
Sustainable Mountain Communities:
Environmental Sustainability in Communities Impacted
by Tourism and Amenity Migration

WEEK 3: DISCUSSION SUMMARY

Topics: Managing Quantity, Type and Rate of Growth
Maintaining a Sustainable Tourism-Based Economy

This is the summary for the final week of the above-mentioned North American Mountain Forum e-discussion. Thank you to everyone who posted messages during the third and final week. During that week there were a total of 21 postings from 15 contributors representing communities in Alberta, British Columbia, Colorado, California, West Virginia, Missouri and Mexico. Thank you!

For communities impacted by tourism and amenity migration, nothing impacts environmental sustainability more than growth. For this reason, there was a great deal of overlap between this week's two topics. The following summary will be organized by discussion thread only. No attempt will be made to separate the weekly topics.

A. MAINTAINING A SUSTAINABLE TOURISM-BASED ECONOMY & MANAGING QUANTITY, TYPE AND RATE OF GROWTH

Discussion Threads:

- *** Affordable Employee Housing
- *** Emergency Services
- *** Protecting Watersheds: Soils
- *** Environmental Regulations
- *** Environmental Monitoring
- *** Adaptive Management
- *** Tourism & Economic Development: Appalachia
- *** Tourism & Economic Development: Mexico
- *** The Impacts of Growth
- *** Common Conclusions
- *** Affordable Employee Housing

This discussion began with a topic of great importance to many mountain communities with tourism-based economies – employee housing.

Lisa Isaacs and Julie Ann Woods pointed out that affordable housing is a huge environmental issue in mountain communities because as tourism-community property values increase, workers get pushed "down-valley" to more affordable locations. The resulting urban sprawl destroys surrounding resources, increases air pollution by creating commuter traffic, and reduces socio-economic diversity within the community. Several methods of addressing employee housing were suggested.

Lisa Issacs described how California's Mammoth Mountain ski resort has addressed employee housing by spending over \$8 million(USD) on new multi-unit housing complexes and on other properties located within 4 square miles (~6.5 square km) of the

local town. In addition, employees who want to purchase property in town are offered a mortgage assistance program through the ski area.

In the hamlet of Lake Louise, Alberta, all lease-holding businesses are required to provide employee housing. Caroline Marion explained that this is possible because Lake Louise is located inside Banff National Park where Parks Canada is both landowner and development authority. In addition, only leaseholders and their employees are permitted to live in there.

Communities that are not located in a National Park do not normally have the benefit of regulated residency and must deal with employee housing in other ways.

As the Community Development Director for the City of Aspen, Colorado, Julie Ann Woods suggested that early planning is crucial. Aspen implemented an aggressive affordable housing (AH) program in the late 1970's, which has created over 1700 deed-restricted units that enable nearly 1 in 3 working residents to call Aspen home. In addition, the city wrote a Community Growth Boundary into the community plan and created a number of incentives for developers to build "up" instead of "out". The building incentives have been incorporated into free-market developments within the original townsite as part of a new infill program.

*** Emergency Services

Affordable housing is only one of many issues faced by tourism-based mountain communities. Gerard V. LeBlanc of the Comox-Strathcona regional district in British Columbia has found that providing emergency services can also prove challenging.

Gerard's community would like to provide emergency services because the nearest fire department and police service are 25 minutes away, current insurance costs are 4 to 6 times the rates charged where fire protection service exists, and the community hosts thousands of residents and visitors in the winter.

The community finds this difficult to accomplish, however, because it has a very small year-round population and contends with steep slopes and tight sites that make the costs of fire fighting equipment very high.

To mitigate the situation, the local government is partnering with a mountain resort developer whose property is adjacent to a large provincial park. The park sees significant use by day-trippers and hikers taking extended excursions.

*** Protecting Watersheds: Soils

Watersheds and water quality were a major line of discussion during the final days of this e-discussion. Michael Hogan, Don Weir, SDLiberty@aol.com, Brenda Wispinski, Donald Friend, and Ruth Blackwell Rogers all expressed concern with the impacts of growth on watersheds and water quality.

This is a particularly important issue in mountain regions because, as Michael Hogan pointed out, development in mountain areas can affect an entire watershed. However, no amount of downstream treatment will make up for an unraveling upland portion of a watershed.

Several methods of protection were discussed, and much attention was focused upon soils.

Michael Hogan, of the Lake Tahoe region, noted that soil is the primary building block of all habitats and the key to groundwater recharge. He suggested that developers and planners should control erosion (and siltation) through re-vegetation, but also address the chemical composition of the soil itself. This chemical composition greatly affects the kind of vegetation that will grow on a slope and the soil's ability to absorb water.

