

Reserve. Research on the pollination biology and population genetics of *R. liboense* is planned, to support the conservation of the species.

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### New legislation threatens wildlife conservation in Poland

In April 2018 a new Hunting Law (Journal of Laws of the Republic of Poland, 30 March 2018, No. 651) entered into effect in Poland. Poland is one of the last four countries in the EU (in addition to Croatia, Malta and Cyprus) that do not regulate the use of toxic lead ammunition. Each year 400–640 t of lead are introduced into the Polish environment (Niech Żyją, 22 January 2017, <http://niechzyja.pl/dokumenty/uwagi-do-zmiany-prawa-lowieckiego-2015.pdf>; Kitowski et al., 2017, *Ambio*, 46, 825–841). Consequently, high concentrations of lead are found in Polish raptors that consume wounded game species or carrion (Komosa & Kitowski, 2008, *Ecological Chemistry and Engineering S*, 15, 349–358; Kitowski et al., 2017, op. cit.). The new Hunting Law has not enacted a ban on lead ammunition in any habitat, even in wetlands. There is still no obligation to register animals embedded with lead ammunition that are not recovered. Attempts to ban lead ammunition in Poland so far have been unsuccessful, even though in 2013 Parliament declared that lead ammunition would be banned from hunting shoots on wetlands by 2015 (Polish Parliament 2017, 24 October 2017; <http://sejm.gov.pl/sejm7.nsf/InterpelacjaTresc.xsp?key=02849767>).

The new Hunting Law ignores current population trends and the status of game birds because cultivation of hunting traditions was considered an important factor in placing individual bird species on the list of game animals that can be legally hunted. This opens up the possibility of unlimited exploitation of species whose numbers are decreasing at an alarming rate in Poland. This applies in particular to the hazel grouse *Bonasa bonasia* (population 15,000–20,000 pairs in Poland) and Eurasian teal *Anas crecca* (population 1,300–1,700 pairs; Chodkiewicz et al., 2015, *Ornis Polonica*, 56, 149–189). Hunters have already greatly reduced the

western capercaillie *Tetrao urogallus* (population 400–450 adults) and black grouse *Lyrurus tetrix* (population 250–300 pairs), which, despite being protected since 1995, are Critically Endangered species in Poland (Mitrus & Zbyryt, 2015, *Ornis Polonica*, 56, 309–327).

Although the new Hunting Law prohibits group hunting in national parks, the Act of 11 March 2004 (amended in July 2017; Journal of Laws of the Republic of Poland, 9 August 2017, No. 1521) on the protection of animal health and the control of infectious diseases in animals legalized this practice within national parks and nature reserves under the pretense of combating African Swine Fever (Pejsak & Woźniakowski, 2017, *Życie Weterynaryjne*, 92, 648–651). However, group hunting can contribute to the spread of this disease (Pejsak & Woźniakowski, 2017, op. cit.).

The Polish Hunter Association (Polski Związek Łowiecki) oversees hunting activities de facto and de jure in Poland. The Association is connected with political and financial elites, and many powerful representatives of the media and business are members. The lobbying centre for the Association within the Polish Parliament (the Parliamentary Team on Culture and Tradition of Hunting) includes 32 deputies and three senators. The strong position of the Association in Parliament makes it difficult to change regulations in favour of wildlife conservation.

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### New report of Eurasian otters in Lao

There is little information on otters in Lao although there are three reported species: smooth-coated otter *Lutrogale perspicillata*, Asian small-clawed otter *Aonyx cinereus* and Eurasian otter *Lutra lutra*. It is also possible that the hairy-nosed otter *Lutra sumatrana* is present as it has been found in neighbouring countries (Thailand, Myanmar, Viet Nam and Cambodia).

There were formerly only two recent sources of information on otters in Lao. In 2016 Project Anoulak, a local NGO, produced a report on a preliminary camera-trap survey in the Nakai Nam Theun National Protected Area. In addition to camera-trap surveys, they interviewed local people who provided information on two species locally: ‘one with feet like dogs, small and dark, mostly seen in groups of 3–5 individuals’ (the Asian small-clawed otter), and ‘one with feet like ducks, large, mostly seen in pairs’ (the smooth-coated otter). They did not receive reports of the Eurasian otter. The other information came from the Wildlife Conservation Society in April 2018: they confirmed that rangers encounter otters relatively often on one river in the south-east of Nam Et Phou Louey National Park, but they do not know of which species.

