

# Human Dimensions

## *Working with people toward effective conservation*

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*Dr Alistair Bath is a world leading expert in human dimensions in the field of wildlife management.*

*He kindly agreed to speak at our recent seminar on the subject and has also contributed to an exciting new series of books called 'A New Era for Wolves and People; Wolf Recovery, Human Attitudes, and Policy' which will be available at the UKWCT World Animal Day on 4th October 2009.*

**W**hile there are people in the world who are interested in the environment, in finding sustainable lifestyles, and who are willing to conserve wildlife whether wolves, brown bears, elephants or rare lichens, these people, for the most part, remain in the minority in a global society that remains focused on sustaining growth. At a time when economics is dominating the world scene, it would seem particularly important and an incredible opportunity for the global society to recognise the connection between the environment and the economy, and no longer consider the two as separate identities. How can the human species expect to continue to grow, measure success in continued increases in gross domestic product, and not expect to lose habitat that is essential for other species? The reality is conservation of species and habitat occurs only when people choose to

actively do it. Hence, no matter the plethora of funded biophysically based research that can be done to understand the species, the home ranges, diet or habitat requirements, a species survives when, and only when, humans decide to value it, have positive attitudes toward it, and actively engage in doing something to conserve it. Therefore, the research priorities today and for the future for effective conservation must be in understanding people, or the human dimension component of conservation. Without public tolerance, acceptance and even better support, we will never succeed in the conservation challenges that lie ahead.

Individuals supportive of wolf conservation, like members of the UK Wolf Conservation

Trust and members of other similar organisations worldwide, have already placed a value on wolves, wildlife habitat, on minimizing conflict between wolves and people, and hopefully work towards building better coexistence between the predator of our childhood nightmares (e.g. wolves dressing in disguises as grandmothers, chasing pigs, and attempting to break and enter by coming down chimneys) and people. Traditionally, these latter efforts have focused on the easy interest group of children in the hopes and assumption that their young minds can be moulded, and that these future generations will be supportive of the "new conservation". Unfortunately though, we continue to lose species today, (perhaps not as many wolves as in the past), because we fail to effectively engage those currently responsible for successful or unsuccessful conservation efforts. Adults who are hunters, foresters, environmentalists, shepherds, rural and urban general public residents are the key interest groups that require our focus today to ensure successful conservation. They are more challenging to work with than children, but these adults have the power in the household to make environmental differences and set examples today for their children to follow.

Studying and understanding people who strongly support or strongly oppose wolves is in many ways more complex than studying the biophysical characteristics of wolves. Conducting research to understand and eventually influence these public attitudes and subsequent behaviour is more challenging but possible. And similar to how there are many biophysical studies that can be done on wolves, studying people can provoke many research questions and applied conservation projects. While we would want some more details if a scientist said they were going to do some "biology", when we hear the word "human dimension" we should begin to think the same. There is much work to be done within this relatively new field of human dimensions in natural resource management.

### The wildlife management - human dimension relationship

Wildlife management has been defined:

*"as the science and art of changing the characteristics and interactions of habitat, wild animal populations, and people in order to achieve specific human goals by means of managing wildlife resources. In one form or another, everything done in wildlife management is done for the people" (Anderson et al. 1987).*

Biophysical scientists have focused upon understanding the species and considerable discussion has often occurred about endangered species. Emphasis in wildlife management then shifted away from studies of the species to the need to understand the spaces where these species survived. Biophysical scientists began discussing endangered spaces (Hummel 1989). Biophysical scientists have not, however, adequately addressed the people component

of the equation and with some species, particularly large carnivores, this human dimension is probably more important than the biophysical component. Social scientists (e.g., human geographers and rural sociologists) began to apply techniques to understand the people part of the wildlife management equation. This application of studying people and their interactions with wildlife was later termed human dimensions in wildlife management.

Today, successful wildlife management involves not only an understanding of the biology of the species and its habitat, but also an understanding of public attitudes toward and knowledge about the species and attitudes toward possible management approaches to the species. The human dimension of wildlife resource management is particularly important to understand when designing and implementing management plans for large carnivores, which often arouse conflicting emotions among the general public. Indeed, large carnivore management is often more a socio-political issue than a biological one (Bath 1998). Wolf populations and their conservation in France for example appear to be highly dependent upon human factors more than biological factors. Bear conservation in Spain may depend more on changing people's behaviour of setting snares for wild boar (which leads to bears being caught and killed) than to understanding biology of the bears themselves (Bath 2000). These human aspects of the wildlife resource management equation need to be understood through a scientific and objective process for successful large carnivore conservation to occur in Europe.