Dr. Donald Friend drew attention to research by Dr. Mark Williams that found talus and mining-influenced building sites were less able to neutralize acid during the growing season, while tundra, talus and rock glaciers were sensitive to nutrient enrichment. Using the results of this study, regional policy makers adopted regulations for restricting development in sensitive alpine and sub-alpine areas around the town of Telluride, Colorado. The regulations were put in place to protect downstream water quality by controlling growth around the headwater basins of the San Miguel River watershed. Regulations limited building footprints, banned septic systems, prohibited landscaping and fertilizer for all purposes but reclamation, limited the width of high elevation roads and prohibited winter plowing.

Ultimately, Don believes what is needed are regulations that address the unique characteristics of mountain environments. Without national policies that specifically address mountain environments, Don believes it will be difficult to regulate land use and prevent the degradation of mountain environments and watersheds.

*** Environmental Regulations

While there may be few regulations that specifically address mountain areas, there more regulations that address protected areas.

The mountain communities of Lake Louise, Alberta and Field, BC are located in National Parks. Caroline Marion explained that because of their location, regulations exist to: cap commercial, residential and institutional growth; legislate build-out numbers through the National Parks Act; and impose strict development guidelines to govern the look and feel of these national park communities.

Caroline suggested that it was important to collectively negotiate with stakeholders some of the regulations affecting them. As such, the growth management strategy for Lake Louise was negotiated with all local, commercial accommodation operators. Copies of the community plans, completed in 2001 and 1999, are available on the Parks Canada website at: <http://www.worldweb.com/ParksCanada-Banff> and <http://www.worldweb.com/ParksCanada-Yoho>.

SDLiberty@aol.com suggested that appropriate environmental laws do exist outside of National Parks, but are rarely enforced. As a solution, SDLiberty suggests that training and public awareness campaigns should be implemented, and as a last resort, fines and other penalties.

*** Environmental Monitoring

Brenda Wispinski agreed with SDLiberty that environmental laws are not always effective but suggested that punitive measures are not effective either. Like Michael Hogan, she believes that what is needed are action plans that work with developers and government agencies, rather than against them.

In Brenda's community, management plans for Storm Water Management Facilities (SWMF) are required of all developers before they accept engineering drawings. Erosion control must be a part of these plans not only during construction but until the surrounding homes are completely built out and landscaped. Management Plans may remain in place for up to five years.

Brenda prefers these management and monitoring plans because she finds that they are better received by both Council and the public, aid municipalities by ensuring a pre-approved plan is already in place when developers hand over the land, and ultimately, succeeds in protecting watersheds.

*** Adaptive Management

Brenda Wispinski, and other list participants, expressed an interest in learning more about Michael Hogan's version of "Adaptive Management".

According to Michael Hogan, current environmental laws and many management plans are ineffective because they either do not address the source problem directly or do not articulate the end goal so that it is clearly understood by all stakeholders. Concerning water quality regulations, Michael also feels that the watershed connection is seldom made or understood. To address this problem, Michael Hogan recommends Adaptive Management.

According to Michael, Adaptive Management has two main characteristics. First, it acknowledges that we do not completely understand the system that we are dealing with, but allows us to proceed with a project while we gather the knowledge that we lack. Second, it is a decision-making process that includes the following components:

- * Clear articulation of project goals, outcome or success criteria
- * Collection of existing knowledge and practices relative to achieving that goal or those goals
- * Identification of information gaps and related research needs
- * Well-defined strategy to applying knowledge and relevant practices toward achieving that goal or goals
- * A clearly-defined and defensible monitoring program to determine whether that goal or those goals are being achieved
- * A pre-defined management response or responses if those goals are not met.

Michael believes that Adaptive Management works because it narrowly defines both large and small goals, ensures that these goals are clearly understood and accepted by all participants, and requires all participants to take responsibility for their contribution to meeting these goals. As a result, he finds that the process is successful in engaging all partners and transcending much of the negativity associated with "regulation".

Listed below are references provided by Michael Hogan. He cited the Salafsky et al publication and the Elzinga et al book as most useful to him. The Salafsky publication is available free from the website listed.

SALAFSKY, N., MARGOLUIS, R., and REDFORD, K. 2001. Adaptive Management: A Tool for Conservation Practitioners. Washington, D.C. Biodiversity Support Program. (<<http://www.bsponline.org/>> www.BSPonline.org)

CHIRAS, D.D. 1990. Beyond the Fray: Reshaping America's Environmental Response. Johnson Books.

ELZINGA, Caryl L., SALZER, Daniel W., and WILLOUGHBY, John W. Measuring and Monitoring Plant Populations. 1998. Washington, DC, US Government Printing Office.

HOLLING, C.S. 1978. Adaptive environmental assessment and management. John Wiley and Sons, New York, NY.

RINGOLD, P.L., ALEGRIA, J., CZAPLEWSKI, R., MULDAUR, B.S., TOLLE, T. & BURNETTE, K. 1996. Adaptive monitoring design for ecosystem management. Ecological Applications 6, 745-747.

SPELLERBERG, I.F. 1991. Monitoring Ecological Change. Cambridge University Press, Cambridge, England.

WALTERS, C. 1986. Adaptive Management of Renewable Resources. Blackburn Press, Caldwell, N.J.

