MEAT, MARKETS, PLEASURE AND REVENGE: MULTIPLE MOTIVATIONS FOR HUNTING IN BAMU NATIONAL PARK, FARS PROVINCE, IRAN

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ABSTRACT

In this study an informal, qualitative methodology is used to explore motivations for hunting in Bamu National Park, Fars Province, Iran. The park has probably the highest level of hunting-related conflict of any protected area in Iran. Two senior park staff members and fourteen hunters were interviewed individually and a further six hunters were interviewed in a group. Reported motivations for hunting included poverty, market-related profit, pleasure (the love of the hunt and its traditional value) and revenge, in that resentment of the protected area was cited in itself as a reason to hunt. It is concluded that strict enforcement is unlikely to decrease hunting on its own and may actually increase hunting as resentment against the park grows. Managed sustainable hunting is not permitted under Iranian law but the presence of a traditional moral concept (shogoun) that commercial hunting is wrong may offer a basis for a more collaborative approach, and there is evidence that an emphasis on positive engagement between park staff and local people could improve the situation quite quickly.

INTRODUCTION

Unsustainable hunting of wild species is prevalent in developing countries (Hayward, 2009), and is recognized to be a major challenge for wildlife conservation. It is often assumed to be driven either by poverty and subsistence needs (e.g., Bennett et al., 2006; Campbell & Nelson, 2001; de Merode et al., 2004; Grey-Ross et al., 2010; Kumpel et al., 2010) or by commercial profit and market demand for bushmeat and other valuable wildlife products (Duffy, 2010). Conservation strategies to counter unsustainable hunting frequently focus exclusively on these economic drivers and involve a mixture of financial incentives, such as the development of alternative livelihoods, and especially in protected areas, legal bans or restrictions on hunting. However, these measures have had limited success: in many protected areas throughout the world, illegal hunting remains widespread (Loibooki et al., 2002; Kumpel et al., 2010). In many cases this is at least partly due to weaknesses in implementation: livelihoods projects frequently fail to deliver results and enforcement regimes are often under-resourced or undermined by corruption. However, failures may also be due to insufficient information and incorrect assumptions about the drivers of hunting at particular sites. For example, Duffy (2010) argues that one common failing is the focus on supply – local hunters – rather than factors that maintain market demand. More fundamentally, drivers may include non-economic factors as well as economic factors. These include cultural values and prestige connected to hunting (e.g., Kaltenborn et al., 2005), and more simply, the 'love of the hunt', which has been documented across many cultures (for example see Kaltenborn et al. 2005; Dickson et al., 2009; Robinson & Bennett 2000 cited in Grey-Ross et al., 2010). Clearly, conservation strategies that are based on incorrect assumptions about why people hunt are unlikely to be successful.

In order to develop appropriate strategies to address illegal hunting at a specific site it is important to understand the full range of factors that drive hunting activities (Loibooki et al, 2002; Rao et al, 2005). However research on hunting is notoriously difficult, especially where hunting is illegal, because hunters are unlikely to respond openly to questions about their activities. The greater the level of conflict over hunting, the more problematic research is likely to be. St John et al. (2010) have recently developed a questionnaire-based methodology that minimises response biases related to poaching or other illegal behaviours in conservation, but it is still dependent on being able to persuade a representative sample of poachers to take part. In situations where conflict over poaching is very high this may not be the case and less formal, qualitative methods may be more successful.

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Figure 1. Bamu National Park, the Isfahan-Shiraz highway and the villages of this study

In this study we explore the factors that motivate local hunters in Bamu National Park, Fars Province, Iran and discuss the implications for management. There are very few (if any) published studies on hunting in Iran and therefore there is little information on what is driving it or how it could be reduced. Hunting is illegal in national parks in Iran (Iran Wildlife Reference, 2011: 13B) and is combated principally through strict enforcement of the law. Hunting in Bamu is of particular concern because the protected area is an important refuge for the endangered Persian leopard (*Panthera pardus saxicolor)*, which is the only remaining large felid in Iran and is a flagship species (Ghoddousi et al, 2010). Many of the species that are hunted are important prey species for the leopard, including wild sheep *Ovis spp.,* wild or bezoar goat *Capra aegagrus*, the goitered gazelle *Gazella subgutturosa,* wild boar *Sus scrofa* , Indian porcupine *Hystrix indica* and Cape hare *Lepus capensis* (Nowzari et al., 2007 cited in Ghoddousi et al., 2010). According to the testimony of several park authorities, the park has probably the highest level of hunting-related conflict of any protected area in Iran, resulting in the deaths of both hunters and protected area staff (over 16 people from both sides have been killed during the past 30 years.). Therefore research into the drivers of hunting in Bamu is both urgently needed and particularly challenging. This study used an informal, qualitative methodology for gathering information on hunting motivations that was more practicable under these tense conditions than a rigorous quantitative survey. It reveals that there are multiple motivations for hunting including both economic and non-economic factors, some of which are not addressed by current management strategies. Most importantly, it also reveals that the conflict between the protected area and local people is now perceived by some hunters to be a strong motivation in itself to hunt, as a way to express opposition to the park.