While wildlife management by definition has for many years realised that there is indeed a human dimension to successfully implementing species action and management plans, integrating human dimensions into daily decision-making remains a challenge for many wildlife agencies. In North America, Aldo Leopold, considered the founder of wildlife management in North America, stated in 1943



that deer management was more about managing the people than managing the deer. Since those early statements, the human dimension in wildlife management has become increasingly integrated into wildlife management planning and decision-making in North America and with some very positive results. Wolf restoration efforts in Yellowstone National Park included a human dimensions component, which was important

in understanding the amount of support that existed for wolf restoration, and the reasons why people were in favour or against wolf restoration (Bath 1991, Bath 1989, Bath and Buchanan 1989). This latter data were useful in designing effective educational efforts and working toward conflict resolution. Wolves were eventually restored to Yellowstone National Park in 1995 with many interest groups supporting the restoration effort; only sixty years earlier poison campaigns occurred within the same national park. Human dimension results allowed managers to successfully address the issues and concerns of many of these groups, and by working with groups, rather than against them, wolf conservation occurred.

Involving the public in the early development of a management plan was also the key to a successful wolf management plan for the Yukon, Canada. Various interest groups were given the authority by the Department of Renewable Resources to design a wolf management plan; the plan included measures for wolf control and wolf protection, and although controversial, the plan was accepted. In this case a public involvement approach that allowed interest groups to effectively make decisions and place values on scientific data provided by the government, did work in the design and implementation of a wolf management plan. In contrast, wolf management plans including wolf control and wolf protection areas in northern British Columbia and Alaska were not successfully implemented; the basic reason being that the various publics were not meaningfully involved in the resource management decision-making process.

Recently in Croatia a wolf management plan, Eurasian lynx management plan and a bear management plan were achieved by implementing a human dimension workshop approach where various interest groups chose to work together to understand each other's core values and concerns. Groups reached an acceptable compromise and produced management plans that all groups could support because each plan addressed the fundamental concerns of each group. Such "win-win" scenarios are only possible with an implementation of a human dimensions research and applied approach.

Past human dimensions research has determined that the following beliefs seem to be the most important in affecting attitudes toward wolves:

- Beliefs about the population numbers (how many wolves actually exist?)
  - ▶ Those individuals who believe there are fewer numbers tend to hold more positive attitudes toward the species.
- Beliefs about the population status (are the numbers increasing, decreasing, or remaining stable)
  - ▶ Those individuals who believe the population is decreasing tend to hold stronger positive attitudes toward wolves than those who believe the population is increasing or stable.
- Beliefs about the number of attacks by wolves on people
  - ▶ Those individuals who believe there have been attacks and high numbers of attacks hold more negative attitudes.
- Beliefs about the number of human deaths caused by wolves
  - ▶ Those individuals who believe wolves have killed people tend to hold strong negative attitudes toward the animal.

Understanding belief systems and the relationship between beliefs, attitudes and behaviour can be one of the most important uses of human dimension conservation projects. In France, a beliefs and attitudes human dimensions study was used to provide the terms of reference for a communication officer (Bath 2000). In addition to an understanding of key beliefs affecting attitudes, the human dimension conservation project in France identified which value persuasive messages (e.g. wolves for future generations) were important in affecting overall attitudes toward wolf management options. And while some is known of public beliefs about wolves (Kellert 1985, Tucker and Pletscher 1989, Bath 1989, Bath 1991), much less is known of public beliefs about other large carnivores (Jope and Shelby 1984, Braithwaite and McCool 1989). In those cases where attitudes are directly being affected by beliefs, targeting such beliefs can be effective; however, attitudes toward the issue could be influenced by other factors. Therefore, we need an understanding of the nature of conflict.