The International Otter Survival Fund (IOSF) has been holding a series of workshops to train the next generation of otter researchers in Asia, where there is a serious problem with illegal trade in otters, both for furs and as pets. The workshops cover field techniques for otter research, public awareness programmes, law enforcement and general conservation issues.

The latest workshop was held at Nakai, Lao, in April 2018. This included a field visit to Nakai Nam Theun National Protected Area, in an area where otters are known to be present, led by Chanthalaphone Nanthavong of Project Anoulak. During this trip signs of Asian small-clawed otters were found, together with the spraint and footprints of the Eurasian otter. This is believed to be the first time the latter has been recorded in the Protected Area and it also confirms the presence of the species in Lao.

The workshop brought together 36 people, mostly from the Agriculture and Forestry Office, who are responsible for conservation issues in Lao. At the end of the workshop a Lao Otter Network was formed, linked to the IOSF Asian Otter Conservation Network, which has developed from previous workshops. The Lao Otter Network will identify priority areas for field surveys, conduct social surveys to assess any negative human–otter interactions, carry out more education and public awareness programmes, and investigate the scale of the illegal trade in otter furs and body parts and as pets. Chitpasong Senthammavong, of the Wildlife Management Division, was appointed the Network co-ordinator. As part of the workshop Paul Yoxon of IOSF met with Asoka Rasphone, Director of the Ministry of Foreign Affairs, who is supportive of otter conservation and the new Lao Otter Network.

We are grateful to the Anderson Rogers Foundation Inc., Action for the Wild, Nurtured by Nature, and the Rufford Foundation for financial support for the workshop. The full report on the workshop is available at [http://www.otter.org/documents/InternationalWorkshops/InternationalWorkshop\\_Laos.pdf](http://www.otter.org/documents/InternationalWorkshops/InternationalWorkshop_Laos.pdf).

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### **Participatory Octopus Market System Development strengthens community management of marine resources on Pemba Island, Zanzibar, Tanzania**

Fauna & Flora International (FFI) has been working with NGO partner Mwambao Coastal Community Network since 2015, developing community-based marine resources management on Pemba Island, Tanzania. The work began with a remote fishing community on a small island to the south of Pemba, with capacity-building training sessions for the village fishers' committee. Following the training,

the committee decided to implement a temporary closure of 100 ha of the island's reef flats. Catch data showed an increase in the average size of octopus caught when opening after a 3-month closure, but refraining from fishing remains difficult for low-income households. This represents a challenge for the fishers' committee working to retain consensus within the community, enforce closures and demonstrate the benefits of this management action to individual fishers and the wider community.

With Mwambao we explored various options for strengthening local governance and informing and empowering fishers in their relationship with buyers, including an investigation of how the existing market could be developed to support marine conservation and benefit the community. We adapted Practical Action's Participatory Market System Development tool in a conservation context and identified the kind of markets that would maximize conservation and social impact. After detailed consideration of four marine activities (octopus, reef fish, sea weed farming and other mariculture) scored against 20 impact criteria (e.g. gender inclusiveness, accessibility to different age groups, market demand and conservation benefits), the octopus fishery was prioritized for further development.

Mwambao's team was trained in the Participatory Market System Development approach and together with FFI acted as facilitators, encouraging participation of the market stakeholders in addressing challenges and highlighting converging interests to achieve long-lasting conservation and community impacts. Based on an earlier market research study we analysed a participatory market system, to identify and understand the power relations between key market actors such as local and intermediary buyers, agents and exporters, and fishers, who traditionally have low bargaining power. We organized meetings in three villages, to improve the community's confidence and their understanding of the market in preparation for a multi-stakeholder meeting that would bring together all market actors for a dialogue on opportunities and challenges in octopus fisheries.

We held a 2-day multi-stakeholder workshop in September 2017 in which the discussions amongst actors revealed information asymmetry in rural markets. Overfishing has resulted in a high proportion of small octopus in the catch which means that intermediary buyers' profits fall as only the larger octopus (above the legal size limit) can be sold for export. The buyers had been unaware of the fishers' committee's conservation initiatives and temporary closures, which they recognized as well aligned with their business interest of procuring export quality octopus. The community and fishers' committee also realized an opportunity to negotiate better terms for an opening days' catch, and to encourage buyers to make a financial contribution to the costs of the conservation efforts, such as that of patrol costs. Buyers and the fishers' committee agreed to