BAMU NATIONAL PARK

Bamu is a 486 km² national park located northeast of Shiraz city in Fars Province, Iran. It became a protected area in 1967 and a national park in 1970 (Darvishsefat, 2006). With elevations of 1,600 to 2,700 m, it has a continental and semi-arid climate and is restricted topographically by the northern slope of the Zagros Mountains (Darvishsefat, 2006). Mean annual precipitation is 400 mm and mean temperature is 16 °C. Flora and fauna include 350 vascular plant species, of which 51 are endemic, and 143 species of vertebrates (Darvishsefat, 2006), including the Persian leopard.

The national park is divided into two sections by the Isfahan-Shiraz highway (Figure 1). Populations of large mammals in the western section have been severely diminished by hunting (Ghoddousi et al., 2010) but the eastern section still contains leopard and several of the prey species listed above (Nowzari et al., 2007 cited in Ghoddousi et al., 2010).

There are nine villages adjacent to Bamu National Park (Figure 1) including people of two ethnic groups: Turks and people of Farsi origin. The dominant religion is Islam. Both park staff and local people report that illegal hunting by local people is widespread, and anti-poaching activities have been an important focus for leopard conservation projects (Ghoddousi et al., 2008 & 2010).

Panorama Bamu National Park © Mani Kazerouni

METHODS

The research was conducted in the five villages that are closest to the protected area, which were also reported by park staff and local people to be those with the highest levels of hunting: Tarbor Jafari, Badjgah, Sa'dieh, Zarghan, and Tarbor Labisheh. Data were collected by the lead author over a six-week period (26th May to 10th July 2011) during three trips to the area. The principal method was semi-structured interviews, which were carried out individually with two senior park staff and with local hunters in the five study villages. Hunters were contacted through a process of chain referral (Newing, 2011: 65-82). At the start of the fieldwork two hunters were contacted through their connection to a conservation NGO working in the area, and subsequently each hunter interviewed was asked either to suggest other hunters who might be willing to participate or else to let other hunters know of the study so that those who felt comfortable to do so could approach the researcher anonymously. In this way a total of 14 hunters were interviewed. One focus group was also carried out with six additional hunters after one interviewee who had been hosting the researcher in his house asked six other hunters to come to the house to be interviewed without giving their names. Informal interviews were carried out with hunters' wives and families as the opportunity arose. Both the interviews and the focus group with hunters focused on their own reasons for hunting and also on broader perspectives on drivers of hunting and differences between the villages. Park staff were also asked about possible reasons for hunting in the area and the differences between the villages.