*** Tourism & Economic Development: Appalachia

Ruth Blackwell Rogers, of West Virginia, explained that Ruth explained how economic development in Appalachia has been difficult due to the decline of the logging and mining industries. She described three different ways in which local populations are addressing economic development and environmental protection in their mountain homes.

The "Shavers Fork Coalition" is a diverse group of concerned citizens, landowners, recreationalists, businesses and organizations who are working together to improve regional quality of life through watershed stewardship. Shavers Fork is an 84-mile-long tributary of the Cheat River which flows north and eventually into the Ohio at Pittsburgh PA.

In addition to this citizens' organization, the State contributed by buying a local rail line and leasing it to a creative entrepreneur who developed an excursion train called the Cheat Mountain Salamander – named for one of the area's endangered species. The railway provides low-impact access to a large, otherwise difficult to reach, section of the Monongahela National Forest.

Finally, the Coalition is working with the Appalachian Forest Heritage Area to create a cohesive network of forest heritage destinations. The destinations enhance economic viability in nearby rural communities, and provide visitors with opportunities to learn about historical and contemporary efforts to maintain healthy forest ecosystems.

*** Tourism & Economic Development: Mexico

Antonio Suarez <febobalam> cited a case study that addressed how tourism can address both economic and environmental concerns in Mexican protected areas.

Antonio described a project whereby residents of the park San Nicolas Totolapan initiated a tourism strategy that made their park the most visited natural area for mountain bikers and hikers. They also developed a fish farm industry, an environmental educational center and several other local initiatives. Antonio felt this was a good program because it involved the local community in park development. Local communities play a very different role in many Mexican parks because, as Antonio explained, 90% of total protected areas in Mexico have a community land tenure status. This means that the majority of protected areas in Mexico are inhabited by local or indigenous people. To Antonio however, it is not the park infrastructure that makes San Nicolas interesting it is the concept of a community park initiative that complements the region's economic and cultural realities.

Angeles Mendoza agreed with Antonio that community involvement in tourism projects can be positive. However she feels that if tourism is to be successful in protected areas then protected area legislation must be enforced and the role of private investment needs to be understood.

Angeles believes that the most striking difference between Canadian and Mexican parks is not the presence of indigenous residents, but the level to which park authorities are accountable for their decisions. She notes that in Canada there are more channels to promote public participation and more instruments to make government agencies accountable for their decisions. She believes that the ministries of the environment (SEMARNAT) and Tourism (SECTUR) should work more closely to ensure that development in natural and protected areas respects legislation and supports genuine "eco"-tourism that brings benefits to local mountain communities.

*** The Impacts of Growth

Several participants suggested that growth necessarily has negative impacts upon the environment. Participants disagreed as to how to deal with it.

Tony Prato believes that human-induced landscape change will impact the general sustainability of mountain communities – particularly those of the US Intermountain West – more than any other factor, including climate change and natural disturbance.

Although global climate change is expected to alter such crucial factors as amount and distribution of water, Tony notes that human-induced landscape will alter even more. Energy, water and nutrients to ecosystems all change as a result of human-induced landscape change, which also accelerates natural processes of ecosystem change and alters the structure and function of ecosystems.

Tony believes that landscapes must be managed to sustain economic development without impairing provision of ecological goods and services. In order to do this, he believes that we need to learn more about the ecological economic impacts of past and future landscape change in mountain communities.

Raymond Chipeniuk suggested that forum participants could learn more about the topic by reading "Lost Landscapes and Failed Economies: The Search for a Value of Place" by Michael Power. Washington, DC: Island Press, 1996. Julie Ann Woods recommended Downhill Slide, by Hal Clifford.

Michael Hogan enjoyed both of these books, but felt that they painted an image of resorts as businesses with a blind need to maximize profit at the expense of the environment. For an alternative side to the resort development story, he recommends Pete Seifert's "Vail-Triumph of a Dream".

He suggested that it is not just development that is causing problems but the whole population dynamic (growth rate, doubling rate, etc.) that is at the heart of the issue. In addition, Michael pointed out that everyone has desires that are not always equated with outcomes. For example, he suggested that most people would like a home, a car and a family but do not consider that with the right to have these things – or to have a ski resort or a coal mine - comes a responsibility to the environment and each other.

Michael suggests that progress will require use to see the "other" point of view, educate ourselves in both business and environmental realities, negotiate as honestly as possible, and be willing use a different model for finding an outcome. If not, he feels we will risk losing our mountain homes to death.

*** Common Conclusions

- All growth has impacts.
- Communities should be involved in planning processes that affect them.
- Special care should be taken to ensure that watersheds are protected during mountain development. Development at the top of a watershed may impact communities far downstream.
- Responsibility for employee housing needs to be shared between governments and business.
- Monitoring programs and adaptive management are preferable to relying solely upon regulation.
- Existing regulations are difficult to enforce and are therefore often not enforced.
- All stakeholders must take responsibility for their actions.