

Human-Wildlife Conflict Toolkit: comprehensive solutions for farmers and communities

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*A new toolkit suggests strategies
and practical tips to make the
increasingly tight cohabitation
between people and wildlife safer.*

Human-wildlife conflict is a growing global problem. It is not restricted to a particular geographical region or climate condition, but is common to all areas where wildlife and human populations coexist and share limited resources (Distefano, 2004). The February 2010 meeting of the Southern African Development Community (SADC) Technical Committee on Wildlife pronounced that wild animals represent the number-one problem for Africa's rural populations in terms of both personal security and economic loss, and the situation is getting worse. The population of the African continent, which has

the world's largest reserves of wildlife, is expected to double from 0.8 billion to 1.8 billion people in the next 40 years (ILRI, 2009). Africans will not only be packing more tightly into cities; they and their crops will also be increasingly pressing up against territory populated by wildlife.

Human-wildlife conflict is a problem for farmers, and ultimately it must be tackled by the farmers themselves. However, although numerous research articles, reports, recommendations, guidelines and training manuals have been produced in recent years to address the problem, most have been aimed at technical support agencies, government wildlife departments, and conservation and/or development oriented non-governmental organizations (NGOs). Few tools have been developed for and adopted by rural farmers and communities.

In southern Africa, FAO and Bio-Hub, a consortium of conservation agencies – the International Cooperation Centre of Agricultural Research for Development (CIRAD), the Worldwide Fund for Nature (WWF), the

African Wildlife Foundation (AWF) and the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) – have teamed up to assist local populations in dealing with human-wildlife conflict. With FAO support, Bio-Hub held a workshop in December 2008 to brainstorm ways of developing and implementing a community- and farmer-based, practically oriented approach to human-wildlife conflict mitigation. A tangible result has been the Human-Wildlife Conflict Toolkit, released in 2010 and currently being tested in southern and western Africa.

The toolkit is designed for use by extensionists working with local communities. Four four-day "training of trainers" workshops were organized in Zimbabwe between December 2009 and July 2010, involving extensionists, researchers, conservationists, private-sector representatives, workers from government and NGOs, local game scouts, village heads and other traditional leaders. The workshops were publicized through the Community-Based Natural Resource Management Network (www.cbnrm.net). In total, more than 200 toolkit prototypes were distributed during the workshops for preliminary field tests with local communities in Botswana, Gabon, Malawi, Mozambique, South Africa, Zambia and Zimbabwe.



Human-wildlife conflict is a growing problem where wildlife and human populations exist at close quarters: an elephant foraging in a garden

IGF/P. CHARDONNET

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The human-wildlife conflict toolkit

CIRAD



Fencing protects a watering point from Nile crocodile



Villagers scare wild animals with fire

The toolkit produced by Bio-Hub and FAO recognizes some of the challenges and gaps in implementing mitigation measures. It acknowledges that human-wildlife conflict is multifaceted and that some of the mitigation practices advanced to date are ineffective on their own over time. Therefore the toolkit presents tools and practices that can have great success when used in combination. It is designed not only to help protect people, their livestock and their crops from wild animals but, just as important, to safeguard wild animals from people.

The materials help communities identify control options in five colour-coded categories:

- awareness raising (blue);
- access prevention (green);
- translocation (brown);
- driving animals away (yellow);
- as a last resort, lethal control (red).

A booklet entitled "Individual animals and index to the tools" provides descriptions, photos and drawings of the 16 main problem animals, their typical behaviours and their spoor (tracks). Solutions vary according to whether the need is to protect people, villages, livestock, water or crops. The index identifies (by number) solutions in each of the colour categories, in columns according

to what it is the user needs to protect. Stencils direct users to the right column of solutions for their needs. Finally, a booklet of tools describes each colour-coded and numbered option in detail, including the technique, its advantages and disadvantages and also its cost effectiveness.

Some examples of solutions that may be effective in certain situations include:

- chasing elephants away from field crops with the trademarked "Mhiripiri Bomber"[®], a plastic gun that fires ping-pong balls containing a highly concentrated chilli solution at 50 m range (Le Bel *et al.*, 2010);
- using enclosures to protect fishermen or villagers from Nile crocodile – the animal causing the most human deaths in Zambia and Mozambique – at watering points;
- driving away crop-raiding hippopotamuses by shining a strong light in their eyes;
- investing in a guard dog or donkey to warn of the approach of predators and keep them away.

The hope is that in the long run, people and wildlife can live together and walk side by side

As a general strategy, the toolkit emphasizes conflict prevention through advance land-use planning, for example ensuring that crops are planted where they are less accessible to problem animals, and providing corridors for wildlife to go to and from water. Awareness raising and training in how people can live safely alongside wild animals also constitute a fundamental set of solutions.

The review and development of the toolkit is ongoing. A template for providing feedback and sharing additional strategies is being distributed through the workshop participants, and the toolkit is designed in such a way that new information can be inserted. Planned activities include the addition of CD-ROMs to the toolkit and the creation of an online version.



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