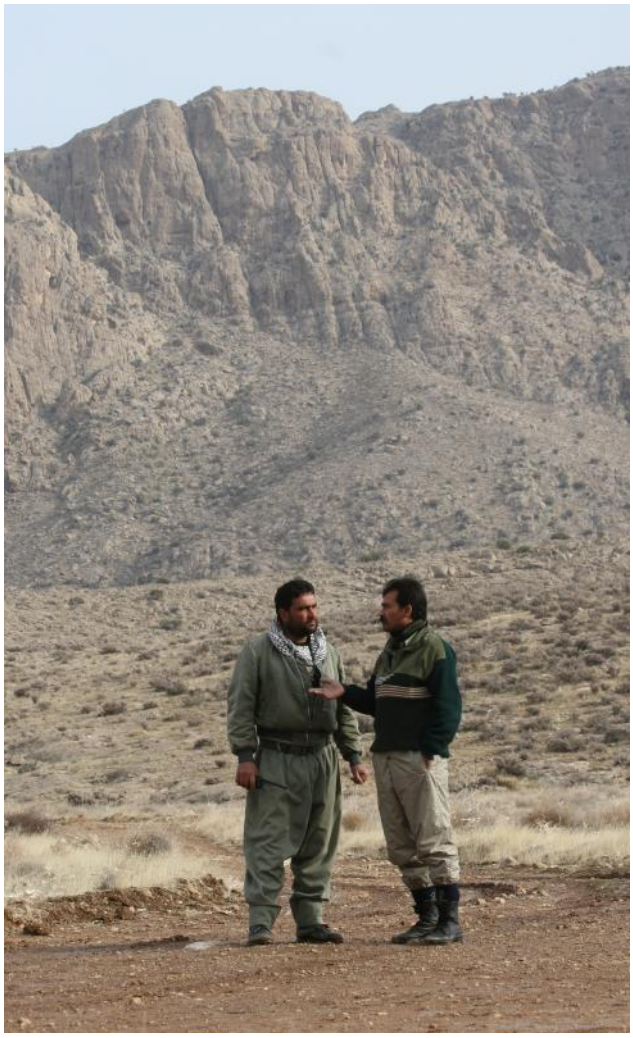
Whilst the number of hunters who came forward to be interviewed was small, at the start of fieldwork those who did so were eager to talk about the issue. Some of them even invited the researcher to their homes and families and talked for hours; it was evident that feelings ran high. The fact that the field researcher was a compatriot who spoke the same language as the hunters and was a female appears to have allayed suspicions and facilitated the process of data collection. However towards the end of the fieldwork, hostilities between hunters and the park staff became acute after a conflict between the rangers and one hunter in which the hunter was shot dead. Not surprisingly, this incident had an impact on the willingness of the hunters to be interviewed about their illegal activity.

Interviews were not recorded; information was documented by note-taking alone. Personal information was recorded including age, marital status, size of household and occupation, but names were not recorded. All data were analyzed qualitatively using annotations, memos and coding in order to identify key topics and collate information on each topic (Newing 2011: 242-256). Coding was initiated in the field so that it could be used iteratively to inform data collection as the study progressed.

MULTIPLE MOTIVATIONS FOR HUNTING

Motivations for hunting included both economic factors related to subsistence or to commercial profit and also additional social and cultural factors. These included the value of hunting as a tradition; the love of hunting in its own right, and also the historical enmity between the park authorities and local people. This section outlines the evidence for each of these factors in more detail and the following section explores the implications for management.

In terms of economic factors, for some hunters hunting was driven by extreme poverty. Meat from hunting would either be eaten or else sold to provide money for food and other basic provisions, and a single hunting trip could provide for the household in this way for several months.



Game-Wardens Bamu National Park © Taher Ghadirian

Both the hunters and the park staff who were interviewed said that poverty-driven hunting was particularly prominent in one village (village A), where there were very limited options for employment or alternative sources of income.

Hunting was perceived in this village as a fall-back option (Kümpel et al., 2010): for example a 61-year-old hunter from village A said that: "*All my four sons aged 23, 24, 25 and 30 have finished their high school, they do not have money and are unemployed…if 2 to 3 years from now the situation does not change, it is obvious they'll become hunters as well.*"

Hunting on a commercial scale could be extremely lucrative; the minimum monthly wage of an unskilled worker in Iran in 2011 was 3,303,000 Rials (Government Help Desk, 2011: equivalent to £165.00), whereas a single successful hunting trip could bring in 5,000,000 Rials (£250.00). However, there was a strong traditional belief that whilst hunting to meet immediate needs was morally acceptable, selling bushmeat commercially was immoral, and this belief appeared to be limiting commercial hunting activities. For example when asked whether he ever sells meat commercially, one hunter from village A replied: "*Honestly we have never done that… it was just for the subsistence of the family and not for the trade…this is infamy, it is like selling blood*".

