# Template FOR INPUT INTO THE

**AUSTRALIAN HERITAGE STRATEGY**

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| Overview  This template should be used to provide comments on the content of the Australian Heritage Strategy. | |
| Contact Details | |
| **Name of Organisation:** | The Mountain Cattlemen’s Association of Victoria (MCAV) |
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| **Date:** | **16 June, 2013** |
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| Questions  Please add your comments for some or all of the questions provided with the Strategy’s three high level themes below. If you have other information you wish to provide, please add this in the “Other comments” field. | |
| 1. **Improve National Leadership**   What are the most important things the Australian Government should be doing to offer leadership in heritage?  How can the Australian Government provide guidance and support for our national heritage—while still empowering other government, industry and community members to take responsibility and get involved?  What priority areas are important to you, your organisation or group?  What practical actions would you suggest to improve national heritage leadership? | |
| The Australian Government should instruct DoE to develop a broader vision of what can be considered for inclusion in listing Australia’s heritage under the EPBC Act. The current definitions, interpretations and explanations of heritage put too great an emphasis on physical things: relics, monuments, buildings, places. In its current form heritage protection tends to adhere to the principle: don’t worry about saving the whale; save the whale museum at Eden.  DoE should be instructed to include in the definition of heritage “living culture” i.e. *living people or groups of living people who have, over generations, forged a common identity around a particular way of life and who, as a result, possess unique cultural values and knowledge*.  Government should investigate embracing the sentiments of the 2006 **UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage**. It should look to adopting wording similar to Article 2 of the Convention (Definitions) for inclusion in the EPBC Act. UNESCO explains the Convention and the need for it thus:  Cultural heritage does not end at monuments and collections of objects. It also includes traditions or living expressions inherited from our ancestors and passed on to our descendants….  While fragile, intangible cultural heritage is an important factor in maintaining cultural diversity in the face of growing globalization. An understanding of the intangible cultural heritage of different communities helps with intercultural dialogue, and encourages mutual respect for other ways of life.  The importance of intangible cultural heritage is not the cultural manifestation itself but rather the wealth of knowledge and skills that is transmitted through it from one generation to the next. The social and economic value of this transmission of knowledge is relevant for minority groups and for mainstream social groups within a State….”  Government should instruct DoE to reassess the living cultural heritage, together with the natural heritage values implicit in alpine grazing. Alpine grazing is recognized under the EPBC Act as an example of “Transhumant Grazing”. Transhumance is an ancient practice, as old as the domestication of animals itself. This practice remains one of the traditional ways in which people all over the world interact with nature. It is protected and encouraged in Europe, Asia and Africa (and coming under consideration in the U.S.A.) for its contribution to culture, conservation and the economy.  There is a large amount of scientific and inter-disciplinary research on transhumant grazing and traditional ecological knowledge in Europe and elsewhere overseas. There is almost none in Australia. Reproduced below are extracts from three studies (reproduced more fully and accredited in Box 4, Other Comments, below).  **1. Policies and practices of pastoralism in Europe**:  ….Backed by scientific evidence, European Union (EU) policies officially endorse low intensity, transhumant livestock management in Europe as a source of diverse environmental, economic and cultural benefits. Far from seeking to eradicate mobile pastoralism, the European Union explicitly attempts to preserve it, through economic subsidies to livestock farmers, and programmes aimed at marginal grassland areas.  The European Commission considers that the extensive management of livestock on pasture land can assist in halting biodiversity decline, and the commission promotes this type of land use, which it terms High Nature Value (HNV) farming.  “The most widespread type of HNV farmland consists of semi-natural vegetation under low-intensity use for livestock raising. …Often the semi-natural grazing is not part of the farm holding, but has some other ownership (common land, State land etc)  Nearly one third of all farm land in the EU is classified as HNV, while in some countries more than half of farmland is HNV – including Spain, Italy, Greece and Slovenia. The largest areas of HNV land are in the most wealthy and highly-industrialized European countries of Spain, France, Germany, Italy and the UK. Clearly, economic advancement is not incompatible with preserving ancient land use systems of pasturing livestock exclusively.  **2. Transhumance and Biodiversity in European Mountains**:  …transhumance constitute[s] an important but declining element of the European cultural tradition…. played a significant role in the origin and maintenance of many European cultural landscapes, especially those in the mountains. …. they represent an exemplary method of sustainable land use.  Transhumance systems have significant cultural values,…. which are important for nature conservation in Europe.  There is a close and recognisable relationship between traditional farming practices, cultural landscapes and biodiversity. They involve management procedures based in the maintenance of ecosystem function and associated key ecological elements….  In general, [transhumance has] an important role in nature and landscape conservation. Herbivory is a key factor for plant evolution, control of vegetation growth and a stimulus for plant productivity. Herbivory is a complex function that depends on the interaction between several animal species and breeds.…  Herbivory and extensive livestock systems should play an increased role in nature management and conservation, and could then recover in some measure their original role in the traditional countryside and landscapes. Appropriate policies need therefore to be developed to maintain such systems. The indirect effects will help to control serious fires, improve pastures for grazing, and maintain habitat diversity. The associated species of fauna and flora, as well as cultural landscape conservation and the water balance will also be conserved if traditional agricultural systems are maintained…  …Tourism, green ways, education, leisure and nature conservation are all complementary uses, in addition to the production of high value foods.  3. **Traditional ecological knowledge among transhumant pastoralists in Mediterranean Spain**:  In Mediterranean Europe, pastoralism has played a key role in shaping landscapes of High Nature Value, especially in mountainous ecosystems and rural areas. Transhumance has been a major adaptive practice in Mediterranean pastoralist systems. The Mediterranean ecoregion is characterized by seasonality and highly unpredictable rainfall….  Transhumance requires deep knowledge of the location and availability of natural resources, including spatial and temporal patterns, ecosystem types, responses to disturbances such as diseases, and formal and informal institutions that regulate transhumance. In this sense, traditional ecological knowledge (TEK), i.e., the cumulative body of knowledge, practices, and beliefs regarding the relationships of living things to their environment that evolves by adaptive processes and is handed down through generations, becomes a crucial asset for mobile pastoralist livelihoods….  ….Our work assumes that TEK is an essential part of the social-ecological memory of transhumance because it contains ecological and cultural information that enables practitioners to adapt to change. Furthermore, TEK can provide valuable information that complements scientific studies and improves the understanding and stewardship of ecosystems….  Government should take steps to ensure that the EPBC Act cannot be used to impose a singular view of our national journey on to the Australian community. Australia aspires to be pluralist. Our enshrined cultural heritage should be a celebration of our diversity, not of our conformity.  Government (and government bureaucracies) should not pick winners from competing heritage values. In cases where heritage or cultural values clash, government should remain neutral. It should seek to reconcile, not resolve one way or the other. If reconciliation is unlikely it should seek a solution in the form of spatio-temporal separation: i.e. allowing each value to prevail at a separate time or in a separate space.    Social engineering has no place in the consideration of heritage. Put another way, the aim of the game should be to facilitate heritage values flowing upwards to government, not downwards from bureaucracy. Canberra is a long way away from where heritage actually matters.  The MCAV recently had first-hand experience of this. Officers from DoE sought to impose on Victora’s DEPI and the MCAV what can only be classed as an antagonistic and vexatious list of requirements relating to the Alpine Grazing Trial in the Wonnangatta Valley. A lot of the imposts displayed an appalling lack of knowledge of the area, its heritage and its cultural values. The tone of communications was inimical, the stance hegemonic. Such action, as it did here, often results in nothing other than harassment. It trashes any chance of building respect between heritage practitioners and the bureaucracy.    Too often heritage is expressed in terms of stopping people from doing things. Bans and exclusions prevail. If there is such a thing as the “heritage sector” (see 2. & 3. below) perhaps its culture is overly negative: too focused on what is not allowed, on what can’t be done with our heritage. Government must find ways to express the positives and benefits of heritage; ways that go beyond the sanctimonious mantra of saving everything for future generations to enjoy. Current generations have a right to enjoy their heritage too. Given the opportunity, people will probably become more inclined to value heritage and act in personal ways to protect it. Far better than imposing sanction from on high.    