mail: iscar@scnat.ch
Web sites: www.alpinestudies.ch/iscar
www.forumalpinum.org
www.alpweek.org

The Mountain Partnership at the CSD Partnerships Fair

Partnerships for sustainable development

No one organization or group of organizations has the expertise, resources, and capacity to do all that is needed to bring about meaningful change in sustainable mountain development. Indeed, only by pooling our collective energies, skills, and resources, and working in partnership at all levels can we hope to tackle challenges and improve mountain lives and environments worldwide. This is the rationale behind the Mountain Partnership (or the "International Partnership for Sustainable Development in Mountain Regions"), an evolving voluntary alliance of countries, intergovernmental organizations and major groups (eg civil society, NGOs, and the private sector) who are working together to bring positive change to mountain regions, whose populations are amongst the poorest and most disadvantaged on Earth.

The concept of 'partnership' is not new in development. In fact, there are a wide range of collaborative arrangements that can be called partnerships, ranging from consortia to networks, from local to international initiatives, and from formalized arrangements to looser informal structures. But what makes the Mountain Partnership different from many is that it was launched as a "sustainable development partnership," as an important outcome of the World Summit on Sustainable Development (WSSD, 2002), and as part of the process overseen by the Commission on Sustainable Development (CSD).

What does this mean? In the CSD context, partnerships for sustainable development are defined as voluntary, multi-stakeholder initiatives that contribute to the implementation of sustainable development goals—Agenda 21, the Programme for the Further Implemen-

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

International commitment to sustainable development

UN Conference on Environment and Development (UNCED) and Agenda 21 (1992)

The UN Conference on Environment and Development (UNCED), or Rio Earth Summit (Rio de Janeiro, Brazil, 3–14 June 1992), proclaimed the concept of sustainable development as a workable objective for everyone around the world, whether at the local, national, regional, or international level. A major outcome of UNCED was Agenda 21—a comprehensive plan of action to be taken at all levels by organizations of the United Nations system, governments, and major groups in every area in which humans impact on the environment. By devoting Chapter 13 to mountains, Summit delegates placed mountains on an equal footing with climate change, desertification and other issues of global importance.
http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21toc.htm

The Commission on Sustainable Development

The Commission on Sustainable Development (CSD) was created in December 1992 to ensure effective follow-up of UNCED, enhance international cooperation, rationalize intergovernmental decision-making capacity, and monitor and report on the implementation of its agreements at the local, national, regional, and international levels. The CSD remains the high-level intergovernmental forum within the United Nations system at which interrelated issues of sustainable development are addressed in an integrated manner. As such, it remains the focal point for discussion and reporting on sustainable development partnerships.
http://www.un.org/esa/sustdev/csd/policy.htm

The World Summit on Sustainable Development and the Johannesburg Plan of Implementation (2002)

The World Summit on Sustainable Development (WSSD, Johannesburg, South Africa, 26 August–4 September 2002) followed up on developments since UNCED. The event was organized by CSD through a series of consultative meetings. WSSD concluded its work by adopting a political declaration (the "Johannesburg Declaration on Sustainable Development"), as well as a plan of implementation (the "Johannesburg Plan of Implementation") for activities and measures required to achieve development that respects the environment. Another notable outcome of the Summit was the launch of CSD Partnerships for Sustainable Development.
http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm

tation of Agenda 21, and the Johannesburg Plan of Implementation (see box).

Indeed, the launch of the Mountain Partnership at WSSD (along with another 200 sustainable development partnerships) was part of an overall process to redefine, shape, and enhance development collaboration at all levels. At WSSD, there was general disappointment and frustration at the lack of progress made by more traditional models of development (with their strong reliance on national governments) in achieving the sustainable development goals set out a decade before in Agenda 21. These CSD partnerships for development therefore represented fresh hope as new paradigms for development. They offered dynamic frameworks in which to engage all stakeholders and interested partners—be they governments, civil society, or the private sector—to contribute what they know and do best, and make value-added contributions to sustainable development goals.

