

# Factors affecting intention to volunteer to conserve the Ural saiga population

Katie Mabbutt

September 2014

## Project summary

This report presents the findings of research undertaken as part of my MSc degree at Imperial College London, in the Ural region of Kazakhstan in May 2014. The research was funded by Flora and Fauna International's Ustyurt Landscape Conservation Initiative funded by USAID, by the People's Trust for Endangered Species and by Disney Wildlife Conservation Fund through the Saiga Conservation Alliance. Fieldwork was conducted in collaboration with the Association for the Conservation of Biodiversity in Kazakhstan (ACBK).

Understanding human behaviour is central to implementing effective conservation strategies. I applied the Theory of Planned Behaviour framework from social psychology to understand what drives intention to volunteer for conservation programmes. I conducted a survey of residents of two villages in West Kazakhstan, to assess respondent's attitudes, knowledge and willingness to volunteer to conserve saigas. The impact of attending saiga awareness and education events was also assessed. From this, I make recommendations for future conservation interventions in the region.

## Methodology

The study was conducted in two villages in West Kazakhstan – Azhibay and Nursai. The villages were chosen as they have both had saiga awareness and education events operating in them for the same period of time. Saiga Days have occurred in 2010, 2013 and 2014 and a Steppe Wildlife Club has been running since 2013.

I designed a questionnaire using Ajzen's (1991) Theory of Planned Behaviour as a framework to assess willingness to volunteer for saiga conservation, by measuring attitudes towards volunteering, people's perceptions of the social norms around volunteering for saigas, perceived behavioural control (whether they feel able to volunteer), and their intention to volunteer (Figure 1). I also collected data on people's knowledge about saiga status, conservation efforts and how to get involved, as this may affect people's intentions to volunteer.

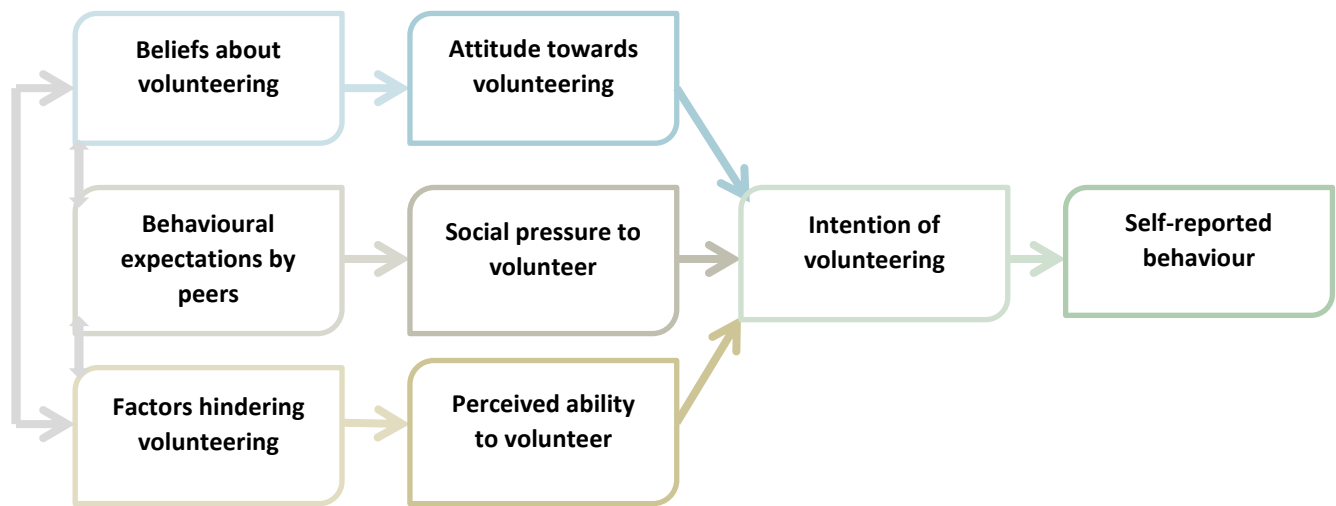


Figure 1 Ajzen's (1991) Theory of Planned Behaviour adapted for this study

The questionnaire contained four main sections: socio-demographic information; knowledge of the steppe; attitude towards the steppe; and willingness to volunteer. A shortened version of this questionnaire was developed for both children and adults at Saiga Day, to assess the impact of awareness events on knowledge, attitudes and willingness to volunteer.

Door to door interviews were conducted between 4th and 7th May in Azhibay and between 10th and 13th May in Nursai, using opportunistic sampling. To reduce sampling bias the interviews were conducted on week days and weekends and at various times of day. Each interview lasted approximately 40 minutes. By the end of the research period the entire area of each village had been covered. The Saiga Day Quiz was distributed to all attendees of the Saiga Day event in each village.