Natural heritage and its protection have been interpreted too narrowly by recent Australian governments. The EPBC Act has been applied in far too partisan a manner. The received wisdom among “progressives” in politics and the media is that the only views worthy of consideration are those of self-proclaimed conservation groups. Environment bureaucracies have been, until recently, captive to this view. The theory and practice of conserving our natural heritage should not be judged against compliance with doctrinal orthodoxy.  Identification and protection of our natural heritage is too important, too pressing a matter for any Government to allow it to be lost in the clatter of class war, history wars, science versus humanities wars, or any other expression of the traditional tension between the left and the right. A way forward must be found that complies with the principals of pluralism, reconciliation and compromise.    In consideration of our natural heritage, the MCAV submits that the Australian Government should take steps to ensure that the scientific advice it receives is neither partisan nor subjectively designed. It should also take into account, not just science, but other academic disciplines such as history, geography, anthropology and sociology. It should also take into account traditional ecological knowledge held by the mountain cattlemen and others of their ilk. Aboriginal land management practices, both historical and current in the north of Australia, should obviously attract more attention. If science alone were able to provide sufficient insight into the Alpine environment, its leading lights should not be in the position they now find themselves in: transfixed by the prospect of widespread mega-fire induced alpine desertification. The high country needs all hands to the pump, not dogs in the manger.  The MCAV is considering seeking listing under the provisions of the EPBC Act. It would not be seeking listing of its relics or of monuments to it. It would be seeking listing of its living heritage. In doing so it would not seek primacy over any other group. It would seek merely to be recognised as one living culture among others. It doesn’t wish to be the loudest voice in the debate over our natural heritage. It wishes merely to be heard. | |
| 1. **Pursue Innovative Partnerships**   What partnerships are most needed within the heritage sector?  What heritage roles and responsibilities should be led by governments, peak heritage organisations or community groups in the 21st century?  How should resources be shared through heritage partnerships to ensure the greatest return on agreed priorities?  Can you provide examples of successful innovative partnerships you or your organisation have established? | |
| The MCAV has now established a good working relationship with both DEPI and Parks Victoria. This turnaround has come after two decades of being treated with disdain by both agencies. The MCAV has been informed by both these agencies that they have now come to realise the cattlemen have useful knowledge and experience to contribute to the future management of the high country  The MCAV has strong relationships with local government in shires surrounding the Victorian Alps. That will continue to be the case. MCAV membership is well integrated into those communities and receives strong support from them.  The MCAV has formed an official alliance with the Mansfield Historical Society and the Merrijig Public Hall Committee by way of an incorporated body. This has been done with a view to preserving high country history, knowledge, story, culture and oral tradition in a digitised archive. (more, Box 3)  The MCAV has strong working relationships with other “bush user groups”. This will continue to be the case. It also has excellent working relationships with a number of eminent scientists in fields related to the high country environment. Predictably, it has no more that cursory contact with scientists who have been prominent in supporting the status quo in the high country. It doubts that will change, but would welcome more contact with those scientists, were it made available.  The MCAV has no effective relationship with universities nor any other higher education establishments. This is concerning and does require rectifying. There is potential for synergy in humanities (particularly history, geography and anthropology). The MCAV would also welcome some discussion relating to ecology and environmental science courses. The organisation sees benefit in gaining a deeper understanding of what science is taught in relation to the high country. Because ecology, at the theoretical and the practical level, is both affected by and affects cultural values, the MCAV sees benefit in investigating whether such courses would benefit from some small exposure, at a practical level, to non-scientific elements including what European academics call “traditional ecological knowledge.”  