

Conservation news

Catastrophe and hope for the saiga

In May 2015 a catastrophic die-off hit the only large population of the Critically Endangered saiga antelope *Saiga tatarica*, in Central Kazakhstan. The latest official statement from the Ministry of Agriculture (5 June) gave a death toll of 134,252 individuals, equivalent to 62% of the 2014 estimate for this population, and more than half of the global saiga population. However, the death toll is expected to rise once follow-up surveys are completed. The deaths have been attributed to the *Pasteurella* bacterium, but this is only part of the story, as this is an opportunistic pathogen that is fatal only when other factors have weakened the immune system. It seems likely that environmental factors were involved. An international team has been put together to investigate the deaths.

The rapid collapse of this large population over 3 weeks reminds us that species such as the saiga live on the edge ecologically: prone to dramatic declines and able to bounce back quickly. This type of species needs to be present in very large numbers if it is to weather these crashes, and so the fact that a population is abundant is not a guarantee of its security. There are only five populations of saigas; this means the species is of conservation concern even if individual populations appear to be secure.

Unfortunately, two of the other saiga populations are currently also in a grave state, as highlighted in articles in the recently published *Saiga News* issue 19 (<http://www.saigaresourcecentre.com/saiga-news>). The north-west pre-Caspian population, in Russia, and the Ustyurt population, shared between Kazakhstan and Uzbekistan, have both suffered substantial population decreases over the last 2 years, on top of an ongoing trend of decline. In the case of the Ustyurt population, this is a result of heavy poaching and the erection of a border fence blocking its migration route in 2011–2012. In Russia heavy poaching is also implicated; a comparison of the number of saiga observations in the Stepnoi Reserve in 2014 with the numbers seen 10 years previously points to very large declines, and a survey using indirect questioning suggests that 34% of the people interviewed in Kalmykia had eaten saiga meat in the preceding 12 months.

Faced with these setbacks it is hard to continue to be positive about the future of the saiga. However, issue 19 of *Saiga News* also brings hope. A new and scientifically robust population estimate for Mongolia suggests that this subspecies now consists of c. 15,000 individuals. Although the estimate is not comparable to previous estimates made using different methods, it seems possible that the population is growing, and that rigorous conservation efforts are beginning to pay off.

For the rest of our hope, we turn to people. *Saiga News* 19 contains several articles highlighting the enthusiasm with

which children are committing to conserving the saiga and its steppe habitat, and the dedication of their teachers and group leaders in helping them learn about the species. The worldwide media concern about the saiga deaths in Kazakhstan shows that people care about the fate of the saiga. NGOs, including the Saiga Conservation Alliance and the Association for the Conservation of Biodiversity in Kazakhstan, are working hard to conserve the species, supported by large international NGOs such as Fauna & Flora International, the Frankfurt Zoological Society, BirdLife, the People's Trust for Endangered Species, and the Wildlife Conservation Network. Governments are also playing their part; the commitment of the Kazakhstan government to protecting the environment is demonstrated by their designation of ecological corridors for migratory species and their commitment to fund research on saiga disease in the light of the die-off, the Republic of Kalmykia (Russia) has listed saigas in their Red Data Book, and Mongolia is strengthening law enforcement cooperation.

The saiga is a success story in international institutional terms; there is a well-supported Memorandum of Understanding on its conservation under the Convention on Migratory Species. The next meeting of the signatories to the Memorandum will be in October 2015. Governments, NGOs and researchers will work together to draw up a new plan of conservation action, recognizing the urgency of the situation and the need to work together to safeguard the saiga's future.

E.J. MILNER-GULLAND Department of Life Sciences, Silwood Park Campus, Imperial College London, Ascot, Berkshire, UK
E-mail e.j.milner-gulland@imperial.ac.uk

Confirming the occurrence of the Endangered yellow-footed tortoise in flooded forests of the Amazon

Forests flooded by Amazonian white-water rivers, referred to as *várzea*, cover c. 400,000 km² in Amazonia. This unique type of wetland is mostly underwater for 4–5 months per year, and even its highest areas are flooded for at least 1 month per year. As a result of this intense flooding, land animals such as the tapir *Tapirus terrestris*, lowland paca *Cuniculus paca*, and deer (*Mazama* spp.), although they can swim, are not present.

During our research, funded by the Mamirauá Sustainable Development Institute, Brazil, in c. 7,000 km² of *várzea* within the confluence of two large rivers, the Japurá and Amazon, we have unexpectedly found the threatened yellow-footed tortoise *Chelonoidis denticulata*. This