## Findings

There were 239 respondents in total, with varying numbers of responses for each section of the questionnaire (Table 1).

Table 1 Number of respondents for each section of the questionnaire. TPB = factors affecting willingness to volunteer.

	Knowledge <i>n</i>	Attitudes <i>n</i>	TPB <i>n</i>
<b>Full Questionnaire</b>	113	113	113
<b>SD Quiz - Adults</b>	34	34	0
<b>SD Quiz - Children</b>	92	55	0
<b>Total</b>	<b>239</b>	<b>202</b>	<b>113</b>

### Knowledge and attitudes towards saiga conservation

Overall, respondents generally had high levels of knowledge about saigas and the steppe. Residents of Nursai had slightly lower knowledge levels than residents of Azhibay. Attending Saiga Day was not found to have an effect on knowledge levels. This was unexpected as previous research has shown that saiga awareness campaigns have increased levels of knowledge. A possible explanation for this difference could be due to a transfer of knowledge between attendees and non-attendees, as Saiga Days have now been operating in these villages for three years.

Homemakers had lower levels of knowledge than other groups (Figure 2). The homemakers group is made up exclusively of women, who had only attained an education up to secondary level, and did not attend Saiga Day. In contrast, women who were employed were generally educated to degree level and participated in the study due to their attendance at Saiga Day in their role as teachers. Pensioners had higher levels of knowledge than other groups, but were less willing to volunteer for saiga conservation.

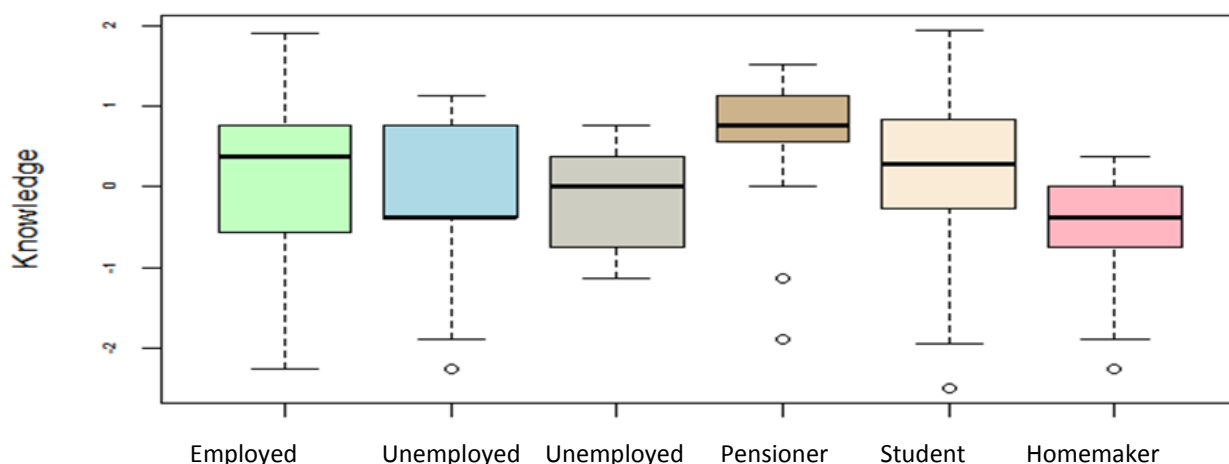


Figure 2 Difference between knowledge scores of employment status categories

Steppe Wildlife Club members had higher levels of knowledge with a mean score of 13.68, 95% CI [12.84, 14.47]. Non-members had a mean score of 12.07, 95% CI [11.48, 12.66]. This was to be expected as part of the knowledge section was based upon the curriculum of the Steppe Wildlife Club.

Overall respondents generally had positive attitudes towards the conservation of the steppe. Those with higher levels of knowledge and residents of Nursai had more positive attitudes. Saiga Day attendance did not have an effect on attitudes towards the conservation of the steppe.

## Factors that influence participation in saiga conservation

Intention to volunteer was associated with all direct measures within the Theory of Planned Behaviour framework except perceived behavioural control (Table 2). The most influential variables affecting the intention to volunteer are attitudes and perceived subjective norms. This means that any activities that positively affect these two are most likely to lead to people volunteering more.

Subjective norms were the most significant factor in predicting volunteering behaviour in this system. This means that if respondents feel there is social pressure to volunteer to conserve saiga, they are more likely to do it. This can be harnessed to further strengthen the social norm and encourage participation in future conservation interventions. In this study perceived behavioural control (i.e. whether they felt they were able to volunteer if they wanted to) was not found to be significant in predicting intention to volunteer for saiga conservation.