The MCAV traditionally had an excellent working relationship with Forest Commission. Since that agency’s eradication in the 1980’s, it has retained its relationship with foresters, retired and still working. It also has strong links with VicForests and local CFA branches..  The MCAV has a great many amateur researchers looking into history and, to a lesser extent, anthropology and forestry. It would welcome an informal relationship with professional researchers able to advise on access to libraries and other sources.  The strongest partnership the MCAV has, and its most valued, is with its supporters throughout Victoria and the rest of Australia. It must be obvious to friend and foe alike that the cattlemen have shown tremendous endurance against what many thought were overwhelming odds. The MCAV finds comfort and inspiration in the fact that its survival and its return to the high country matters so much to so many Australians. The cattlemen have no intention of letting those people down.  The MCAV cannot and does not speak for any other living culture but its own. It does recognise the importance and value to all Australians of Aboriginal culture.  The MCAV also recognises the seminal contribution made to the health and aesthetics of the Australian landscape through the agency of cultural fire. The MCAV accepts the tenor of Prof. Bill Gammage’s findings on Aboriginal burning practices outlined in his book “The Biggest Estate.” It concurs with Prof. Gammage’s conclusion that Aboriginal burning practices were instrumental in creating a “made” Australian landscape. It notes that Prof. Gammage is by no means alone among academics coming to the same conclusions.  MCAV members have witnessed first hand the value of cultural fire. After the Aboriginal people were displaced, the early mountain cattlemen saw the bush change from open and “park-like” to scrubby and closed in. They realised that it could not be left to its own resorts, for its sake or theirs. They reinvented the wheel of cultural fire. Theirs wasn’t as extensive or as targeted as before, it wasn’t as effective overall. But it did do a job of keeping the bush clearer and safer than it would have been. They continued their burning, complemented with alpine grazing (mimicking the natural herbivoreal grazing that had also been displaced) until the mid 1920’s when Forest Commission banned all control burning (under pressure from conservation groups in Melbourne, no less).  After the devastation of *Black Friday* 1939 control burning was reinstated. Cattlemen continued burning in their own right but came more and more under direction of Forest Commission in the late 1960’s and 70’s. This produced another outstanding partnership for the cattlemen. I worked both ways. Forest Commission were able to successfully manage the entire of the high country using a tiny fraction of the resources applied today, and to far greater effect. That was because Forest Commission didn’t try to reinvent the wheel. It made extensive use of bush knowledge. It used the bushmen themselves to advise where to burn; it allowed them to start burns on their own if they were in the right place at the right time. Forest Commission foresters were accepted as bushmen themselves. Sadly, such is not the case with today’s managers of the high country. | |
| 1. **Enable encourage communities to understand and care for their heritage**   What should the Australian heritage sector be doing to help the Australian community better engage in heritage activities?  How can a shared understanding of our national heritage be developed and best celebrated together?  Do you have any examples of activities that have been successful in promoting local heritage to a broader audience?  What is the role of technology and new media in providing greater community access to heritage? | |
| The MCAV submits that it has become critical that equal weight be given to both natural heritage and cultural heritage (tangible and intangible). This will require changes to departmental practice and necessitate changes to regulations and possibly amendment of the Act. The aim must be to prevent edicts from Canberra such as *“droving cattle down a spur on an original stock route which was created by early cattlemen and kept in droving use for well over a century, will impinge on the heritage values of the track”.* Common sense and consideration of equity should be some part of the equation.  The MCAV, the Merrijig Public Hall Committee and the Mansfield Historical Society have just been provided a State Government grant of $164,000. The project will digitise, archive, index and make available as much as possible of all written material, photos, sound and film recordings, etc of the high country families. It will also initiate video recording of interviews with living descendants of the early settlers and other people with important information or experience of the high country. The material will be sourced from communities such as Bright, Omeo, Bairnsdale, Heyfield, Woods Point and Mansfield. In scope and scale the project is ground breaking. It illustrates the commitment of the people of the high country to the preservation of their cultural heritage. It also indicates just how important this is to the Government and the people of Victoria generally.  