Commercial selling of meat was believed not only to be immoral but also to be back luck (*bad-shogoun* in Farsi). Another hunter from village A said: "*We all can recall stories of bad things happening to sellers of bushmeat and to their families.*"

Hunters from all five villages referred to the moral distinction between hunting for immediate needs and hunting for profit. Nonetheless there was some evidence that interpretations of what counted as 'immediate needs' were changing. One jobless 32-year-old hunter from village A explained his situation as follows: *"I am young, I need clothes, I need a motorcycle or for instance I need money to buy a 1,000,000 Rials trousers, so we arrange a hunting trip and the next day, we will have the money we need."*

In this statement the hunter reconciles cultural norms relating to the morality of hunting with his use of money from hunting to buy a motorcycle and expensive clothes by casting the latter as 'needs', although they are clearly not basic needs related to extreme poverty. Further research would be needed to determine how widespread this view is in the village but it may be part of a process in which the younger generation in the village is coming to perceive hunting not as a fall-back option, but as a "*viable and relatively profitable means of generating a cash income*" (Campbell and Nelson, 2001) that can lift them out of poverty.

Both park staff and several hunters indicated that in a second village (village B), commercial hunting for markets was common. Hunters from this village also mentioned the concept of bad 'shogoun' in relation to commercial hunting but in spite of this, some admitted to hunting as much as they could, without any moral restriction. People in this village were perceived to be far wealthier than those in village A; some had expensive hunting equipment and were making considerable amounts of money from hunting. One local hunter from village E, talking about village B, explained that: "*I know some people who earn something like 50,000,000 Rials per month, they don't have any other jobs…they go to hunt 10 times a month, let's say they can succeed 5 times out of 10, it is easy to reckon…this money makes you greedy.*"

Bamu National Park © Nosrat Dehghan

Village B was the only village where the majority of households were ethnic Turks rather than Fars and their commercial hunting was explained by the Farses in terms of ethnic stereotypes – particularly the 'greediness' of Turks. More in-depth research would be needed to determine whether the differences in hunting are related to genuine cultural differences, but it is clear that hunting practices and motivations vary significantly between villages and therefore that different management strategies would be needed to address them.

Economic motives were not prominent in the remaining three villages. However in terms of non-economic motives, almost all hunters in all five villages mentioned pleasure as an important reason for hunting. One hunter from village C, when asked why he hunts, answered simply: *"I don't know, I really don't have an answer for this question, I just love to hunt, I am just eager to hunt."* He also spoke of hunting in terms of tradition and talked of his wish to show his sons how to hunt. Almost all of the hunters claimed that hunting in the area that is now Bamu National Park is a traditional activity for the local people and that therefore hunting should not be banned. Several people also said that having a rifle is part of the 'traditional legacy' of living adjacent to an area full of game.

Single hunters frequently gave multiple reasons for hunting. For example the 32-year-old from village A quoted above, who justified his hunting as fulfilling his need for clothes and a motorbike, explained later in the same interview: *"You know … hunting is a sophisticated activity…the thrill of it cannot be compared with anything you have experienced…when you shoot the game and it rolls down the mountain, we enjoy seeing this happen just like an addict with his drug…"*. Clearly motivations are multilayered and complex, even for individual hunters.

An additional factor that came across strongly was the deep hostility between local people and the provincial Department of Environment (DOE), which is responsible for protected area management. The hostility was related not only to specific conflicts over hunting but also to perceived injustices dating back to the creation of the park. For example according to a hunter from village A, over the years the DOE has restricted access successively to different wells, other water sources and areas of land that were important for livestock. He claimed that at least one of the wells where this had happened was not even located in the park. It became apparent in conversations with park staff that some borders of the protected area are not delineated clearly and there is disagreement between the park and the people about which wells and springs are within the park's boundaries, which has caused additional conflict.

More generally, almost all of the interviewees who stated that poverty and unemployment drove them to hunt blamed the DOE directly or implicitly for this problem. A local hunter from village A stated that: "*There have been times in my life that I had to hunt to survive, because DOE would not let our livestock to graze. If someone wants to help us and establish a factory in this area, the DOE would interfere and so unemployment goes on".*

The actions of the DOE in the Bamu National Park are perceived by local communities not only to have affected their access to resources and their livelihoods but also to show a lack of respect. One local hunter from village A said: *"Just imagine this old respectful shepherd with his herd wants to graze his livestock and he gets captured and insulted by a young warden."* The majority of local hunters expressed their dissatisfaction with the DOE. It was explained from different perspectives by different people but the main point was more or less the same. As one hunter put it, *"Our major problem is with the DOE, we do not like them and they do not like us"*.