The Mountain Partnership

The Mountain Partnership clearly corresponds to this CSD model. It builds on the global alliance of individuals and organizations involved in mountain issues that has grown since the UNCED or 'Rio Earth Summit' in 1992. It captures the momentum created during the UN International Year of Mountains (IYM) in 2002, and strives to improve the implementation of Agenda 21 and promote joint initiatives based on paragraph 42 of the Johannesburg Plan of Implementation and other related instruments regarding mountains, by enhancing on-the-ground action and by working at the policy, program, and project levels. The Partnership's flexible and open structure allows members to tap the wealth and diversity of resources, information, knowledge, and expertise of members, in order to add value to their programs, projects and activities, to identify and promote new mechanisms for cooperation, to attract and generate funding, and to build lasting alliances to effect lasting change in mountain regions.

As of September 2006, the Mountain Partnership was one of the biggest CSD Partnerships, with 137 members—47 countries, 14 intergovernmental organizations and 76 major groups. It is supported by a Secretariat based at FAO headquarters in Rome, and financed through contributions from the governments of Italy and Switzerland. This Mountain Partnership Secretariat acts as a central reference point for information exchange, networking, and liaison for Mountain Partnership members and connects them by disseminating knowledge on effective models, good practices, and existing mechanisms, agreements, and frameworks that could be adapted to suit specific national and regional conditions.

Taking stock of partnerships for sustainable development

Yet nearly 4 years after its launch, the Mountain Partnership, as is the

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

case with many other CSD Partnerships, is at a critical juncture. At WSSD, there were high expectations that these innovative partnerships would accelerate the implementation of sustainable development policies and actions in the second decade following the Rio Earth Summit. But, the reality of such a diverse group of stakeholders working together to achieve common goals has at times proven to be more challenging, if not elusive, than originally expected.

How can we start to evaluate the progress and impact of the Mountain Partnership and other CSD Partnerships for sustainable development? And how can we assess the effectiveness of this partnership model in bringing about meaningful change? The most important forum in which to do this is the annual session of the Commission on Sustainable Development and the Partnerships Fair held every year as part of the official CSD program.

This year's Partnerships Fair (1–9 May), part of the official CSD–14 program in New York, was a valuable opportunity to highlight the advances and constraints facing the Mountain Partnership, to share experiences with other CSD Partnerships, and to explore ways to improve the impact and effectiveness of the Mountain Partnership and other such CSD Partnerships at all levels. The key components of the CSD–14 Partnerships Fair included 7 "Partnerships in Practice" interactive discussion sessions, 25 information desks where CSD-registered partnerships displayed and distributed information, and 28 partnership presentations on progress made in implementation. The Fair attracted a diverse range of partnership representatives from governments, major groups, the UN system, and other organizations. The focus on practical, results-oriented debate and dialogue created a positive learning atmosphere. All sessions featured dynamic and fruitful exchanges.

The Fair's series of interactive discussions, in particular, were designed to promote open discussion on practical issues related to building and operating partnerships, based on the 'real' experiences of CSD-registered partnerships—internal governance structures, mobilizing resources, communication and networking, and reviewing and measuring partnerships. Despite the fact that many of the CSD Partnerships attending CSD–14 were involved in the thematic clusters of energy, climate change, pollution, and industrial development (areas in which the Mountain Partnership is not directly involved), it was the actual partnering process—the building, managing, reviewing, and sustaining of partnerships—which was at the core of Fair activities and arguably the most relevant to the further development and strengthening of the CSD Partnerships as a whole, and the Mountain Partnership in particular.

Constraints and opportunities common to all CSD Partnerships

Understanding the partnership-building process

Expectations of how fast effective partnerships would evolve when first launched at WSSD were in many cases unrealistic. This conclusion has been expressed in the past by CSD Partnerships and was reiterated at CSD–14. Participants saw partnership-building as an evolving process that requires adequate time, effort, and support in order to be effective. There is no template for CSD Partnerships; and there are no shortcuts in forming effective partnerships. Some described partnership-building as more of an art than a science. To have effective partnerships with long-term value requires substantial investment of time and resources in building the partnership and regular reviews to assess whether the partnership is truly equitable, transparent, and mutually beneficial. Many reported that development was more costly than expected and tangible results materialized more slowly than expected.