The initiative that led to the grant came from the MCAV, which hold extensive records and whose members are very proud of their history, heritage and culture. So they should be.  The accepted history of Victoria’s origins regards the Henty family at Portland as the future state’s first permanent settlers, and sheep grazing as its first industry. The MCAV is in possession of material, not yet corroborated, that suggests a Monaro cattlemen, James McFarlane, may have beaten the Hentys to the punch. In the early 1830’s, looking for respite from the effects of a crippling drought in southern N.S.W., McFarlane pushed his cattle south west out of the Monaro through precipitous country, across the Snowy and Ingeegoodbee rivers on to extensive open flats in the area now known as McFarlane Flat through to Cowombat Flat. Here, in the shadow of Kosciusko, he settled the cattle and built a hut. The location of this hut is known and some scant remains are visible. It is believed that McFarlane arrived in the area somewhere between 1832 and early 1834. He can be authoritatively placed in Omeo in 1835.  The first permanent settler in Victoria *may* have been a mountain cattlemen. Cattle have definitely been in the Victorian high country continuously since at least 1835: i.e. for 180 years. Alpine grazing pre-dates Batman and Fawkner, the founding of Melbourne and the colony of Victoria itself.  From that day to this, the life and ways of the mountain cattlemen have remained largely unchanged. Uniquely among all other bushmen, mountain cattlemen work a defined territory, their own run. They become strongly attached to that country in a deeply felt, even spiritual way. They see themselves as responsible for the condition of the whole of the run, not just the grass and the cattle. They feel they are stewards of that part of the bush and have a grave responsibility to care for it and share it with all others. They believe themselves to be practical conservationists and take trouble to acquaint themselves with the animals, trees and plants of the area. Some have taken it further, to the point of becoming renowned naturalists. They understand implicitly the rhythm of the seasons and the cycles of life. In short, the depth and breadth of their knowledge and experience on their own runs is exceptional, even nonpareil.  Being a mountain cattlemen is not a job. It is not a lifestyle. It is a life. It is a family-based undertaking, with the young ones being blooded early in the bush and growing into their role. They learn from each other, from their peers, from fathers and mothers, uncles and aunts, grandfathers and grandmothers. They are granted freedom to operate on their own at the earliest opportunity, to profit from their successes and rue their mistakes. Their bush knowledge is accumulated over a lifetime of fun and excitement, intermingled with hard-wrought experience until it is ready to be passed on, part of a never-ending cycle. Over generations the culture has developed its own stories and legends, its own heroes and villains All cattlemen share a common set of values, possess shared attributes that are unique to them. They have some unique lingual expressions.  The mountain cattlemen always worked in closely with other communities in the bush: miners, loggers, road and track builders, public authority workers (S.E.C., C.R.B., etc). Working together, this informal alliance initiated, surveyed, constructed and maintained the majority of high country civil infrastructure still in use today. They facilitated the development of the ski fields: cattlemen guided the first skiers into the mountains, packed in materials for huts and tows, rescued and evacuated injured skiers and laid the basis for mutual respect that continues to this day. They shared their knowledge and provided hospitality to all comers in the bush: bushwalkers, cross-country skiers, fishermen and hunters. They were the cornerstone of mountain search and rescue operations.  Until the 1970s mountain cattlemen went about their business largely un-noticed by the general public. Alpine grazing was an established, traditional activity in the Victorian high country. It was legal, licensed, regulated by Government and paid for at a rate per-head of cattle set by Government. It was neither controversial, nor politicised.  There was never any genuine debate to be had with the environmentalist movement. As they did with miners and loggers, they simply demonised the mountain cattlemen. They still do, in the same value-loaded language. It says a lot for the common sense and fairness of the Australian people that the cattlemen still have, after 30 years of vitriol, widespread support in the community.  The heritage of the mountain cattlemen and the iconic imagery of mountain horsemen and women have been regularly used to promote Australia tourism and cultural immersion, domestically and internationally. The uniform of the present Australian contingent for the Commonwealth Games in Scotland, is a current example. The fact that the ersatz recreation of Craig’s Hut, ironically funded by a state Labor government, is still the top drawing tourist destination in the Victorian High Country, is another. Banjo Paterson’s “The Man From Snowy River”, a ballad about mountain stockmen who, “on the mountains make their home,” was lauded on Parks Victoria’s website, while the real deal was booted out and excoriated.  Irony abounds: the most important manuscript on Australian high country environmental theory and practice in the past decade came not from scientists and ecologists, but from a history professor at A.N.U. It is ironic that the management practices of “a stone-age people,” later emulated by “hicks and dinosaurs” may have been more profound and more effective than the well-resourced efforts of those “on the right side of history”. | |