Unfortunately, few organisations understand the key beliefs affecting attitudes before designing educational efforts (e.g., posters, brochures, videos, etc.); consequently the effectiveness of such efforts is unknown. More recently human dimensions studies have been implemented in many parts of Europe that now help guide the development of new material in those cases where beliefs

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underlie the expressed attitudes. In many cases knowledge of the underlying factors affecting attitudes has yet to be done. An assessment of large carnivore educational materials (Bath and Tavares 2000) found that available material varies considerably across species and across countries in terms of quality and quantity. Without knowing what information currently exists within the various publics, what beliefs are most directly linked to attitude, the nature of the conflict, and how different beliefs affect different target audiences, such educational materials may not be effectively working. A stronger statement may be to say that such efforts are similar to "shooting in the dark".

## Understanding the nature of conflict

Human dimension conservation projects can work towards achieving public acceptance of large carnivores by providing a better understanding of the nature of conflict between all interest groups. Identifying where conflict exists is the first step towards conflict resolution.

There are basically four types of conflict:

- Cognitive
  - ▶ Cognitive conflict results when there is a difference in beliefs between various interest groups. These beliefs may or may not be true.
- Value
  - ▶ A value conflict occurs when there is a difference in the importance of an issue between various groups. This could result because of a hierarchy of values within a value system.
- Costs/Benefits
  - ▶ A costs/benefits conflict occurs when there is a difference perceived between groups of who bears the costs of implementing an issue versus who reaps the benefits of such an issue. A group may feel unfairly that it must suffer all the costs while another group gets the benefits.
- Behavioural
  - ▶ A behavioural conflict can be a personal conflict between individuals of different agencies over issues not directly related to the issue at hand. A behavioural conflict could also exist due to a mistrust of a particular agency by another interest group based upon past history with the agency or organisation.

The most common conflict in natural resource management issues is in fact behavioural conflicts, and yet traditionally we treat most

conflicts as cognitive issues and design expensive educational efforts only later wondering why they may not have been effective. In addition, wildlife resource management issues would be relatively simple if in each conflict there were only one of these types of conflict happening at one time. The reality many times is that several types of conflict could be happening at once. Human dimensions research can help identify the nature of the conflict and begin "peeling back the layers of the conflict", thus enabling a better understanding of the people component and the necessary direction toward a possible solution. It is important to recognise that traditionally we have assumed that all conflicts can be solved through more public awareness and educational materials. Depending upon the nature of the conflict, educational materials could be absolutely useless; in fact unless a cognitive conflict exists, educational materials is not the way to resolve the conflict. To resolve most of the conflicts requires listening more than talking. We are born with two ears and one mouth and perhaps we should be listening at least twice as much as talking when engaging various interest groups. In addition, the first contact with groups should be a listening exercise of key issues and concerns, not a presentation of what "you" believe so to educate the others. The second session should be a presentation of what "you" heard, and perhaps a beginning of connecting the interest group or community issues with those of "your" own. Only through communicating with interest groups (listening and then talking) can trust be built between groups and effective conservation occur. Human dimensions research can be used to build that trust and to understand and to address the nature of the conflict between all groups.

In the form of a summary, human dimensions research:

*"focuses on the public's knowledge levels, expectations, attitudes and activities concerning fish and wildlife resources and associated habitats. There is a close tie between human dimensions and conservation education research" (Adams 1988).*

Human dimensions research can address various objectives:

- Baseline assessment to begin attitudinal and belief monitoring - has an educational effort, management policy, made a difference?
- Educational role - targeting specific weaknesses in knowledge to affect attitudes. Working toward designing more effective educational materials.
- Building partnerships - bringing groups together around a common data set.

Working toward understanding the issues of a variety of interest groups, building trust, and initiating the first steps toward working together.

- Identification of areas of support and disagreement over management options, thus assessing the feasibility of approaches being successfully implemented.
- Identification of types of conflict (cognitive, values, costs/benefits, and behavioural conflicts) - the first step toward conflict resolution.

Human dimensions research can address many questions and can provide managers with useful information for decision-making. It is important for managers to clearly define how they wish to utilise the results; this will affect all aspects of the study, from the formulation of the problem, design and collection of the data, analysis and presentation. Similar to how one biophysical study can't answer all the biophysical questions surrounding an issue, one human dimension study can't address all the social science questions that pertain to the issue. We must all, though, realise that the core to successful conservation lies with working with different interest groups who have different values, different interests and different economic implications of conserving wolves and other species, rather than working against these key interest groups. As individuals interested in wolf conservation, I encourage you to continue to be willing to listen to diverse opinions and work toward solutions.

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