At its most extreme, the enmity between local people and the park has acted as an extra incentive for hunting: "*If there is no game in the mountain* [National Park] *there would be no game-wardens, no DOE and no one to protect this area…life can be much easier for us without them and their interventions in the park…so the best thing to do is to hunt and to get rid of everything…and that is not hard to achieve, there are 6-7 leopards left and if they don't have enough prey, they will die and the whole story of the park will end… "*. (Hunter from village C). Thus strong enforcement measures may actually be motivating people to increase their hunting further, thus leading to further escalations of conflict.

However, people's accounts of different stages in the park's history revealed that in spite of the ongoing conflicts between people and the park since its creation, the level of tension has not always been so high. From 2006 to 2009 there was a Head of the park who was highly respected and had a good relationship with local people, and this was reported by hunters in all five villages to have made them reduce hunting. For example one hunter from village A stated: *"I would have been ashamed of him and of our friendly relationship with him if he would be informed that I was at a hunting trip…he came to our village…to our homes…he had tea with us and he pleaded for help to save the park, how could I continue hunting ignoring him…"*.

One hunter from village C believed that the park head tolerated low levels of hunting (even though this would be against the principles and regulations of the national park): *"He always said to locals that: "the park is yours, I am not telling you to stop hunting but do not exceed your needs, help me and let us keep the park together"*. Hunting did not cease altogether but people believed it had decreased considerably: *"I am not saying that people were not hunting those years, but if they normally hunted 60 game animals a month, they have reduced that to 20 per month, and that was just because he respected them and they respected him". (Member of park staff).*

Thus hunting in Bamu National Park may serve as a way for local people to demonstrate hostility or compliance with the park authorities in addition to its economic and cultural drivers. There are no systematic data on wildlife populations but both hunters and park staff believed that game populations had increased during the period when there were good relations with the park manager.

IMPLICATIONS FOR MANAGEMENT STRATEGIES

Because of the high level of conflict in Bamu over hunting, this study was based on a relatively small number of interviews with a non-representative sample of hunters. However a high degree of consensus in what people said suggests robustness in the findings. Motives for hunting included poverty-related subsistence needs, market-related profit, pleasure and revenge. Poverty and profit were each associated with a single village whereas the recreational and cultural value attached to hunting and the deep-seated resentment of the park was common to all villages.

These findings have important implications for management. Currently, the main management strategy for combating illegal hunting is strict enforcement through checkpoints and patrolling. Park staff believed that commercial hunting was having the greatest impact on wildlife populations and that enforcement was the best way to combat commercial hunting. However enforcement alone is unlikely to be effective, for several reasons. First, enforcement on the ground is likely to have only limited success unless market demand is also addressed (Duffy, 2010) – something that was recognized by protected area staff but that they felt they were not in a position to do anything about. Second, strict enforcement is unlikely to be effective where meat is an 'essential good', which appears to have been the case for at least one village, where hunting was driven by extreme poverty. Here, a more appropriate strategy would be the development of alternative sources of livelihoods. It was beyond the scope of this study to investigate livelihood options but it was apparent that local people believed that the park had the opposite policy and was consistently undermining livelihood opportunities.

Third, strict enforcement does not address cultural drivers of hunting, and can thus create deep-seated resentment. However the moral concept of shogoun,

Bamu National Park © Nosrat Dehghan

according to which commercial hunting is perceived as immoral and likely to bring bad luck, may offer common ground from which protected area staff can build on cultural values to counter the worst excesses of hunting. In spite of changing economic conditions and social values, the concept of 'shogoun' appears to remain powerful, although management strategies using this approach would need to take care to address the changing perspectives of the youth.

Finally, strict enforcement has led to acute resentment, to a point where it appears to be acting as a motive for hunting in its own right. Protected area staff are perceived as disrespectful both of traditional practices and of local people, and this has built upon a deep-seated sense of injustice related both to local people's perception of hunting as a traditional activity, with the implication of associated rights, and to broader loss of access to their lands and natural resources since the creation of the park. There is a danger of an ever-escalating conflict as the protected area authorities respond to increased hunting by implementing ever-stricter enforcement measures, which simply spur people to hunt even more in revenge. However hostility and hunting are both reported to have decreased when there was a park manager who had good relations with hunters, suggesting that it may be possible to improve the situation over a relatively short time through a change in behaviour of the protected area staff and an emphasis on positive personal engagement with local people.

