

techniques to help conserve threatened species through the use of assisted reproductive technology. They aim to boost populations of threatened animals by harvesting egg and sperm cells, producing embryos by means of in vitro fertilization, and implanting the embryos in females of more common species. There are significant challenges associated with the differences in physiology and reproductive cycles among species, requiring a specific cryogenics process in each case to freeze semen, embryos and other tissue. In 2006 a Sika deer fawn was born to a common red deer surrogate mother and integrated with naturally conceived Sika deer, but the same operation carried out later on a rare subspecies was unsuccessful, as the fawn was rejected by the surrogate mother. The reserve also maintains a diverse wildlife sperm and tissue bank, which includes deer and markhor embryos, and semen samples from 400 individuals of 30 wild species.

Source: *The Guardian* (2016) [theguardian.com/environment/2016/jan/18/biotechnology-endangered-wildlife-conservation-species](http://theguardian.com/environment/2016/jan/18/biotechnology-endangered-wildlife-conservation-species)

### Lethal amphibian disease killed off on island

For the first time researchers have eliminated an amphibian fungal disease in a wild population of toads. The chytrid fungus *Batrachochytrium dendrobatidis*, which has affected amphibian species worldwide, driving population declines and species extinctions, is highly infectious and is responsible for devastating amphibian populations. Over 5 years researchers were able to clear the disease from toads native to the Spanish island of Mallorca. Tadpoles of the Mallorcan midwife toad *Alytes muletensis* were collected from the wild, transported to a laboratory and bathed in an anti-fungal solution. The tadpoles were returned to the collection sites and a laboratory decontaminant used to sterilize the environment around each breeding site. Infection at four of the five pools where infection had previously been recorded was eradicated, and remained so for 2 years post-application.

Source: *Biology Letters* (2015) [dx.doi.org/10.1098/rsbl.2015.0874](https://doi.org/10.1098/rsbl.2015.0874), & *BBC News* (2015) [bbc.co.uk/news/science-environment-34850807](http://bbc.co.uk/news/science-environment-34850807)

## SUB-SAHARAN AFRICA

### Marine monitoring inspires new approach to studying wild animal offtake

Based on approaches used to monitor exploitation of fisheries and population trends

in marine species, scientists have proposed two novel indicators for harvested terrestrial species, to assess the harvesting pressure on groups of wild animals within a region, and whether hunters are relying increasingly on smaller species over time. The indicators were applied to data for mammals and birds of West and Central Africa, where overharvesting of wild animals is one of the greatest threats to biodiversity, and the results indicated that harvesting pressure increased over the 40-year study period and that hunters may target smaller species over time, as larger species disappear. For such indicators to be useful in providing insights into the dynamics of wild meat harvesting there is a need for the collection of more data to facilitate large-scale long-term analyses.

Source: *Ecology and Society* (2015) [dx.doi.org/10.5751/ES-07823-200340](https://doi.org/10.5751/ES-07823-200340), & WCS (2016) [newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/8473/Land-bound-Scientists-Find-Inspiration-From-the-Sea-to-Monitor-Wild-Animal-Hunting-in-African-Forests.aspx](http://newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/8473/Land-bound-Scientists-Find-Inspiration-From-the-Sea-to-Monitor-Wild-Animal-Hunting-in-African-Forests.aspx)

### Sixty new dragonfly species described in Africa

Researchers have recently described 60 new species of African dragonflies, bringing the total number of known dragonfly species on the continent to 760. All dragonflies and damselflies breed in freshwater, yet the new species exhibit considerable diversity in their habitats; for example, the pale cascader *Zygonyx denticulatus*, found in Zambia and the Democratic Republic of the Congo, prefers sunny rapids whereas the Gabon slim sprite *Pseudagrion dactyloidium* is found near muddy puddles in deep shade, and the black relic *Pentaplebia mangana* occupies dark areas near forest waterfalls. Freshwater habitats, which are home to 10% of all animal species worldwide, are under enormous pressure in Africa, and knowledge of the dragonflies is important as they are indicators of the health of freshwater ecosystems. There is a need to develop local expertise in biological research to ensure that new species are discovered and protected.

Source: *IUCN* (2016) [iucnredlist.org/archives](http://iucnredlist.org/archives)

### Scientists predict decline of deadly chytrid fungus in Albertine Rift

The Albertine Rift region in central Africa is the continent's richest area for vertebrate diversity and is home to >145 amphibian species, at least 42 of which are endemic. The fungal pathogen *Batrachochytrium dendrobatidis* has been associated with

infections, die-offs or extinctions in more than 200 amphibian species worldwide and has been identified in at least eight African countries. A study has documented the distribution and prevalence of the chytrid fungus in existing and proposed protected areas of the Albertine Rift, and used modelling software to predict how climate change will affect its distribution. Model predictions indicate that the fungus is currently widespread across the Albertine Rift but that under predicted climate change scenarios its range will contract substantially by 2080 as optimal habitat suitability decreases. Although the predicted decrease in the chytrid fungus may offer hope for amphibians, they are likely to also experience negative impacts of climate change, including loss of habitat.

Source: *PLoS ONE* (2015) [dx.doi.org/10.1371/journal.pone.0145841](https://doi.org/10.1371/journal.pone.0145841), & WCS (2016) [newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/8503/Study-Deadly-Amphibian-Fungus-May-Decline.aspx](http://newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/8503/Study-Deadly-Amphibian-Fungus-May-Decline.aspx)

### 2015 worst year on record for rhino poaching...

Overall, rhinoceros poaching figures for Africa reached a record high last year, despite a slight decrease in poaching in South Africa. Losses in Zimbabwe and Namibia rose sharply, and the continent-wide total for the year is at least 1,305 rhinos. Of the four major rhinoceros range states, only Kenya is expected to report a significant decrease in poaching in 2015. In January the South African Government lost its appeal against the lifting of a ban on the domestic trade in rhino horn. The ban was overturned in November following legal action by two game ranchers, leaving open the possibility that South Africa will again become a link in the illegal trade from Africa to Asia. At the 66th meeting of the Standing Committee of CITES at the start of the year, all countries affected by rhino poaching were instructed to implement key strategies and actions set out by the CITES Rhinoceros Enforcement Task Force.

Source: *TRAFFIC* (2016) [traffic.org/home/2016/1/21/south-africa-reports-small-decrease-in-rhino-poaching-but-af.html](http://traffic.org/home/2016/1/21/south-africa-reports-small-decrease-in-rhino-poaching-but-af.html)

### ...and Northern white rhino dies in USA, leaving only three alive

One of the world's last four remaining northern white rhinos has died in a zoo in the USA. The condition of 41-year old Nola had deteriorated after surgery and she had to be put down. Nola had been a popular attraction at the San Diego Zoo Safari Park since 1989. The remaining three northern white