Involving the private sector

At WSSD, the expertise and leverage of the private sector was considered crucial to CSD Partnerships and achieving a sustainable path to development. At the CSD–14 Partnerships Fair, the importance of strengthening the participation of the private sector in partnerships was underlined at a session focused specifically on practical issues related to attracting and sustaining private-sector involvement. The contributions of the private sector—not just through financial resources but specifically through the sharing of management expertise, appropriate technologies, competitiveness, open communication platforms, building capacity and skills through training activities—were stressed. There was a perceived need to engage the private sector more especially for the delivery of services and technological know-how, and for the poorest of the poor, as they are key end-users. However, attracting the private sector requires clear incentives and creative engagement strategies. Many representatives stressed that experience had shown that all stakeholders in the process need to clarify what they are contributing to create an "enabling environment" for arrangements, and to promote awareness that every partner is both a beneficiary and a donor.

Ensuring enabling frameworks and governance

Partnership representatives stressed that the success of their initiatives was dependent on the existence of a supportive policy and regulatory framework; political commitment at high levels; public awareness; and a sustainable resource base. The challenges identified ranged from difficulties faced in scaling up pilot projects to the national and region-

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

al levels to concerns over the time and the resource-intensive nature of coordination between partners. Regarding the governance of CSD Partnerships, many participants had learned that a light governance structure, with a steering committee made up of members, makes for a more dynamic alliance: in particular, it allows partners (rather than governments) to make decisions about how to spend resources, and instills a better sense of ownership and inclusiveness among members.

Sharing experiences and learning from one another

In discussing strategies for effective communication, it was pointed out that many organizations and partnerships are working to facilitate dialogue and exchange information on partnerships. There was general consensus that gathering and sharing information on partnerships' experiences was vital if we are to maximize our understanding of partnership processes, and help bolster momentum. CSD–14 vice Chair Azanaw T. Abreha highlighted the need for effective communication and outreach in the context of capacity-building, scaling-up, creating an enabling "learning environment," advocacy, and effecting change on the policy level. He also noted the particular relevance of communication and outreach as a means for partnerships to answer concerns raised over issues such as transparency, accountability, monitoring, and measuring progress.

In an effort to share experiences of Partnerships, and at the invitation of the UN General Assembly, the Mountain Partnership Secretariat prepared a report, *The Mountain Partnership: Activities and Achievements*, for the consideration of CSD–14 and the CSD–14 Partnerships Fair. This report provides an overview of progress made by the Mountain Partnership since its launch, discusses some of the key challenges facing the Partnership today, and provides lessons learned and proposals on how to strengthen its impact and effectiveness. It highlights some significant advances, while focusing on key issues and challenges that many consider critical to the long-term success of the Mountain Partnership. These challenges include the uneven level of involvement of members; communication, and networking over geographic and linguistic borders; greater participation of the private sector; and mobilizing increased levels of funding for joint activities. This report, presented by the Mountain Partnership Secretariat at the plenary afternoon session of the opening day of CSD–14, was distributed widely to Fair participants in the hope that the issues outlined in the document would be of relevance to the development of other CSD Partnerships.

Promoting networking and relationship-building

Partnerships are about relationships and building trust—this sentiment was at the core of discussions about networking for and within CSD Partnerships for sustainable development. It became clear that most of these partnerships, like the Mountain Partnership, spend considerable time and resources in building effective information tools, products, and services to communicate and coordinate between partners. But unlike the Mountain Partnership, the primary aim of some partnerships is to serve as a mechanism for information exchange—to share experiences and best practices, to exchange practical knowledge, and to engage in common analysis and review, as well as informal and frank debates. These initiatives are working well to create multi-stakeholder networks, connecting governments, international institutions, NGOs, industry associations, and other partnerships. Their models are worth studying. But participants noted that it is important to recognize that there is not one model or "one size that fits all," and each partnership also needs to have the flexibility to adapt to changing needs, concerns, and contexts.