Table 2 Summary of GLM for Theory of Planned Behaviour components

	Intention	Attitude	Subjective norm	PBC	Behavioural beliefs	Normative beliefs	Control Beliefs	Employment status	Village	Interactions
Self-reported behaviour	+									
Intention		++	+++					- U - P		
Attitude					.					
Subjective Norm						+		-- UW	- N	++ UW:N
Perceived Behavioural Control										

**Legend:**  Variable not included in model. N: Nursai P: Pensioner U: Unemployed without profession UW: Unemployed with profession. UW:N is unemployed with profession in Nursai. **Significance codes:** += positive relationship, -= negative relationship. Strength of the relationship is shown as: <0.001 '\*\*\*' <0.01 '\*\*' <0.05 '\*' <0.1 '.' >0.1 '' , with the \* replaced by + or - as appropriate.

We asked people whether or not they did actually volunteer to conserve saigas. Those who said yes were more likely to intend to volunteer in future. However, it has been argued that self-reported behaviour does not completely reflect people's actual behaviour but instead reflects their perceptions or beliefs about their own behaviour. Employment status and village of residence were found to be related to people's intention to volunteer and perceptions of subjective norms. Those that are unemployed and live in Nursai

have lower perceived social pressure to become involved in volunteering. This type of information can help conservation organisations target interventions to specific areas or groups of people.

### Conservation of saigas: threats and interventions

The majority of respondents, 70%, identified hunting by people as the main threat to saiga. 13% identified extreme weather. Other threats (e.g. predation, lack of grass or development and infrastructure) were much less often cited as the main threat.

With regards to the type of conservation activities people were willing to participate in, over half of the respondents stated they would be prepared to attend saiga awareness events (Table 3). This demonstrates that there is a demand in the local community for awareness events, and suggests SD could be extended include the whole village rather than being centred on particular schools.

Table 3 Volunteer activities respondents would be prepared to do

Volunteer activity	Children responses		Adult responses		Total Responses	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<b>Participate in more saiga awareness events</b>	34	(62%)	85	(57%)	119	(59%)
<b>Talk about the importance of saiga conservation to family / friends</b>	10	(18%)	71	(48%)	81	(40%)
<b>Help with collecting ecological data on saiga populations</b>	35	(63%)	23	(15%)	58	(28%)
<b>Lead / organise awareness events or clubs</b>	29	(52%)	24	(16%)	53	(26%)
<b>Donate money</b>	19	(18%)	10	(7%)	29	(14%)

Over a quarter of respondents were willing to participate in activities that involve much higher levels of engagement participation, such as to helping collect ecological data or organising events. This is in contrast to previous research in the saiga ranges, and may indicate that people are prepared to take responsibility for the conservation of their local environment.

When respondents were asked to rate which interventions would be the most effective, increased penalties and increased enforcement were both in the top three (Table 4). Respondents rated direct public involvement through local monitoring as the second most important intervention. There has already been a successful participatory monitoring scheme in the Ural region, so this could potentially be an intervention that could be successfully re-introduced.

Table 4 Ranked responses for most effective interventions to improve the status of saigas

Intervention	Ranked <i>n</i> :	First	Second	Third	Total
Increase penalties for people who are caught		55	60	36	<b>151</b>
Increase direct public involvement in saiga conservation		17	39	61	<b>117</b>
Increase law enforcement effort		39	42	32	<b>113</b>
Improving incomes of local people from their current jobs		48	15	17	<b>80</b>
Change people's views on the value and importance of saigas		20	24	36	<b>80</b>
Help local people to get different jobs		21	25	14	<b>60</b>

## Recommendations

This study has highlighted several recommendations for future conservation work in Ural and other regions:

- Education and awareness campaigns such as Saiga Day should target the whole community and not just focus on schools.
- The Steppe Wildlife Clubs could start a young volunteers programme to instil volunteering behaviour at a young age
- A volunteer programme, with an integrated monitoring and evaluation component, could be established to encourage participation of people willing to volunteer
- Outreach to the region should continue to build upon people's willingness to help and increase local involvement in the organisation and running of Saiga Day and Steppe Wildlife Clubs
- People perceive positive social norms and have positive attitudes to saiga conservation, which can be built upon to encourage participation
- Information provided to residents should be specific about what actions people can undertake to conserve saiga
- The possibility of reviving a participatory monitoring scheme should be explored further

To conclude, in the Ural region the most important factors linked to willingness to volunteer to conserve saiga are people's subjective norms and attitudes. In light of this, awareness events should wherever possible provide information and support to people so that they can personally become involved in conservation.