| **Other comments** | |
| The term mountain cattlemen refers to groups of people and families. It always means men and women.  **Reports cited in Box 1, above:**  1. **Policies and practices of pastoralism in Europe**:  In many parts of the world, government policies undervalue or actively discourage pastoralism, especially mobile pastoralism. Europe is an exception to this trend. Backed by scientific evidence, European Union (EU) policies officially endorse low intensity, transhumant livestock management in Europe as a source of diverse environmental, economic and cultural benefits. Far from seeking to eradicate mobile pastoralism, the European Union explicitly attempts to preserve it, through economic subsidies to livestock farmers, and programmes aimed at marginal grassland areas.  Is there something special about European pastoralism, or have European policy makers simply recognized advantages associated with pastoralism that officials in many other parts of the world have missed?  The answer to this question could, paradoxically, be more important for non-European than European pastoralist. While there may be only a few hundred thousand practicing pastoralist remaining in Europe, elsewhere millions of pastoralist are subjected to national policies which are often inimical to extensive livestock production methods and cultural continuity. As an example of policy alternative that many other governments have declined to adopt, the unfolding trajectory of European supra-state and national policies towards pastoralism is relevant outside Europe.  The European Commission considers that the extensive management of livestock on pasture land can assist in halting biodiversity decline, and the commission promotes this type of land use, which it terms High Nature Value (HNV) farming.  “A characteristic of HNV farming in many regions is a reliance in common grazing lands. Although barley on the radar of many agricultural policy makers, common grazing lands covers many millions of hectares of European farmland”. <http://www.efncp.org/high-nature-value-farmland/>  “The most widespread type of HNV farmland consists of semi-natural vegetation under low-intensity use for livestock raising. The grazed semi-natural vegetation may be grassland, scrubs or woodland, or a combination of different types…Often the semi-natural grazing is not part of the farm holding, but has some other ownership (common land, State land etc.).” <http://www.efncp.org/high-nature-value-farmland/hnv-farming/types/>  Nearly one third of all farm land in the EU is classified as HNV (Table 1), while in some countries more than half of farmland is HNV – including Spain, Italy, Greece and Slovenia. The largest areas of HNV land are in the most wealthy and highly-industrialized European countries of Spain, France, Germany, Italy and the UK. Clearly, economic advancement is not incompatible with preserving ancient land use systems of pasturing livestock exclusively.  The pastoral production system in Europe typically depends on transhumant – seasonally moving livestock from one type of pasture to another, and grazing on state-owned land and conservation areas. These pastoralist systems are documented for example in Bulgaria, Germany, Ireland, Wales, Scotland and Sweden, in cases summarized in the European Forum for Nature Conservation and Pastoralism. <http://www.efncp.org/>  © authors Carol Kerven and Roy Behnke Pastoralism: Research, Policy and Practice (Springer 2011, 1:28): *Policies and practices of pastoralism in Europe*  **2. Transhumance and Biodiversity in European Mountains**:  Extensive animal systems based on livestock displacement are called transhumance and constitute and important but declining element of the European cultural tradition. They have played a significant role in the origin and maintenance of many European cultural landscapes, especially those in the mountains. Because their ecological rationale is based on distant but complementary pastures or forage resources and they developed over centuries, they represent an exemplary method of sustainable land use.  Transhumance systems have significant cultural values,…. which are important for nature conservation in Europe.  There is a close and recognisable relationship between traditional farming practices, cultural landscapes and biodiversity. The fascinating historical cultural elements associated with transhumance, have been developed over many centuries-and therefore have their distinctive patterns and structure. They involve management procedures based in the maintenance of ecosystem function and associated key ecological elements….  