The Mountain Partnership is networking at the global, regional, national, and local levels—tapping into existing networks and aiming to help build new networks for specific areas of work and focus. The representative of the Mountain Partnership Secretariat, who acted as a lead discussant in an interactive discussion on networking and relationship-building at the CSD–14 Partnerships Fair, stressed that the Secretariat was "learning by doing" in its role of disseminating information, networking, and encouraging dialogue between members. Many types of tools, services, and products are used by the Partnership to network (from face-to-face meetings to a Web site, databases, a newsletter, collaborative workspaces and e-consultations), but there is no one standard communication strategy or model for networking and relationship-building for all activities within the Partnership. This is because of the unique challenges and constraints faced by its 137-member alliance, ranging from geographic distances, cultural and linguistic differences to an uneven capacity of members to communicate and network effectively. Importantly, although virtual or electronic means of information sharing, knowledge exchange, and debate have proven essential tools in building and sustaining collaboration among some Mountain Partnership members, this does not suit all. The Secretariat acknowledges that technology is not a 'quick-fix' solution for a significant number of Mountain Partnership members, many of whom live in developing countries and have insufficient or non-existent Internet connectivity. Nor can information and communication technologies ever replace the real benefits of face-to-face meetings of individuals.

This was a common concern of other CSD Partnerships who often questioned the over-reliance on Web sites for partnership-building and networking. Within the Moun-

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

tain Partnership, one-to-one and 'real time' group meetings, such as workshops, seminars, and side events, have proven invaluable in allowing members to better understand each other's aims and needs, and in many cases have made it possible for personal relationships to develop that have been a key factor in sustaining collaboration over time. The higher costs involved in organizing such events is justified in most cases, judging from the results and the feedback provided by members. Importantly, one participant at this interactive session stated that it was easy to report on successes in networking and relationship-building. It was more difficult to report on 'failures' and on what was not working, although these sorts of examples would clearly be beneficial for all CSD Partnerships.

Demonstrating and communicating results

CSD Partnerships are being held accountable to demonstrate and communicate results, through databases, presentations at the Partnerships Fair, and other fora. Importantly, many partnerships attending the CSD–14 Partnerships Fair underlined the need to communicate outcomes and stressed the need for mechanisms to measure progress and results. Appeals were made amongst Partnership representatives and directly to the Partnerships Team in the CSD Secretariat to exchange experiences and lessons learned on metrics used for sustainable development partnerships. It was acknowledged that the metrics of assessing partnership success remain a challenge, particularly in the cases of partnerships that are focused on activities with qualitative outcomes such as capacity-building, training, and public education.

CSD Secretariat support for partnership development

There are clearly tangible benefits in exchanging experiences, approaches, and results among the different CSD Partnerships. To date, the Mountain Partnership has had important opportunities to do so at the annual CSD Partnerships Fair and at some of the related preparatory events that were organized prior to these sessions. At this year's CSD Partnerships Fair, the Partnerships Team in the CSD Secretariat underlined its supportive role in the building and nurturing of CSD Partnerships, and showcased existing and new services and tools designed to generate knowledge and strengthen collaboration between and among sustainable development partnerships. These services and tools include the summary reports to CSD highlighting trends in registered partnerships; the CSD Partnerships Web site and database, and the organization of meetings and events such as the annual CSD Partnerships Fair.

In particular, the redesigned CSD Partnerships database, first launched in 2004, now provides a more transparent mechanism to share information on CSD Partnerships, and includes such features as a partnerships events calendar to assist in identifying partnership activities, databases of partnership Web links, publications and articles, and a proposals database for new partnerships still seeking resources and/or partners. This database is now complemented by the CSD Partnerships online e-Forum, which aims to provide networking opportunities, facilitate dialogue, and support partnership development. The CSD Secretariat hopes that this information service will provide a medium through which registered partnerships can exchange lessons learned, good practices, and new ideas, as well as follow up on meetings, conferences, and publications.

The Mountain Partnership Secretariat looks forward to participating in this new CSD e-Forum, as well as future CSD events and initiatives, so that it can best support and facilitate the collaborative efforts of the Mountain Partnership to achieve concerted and lasting development to the world's mountain regions.

CSD Secretariat's Partnerships for Sustainable Development Web site: http://www.un.org/esa/sustdev/partnerships/partnerships.htm

Report: *The Mountain Partnership: Activities and Achievements*: http://www.un.org/esa/sustdev/csd/csd14/statements.htm

Jane Ross
Communications Officer, Mountain Partnership Secretariat, Food and Agriculture Organization of the United Nations (FAO), Viale delle Terme di Caracalla, 00153 Rome, Italy.
E-mail: jane.ross@fao.org
Web site: www.mountainpartnership.org

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use