CONCLUSIONS

The situation in Bamu National Park presents a particularly graphic example of what is probably the biggest controversy in protected areas conservation – the balance between a 'fences and fines' approach based on strict enforcement and a more inclusive approach that aims to gain the support and involvement of local communities. The 'fences and fines' approach, dominant in protected areas conservation at least until the 1970s, lost ground to more conciliatory approaches precisely because of evidence that it led to ever-escalating conflict that was both economically and politically unsustainable (Mulder & Coppolillo, 2005; Russell & Harshbarger, 2003). Community-based approaches have met with limited success and been criticised in their turn (Oates, 1999; Terborgh, 1999), and current management

strategies often combine some level of enforcement with more conciliatory approaches. In the case of Bamu National Park it is clear that enforcement is a necessary part of management, but that it is unlikely to be successful on its own. In relation to commercial hunting, measures are needed to reduce market demand as well as supply. Subsistence hunting driven by extreme need will only be reduced if alternative sources of livelihood are developed. In many countries limited hunting is permitted in protected areas for subsistence and cultural purposes – an approach that would be consistent with the perceptions of Bamu park managers that it is only commercial hunting that is a major threat to wildlife populations. However Iranian law does not currently allow for this option. Nonetheless two alternative approaches may be useful in reducing hunting levels. First, the concept of shogoun may offer a basis from which to work with local people to counter the worst excesses of hunting. Second, the degree to which hostility and hunting are reported to have decreased when there was a park manager who had good relations with hunters suggests that it may be possible to improve the situation over a relatively short time through a change in behaviour of the protected area staff and an emphasis on positive personal engagement with local people. Once the level of conflict has decreased it should be possible to gather more systematic quantitative data on hunting activities, their impacts, and the relative significance of the different motivating factors that drive them.

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RESUMEN

En este análisis se utiliza una metodología cualitativa informal para determinar las motivaciones para la caza en el Parque Nacional Bamu en la provincia de Fars, Irán. El parque tiene, con toda seguridad, el nivel más alto de conflictos relacionados con la cacería en cualquier área protegida de Irán. Dos funcionarios de alto rango del parque y catorce cazadores fueron entrevistados individualmente y otros seis cazadores fueron entrevistados en grupo. Entre las motivaciones para la caza se mencionaron la pobreza, los beneficios comerciales, el placer (la devoción por la caza y su valor tradicional) y la venganza, en cuanto a que el resentimiento hacia la zona protegida fue citado como una razón para cazar. Se concluye que es poco probable que una aplicación estricta pueda disminuir la cacería por sí sola, pudiendo más bien aumentarla a medida que crece el resentimiento contra el parque. La gestión sostenible de la caza no está permitida bajo la ley iraní, pero la presencia de un concepto moral tradicional (shogoun) de que la caza comercial está mal, podría ofrecer una base para un enfoque más colaborativo, y hay evidencia de que un énfasis en la colaboración positiva entre el personal del parque y los pobladores locales podría mejorar la situación con bastante rapidez.

RÉSUMÉ

Dans cette étude, une méthodologie informelle et qualitative est utilisée pour analyser les motivations des chasseurs du Parc national de Bamu, dans la province iranienne de Fars. C'est en effet dans ce parc que l'on trouve probablement le niveau de conflits le plus élevé parmi toutes les aires protégées d'Iran. Deux cadres supérieurs du parc et quatorze chasseurs ont été interrogés individuellement, et six autres chasseurs interrogés en groupe. Les raisons mises en avant par les chasseurs sont la pauvreté, le profit commercial, le plaisir (l'amour de la chasse et sa valeur traditionnelle) et la revanche (le ressentiment envers l'aire protégée a été cité en soi comme une raison). L'étude conclut en affirmant qu'une application stricte de la loi a peu de chances de faire diminuer les pratiques de chasse, mais qu'au contraire le ressentiment et donc la chasse pourraient augmenter parallèlement au développement du parc. La chasse durable et gérée n'est pas autorisée dans le cadre de la loi iranienne, cependant l'importance d'un concept moral traditionnel (*shogoun*), qui insiste sur le caractère néfaste de la chasse commerciale, pourrait offrir la base d'une approche plus collaborative. Enfin, il est avéré qu'une implication positive entre le personnel du parc et les communautés locales améliorerait rapidement la situation.