In general, these extensive livestock systems have an important role in nature and landscape conservation. Herbivory is a key factor for plant evolution, control of vegetation growth and a stimulus for plant productivity. Herbivory is a complex function that depends on the interaction between several animal species and breeds.…  Herbivory and extensive livestock systems should play an increased role in nature management and conservation, and could then recover in some measure their original role in the traditional countryside and landscapes. Appropriate policies need therefore to be developed to maintain such systems. The indirect effects will help to control serious fires, improve pastures for grazing, and maintain habitat diversity. The associated species of fauna and flora, as well as cultural landscape conservation and the water balance will also be conserved if traditional agricultural systems are maintained…  …Tourism, green ways, education, leisure and nature conservation are all complementary uses, in addition to the production of high value foods. These new uses could help support people in the countryside, whilst maintaining landscapes and agriculture. Transhumance and associated extensive livestock systems, should have therefore be given policy support at a European level, in coordination with local authorities.”  © R.G.H. Bunce, M. Pérez-Soba, R.H.G. Jongman, A. Gómez Sal, F. Herzog and I. Austad (Eds.) *Transhumance and Biodiversity*.The full document can be found at the following link: [Transhumance **and Biodiversity in** European **Mountains**](http://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&source=web&cd=9&ved=0CFMQFjAI&url=http%3A%2F%2Fwww.researchgate.net%2Fprofile%2FRob_HG_Jongman%2Fpublication%2F40125001_Transhumance_and_biodiversity_in_European_mountains%2Ffile%2F32bfe50e6decc3a789.pdf&ei=JnKSU5n4L5CGkgWzw4HIBg&usg=AFQjCNF3SH4lfgo8Ay9CsgQsRA5fjqDoQQ&bvm=bv.68445247,d.dGI)  3. **Traditional ecological knowledge among transhumant pastoralists in Mediterranean Spain**:  Transhumance is a mobility strategy consisting of regular seasonal migration of livestock between summer and winter pastures, which allows adaptation to climate variability and matches grazing pressure with seasonal peaks in pasture availability (Ruiz and Ruiz 1986, Manzano-Baena and Casas 2010). Despite the acknowledged adaptive advantages of mobility, the practice of transhumance and other mobility-based pastoralist strategies is declining worldwide (Dong et al. 2011). This decline is due to a variety of factors, including progressive integration into the global market economy, sedentarization policies, and institutional constraints that disfavor nomadic lifestyles (Davies and Hatfield 2007, Galvin 2009). These pressures, combined with drivers of global environmental change, such as climate and land use changes, challenge practitioners to sustain and protect mobile pastoralism worldwide in recognition of its social, cultural, economic, and ecological assets (Nori and Davies 2007).  In Mediterranean Europe, pastoralism has played a key role in shaping landscapes of High Nature Value, especially in mountainous ecosystems and rural areas (Hatfield and Davies 2006). Transhumance has been a major adaptive practice in Mediterranean pastoralist systems. The Mediterranean ecoregion is characterized by seasonality and highly unpredictable rainfall, which results in high climatic variability (Blondel 2006). Pasture productivity follows seasonal patterns and varies among years (Gómez Sal 2000). Transhumance persists in some countries like Spain, although with a different structure and at a smaller scale than in the past (Bunce et al. 2006, Manzano and Malo 2006, Fernández-Giménez and Fillat Estaque 2012).  Transhumance requires deep knowledge of the location and availability of natural resources, including spatial and temporal patterns, ecosystem types, responses to disturbances such as diseases, and formal and informal institutions that regulate transhumance. In this sense, traditional ecological knowledge (TEK), i.e., the cumulative body of knowledge, practices, and beliefs regarding the relationships of living things to their environment that evolves by adaptive processes and is handed down through generations (Berkes et al. 2000), becomes a crucial asset for mobile pastoralist livelihoods. In this study, we approach transhumance as a livestock management system and define transhumance-related TEK as the body of knowledge, practices, and beliefs associated with this pastoral practice. Our work assumes that TEK is an essential part of the social-ecological memory of transhumance because it contains ecological and cultural information that enables practitioners to adapt to change (Berkes et al. 2003, Fernández-Giménez and Fillat Estaque 2012). Furthermore, TEK can provide valuable information that complements scientific studies and improves the understanding and stewardship of ecosystems (Huntington 2000, Knapp and Fernández-Giménez 2009, Fernández-Giménez and Fillat Estaque 2012)….  Copyright © Oteros-Rozas, E., R. Ontillera-Sánchez, P. Sanosa, E. Gómez-Baggethun, V. Reyes-García, and J. A. González. 2013. *Traditional ecological knowledge among transhumant pastoralists in Mediterranean Spain*. Ecology and Society 18(3): 33. <http://dx.doi.org/10.5751/ES-05597-180333> | |