How can the sustainable development of rural populations be combined with biodiversity conservation in zones of substantial interaction between man and nature?

Trans-Frontier Conservation Areas (TFCAs) of southern Africa are complex socio-ecosystems in which African savannas are shared between traditional agricultural activities and African wildlife. For farming systems already fragile as a result of climatic, economic and political constraints, the interactions between people and the environment are often fraught with conflict (crop destruction by elephants, or poaching). Research is helping managing those conflicts and promote the sustainable use of natural resources by encouraging farming practices respecting the environment and biodiversity.

Partners

University of Zimbabwe > Departments of Geography and Environmental Science, Animal Science and Biological Science; Centre for Applied Social Science; Faculty of Veterinary Science; Tropical Ecology Programme.

National University of Science and Technology > Faculty of Forest Resources and Wildlife Management.

CNRS > Institut de l’écologie et de l’environnement.

CIRAD > Internal Research Units: ACiRS, AIDA, BSEF, GREEN; Joint Research Units: AMAP, INNOVATION, MOISA.

Beneficiaries

Livestock and crop smallholders on the fringes of conservation areas find solutions to their conflicts with wildlife in the parks (crop destruction, livestock predation, veterinary diseases and zoonoses) and are able to test sustainable ways of using natural resources.

Students, future management staff and researchers, from Zimbabwe and SADC, can build their skills in the whole range of disciplines and fields of use to agricultural development and the management and sustainable use of resources in the specific context of trans-frontier conservation areas.

The scientific community has published more than 80 articles in international journals and book chapters since 2007, most of which have students as their main author.

Associates

Zimbabwe > Agricultural and environmental technical services; animal health services; development and conservation NGOs (CAMPFIRE).

Southern Africa > Universities in South Africa, Mozambique, Zambia and Botswana; AHEAD network.

France and Europe > Numerous research and higher education establishments.
Expertise and technical skills

- Natural resource governance and sustainable management: environmentally friendly use and economic exploitation techniques that help conserve biodiversity.
- Agriculture and conservation in the semi-arid zones of southern Africa.
- One Health approaches to manage infectious diseases at the interfaces between man, livestock and wildlife (from the ecology of wild and domestic ungulate behaviour to analyses of the risks of zoonoses).
- Functional ecology in complex ecosystems, community and behavioural ecology, remote sensing, science of geography.

Some current projects

Strengthening of research capacity for management of protected areas and their periphery • RenCaRe, 2013-2015, MAE, € 500K

The aim is to support national structures and research organizations in Zimbabwe by setting up and managing a competitive research fund to support innovative projects and enable junior researchers working within the platform to take certificate academic courses, with the support of experienced researchers.

Delivering innovation and technology through the reinforcement of agricultural and multi-disciplinary research capacity for the benefit of small-scale farms in TFCAs • EU-DREAM, 2014-2017, European Union, € 2M

The project aims to (re)connect academic research and technical support services (agricultural, environmental and animal health services) with the private sector and small-scale local producers on the fringes of trans-frontier conservation areas. It trains future management staff from technical services and universities in the specific issues relating to these interfaces between man and nature within the framework of participatory, targeted research projects.

Geomatics technologies transferred to animal health services in three southern African countries • EU-GeosAf, 2013-2015, European Union, € 1M

This project trains units specializing in mapping and spatial studies within animal health services in Mozambique, Zimbabwe and Botswana, in order to improve the surveillance and control of animal diseases such as trypanosomiasis and tick-borne diseases. It associates technical training and field studies, and equips the units with the necessary equipment to ensure that they can work effectively.

A platform with some seventy researchers and teaching staff members and 70 Masters and PhD students trained or in training since 2007.

Zimbabwe
Pr. Eddie Mwenje,
Dean of NUST,
RP-PCP Chairman,
edmwenje@gmail.com

Michel de Garine-Wichatitsky,
CIRAD, UPR AGIRS,
Co-coordinator,
degarine@cirad.fr
Tel.: +263 4 33 24 84

Alexandre Caron
Cirad, UPR AGIRs
PP Coordinator
Tel.: +258 84 464 06 39

France
Marie-Noël de Visscher,
CIRAD, UPR AGIRS,
PP Correspondent,
visscher@cirad.fr

For further information
Project website:
http://www.rp-pcp.org/
CIRAD Regional Office
cirad.fr/

A platform is... a set of partners keen to work together; shared prospects and objectives; a commitment in terms of human resources, equipment and funding; a shared research topic; a specific geographical field; a range of skills and activities.

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