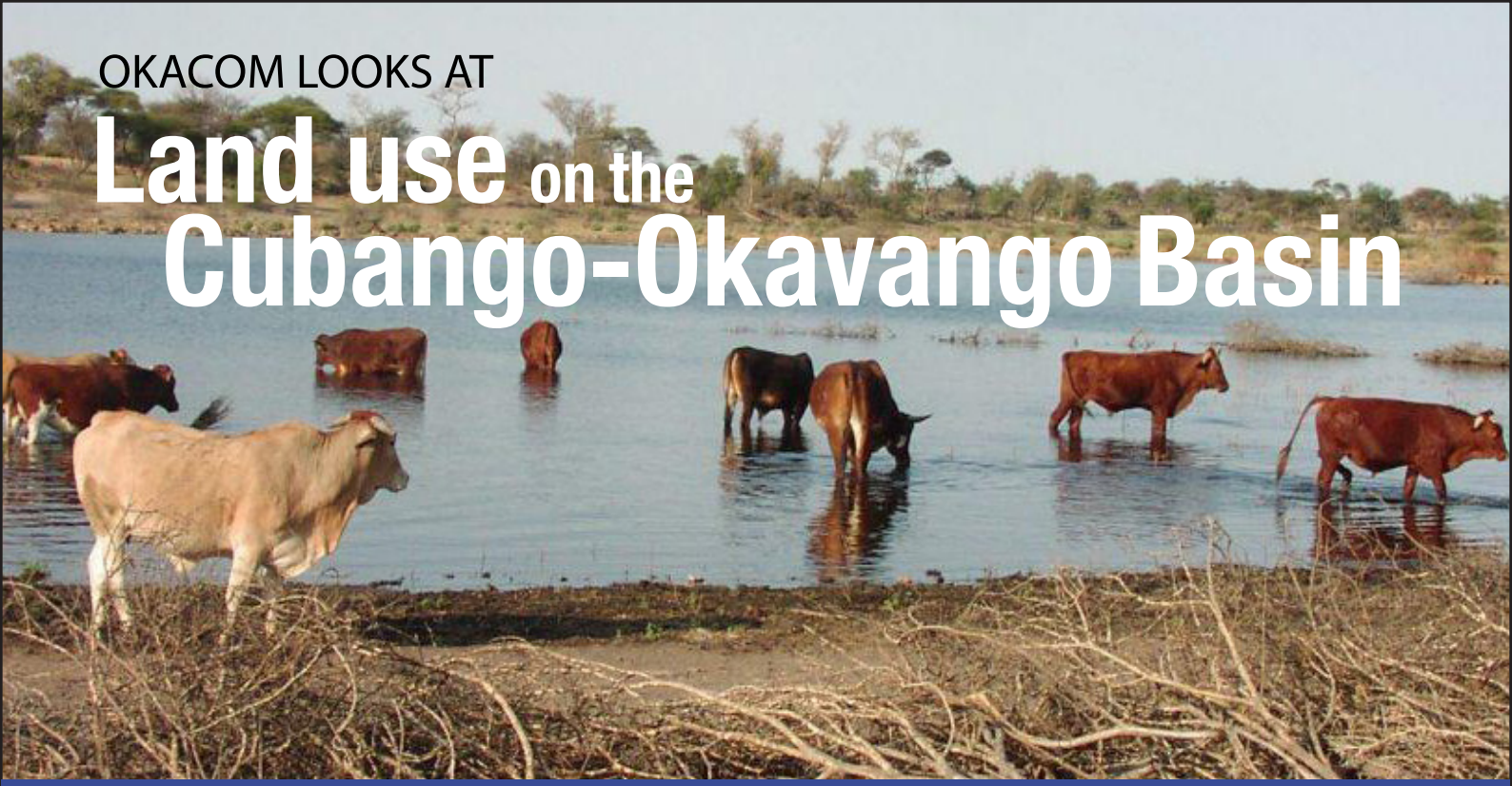
OKACOM LOOKS AT

Land use on the Cubango-Okavango Basin



Linked strongly to population growth, the impacts of land-use change is incremental and often irreversible

LAND-USE CHANGE is a driving force for changes in sediment dynamics, water quality and abundance and distribution of biota.

In addition, through deforestation land-use change has impacts on the characteristics of a body of water.

Despite the relatively low population densities in the Cubango-Okavango River basin, the changes in land-use and vegetation cover have been significant. There is increased demand for land for crops along the length of the river from the Angolan highlands to the panhandle and with increasing populations this trend will accelerate.

Satellite images of land use at three river sites over a 25-year period show a decline in upper basin forest cover adn ever-increasing crop areas in the lower riparian zones.

The use of fire to clear land is becoming more prevalent, which has an impact on composition and density of vegetation.

Live stock numbers are expected to increase substantially in Angola, Botswana and Namibia, leading to overgrazing and bush encroachment, resulting in a change in species composition from palatable perennial species to less palatable annual species.

OKACOM IS THE PRIMARY VEHICLE THAT CAN FACILITATE LAND-USE COOPERATION

Over the past 20 years OKACOM has facilitated the Member states to develop tools and instruments for joint management, primary of which is the joint basin-wide shared Vision of an economically prosperous, socially just and environmentally healthy development of the basin.

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The Permanent Okavango River Basin Water Commission

OKACOM LOOKS AT LAND USE

ISSUES ASSOCIATED WITH SEDIMENT TRANSPORT IN PREDICTIONS FOR THE CUBANGO-OKAVANGO RIVER

- The Increasing erosion in the Angolan highlands as a result of deforestation and cultivation of more land. As land is cleared and cultivated, more soil is eroded and carried down from the catchment into the river.
- There is thus a tendency for sediment levels to increase. It is evident from satellite images that natural erosive processes in the Cuito River sub-basin have been occurring over many years.
- The risk is that with increasing cultivation, such natural erosion processes will be enhanced. Not only will land areas be lost, but quantities of sediment in the river will increase.
- With accelerated erosion and consequent increase in sediment loads to the channels of the Cubango and Cuito Rivers, turbidity could increase, reducing light and dissolved oxygen, threatening aquatic habitats.

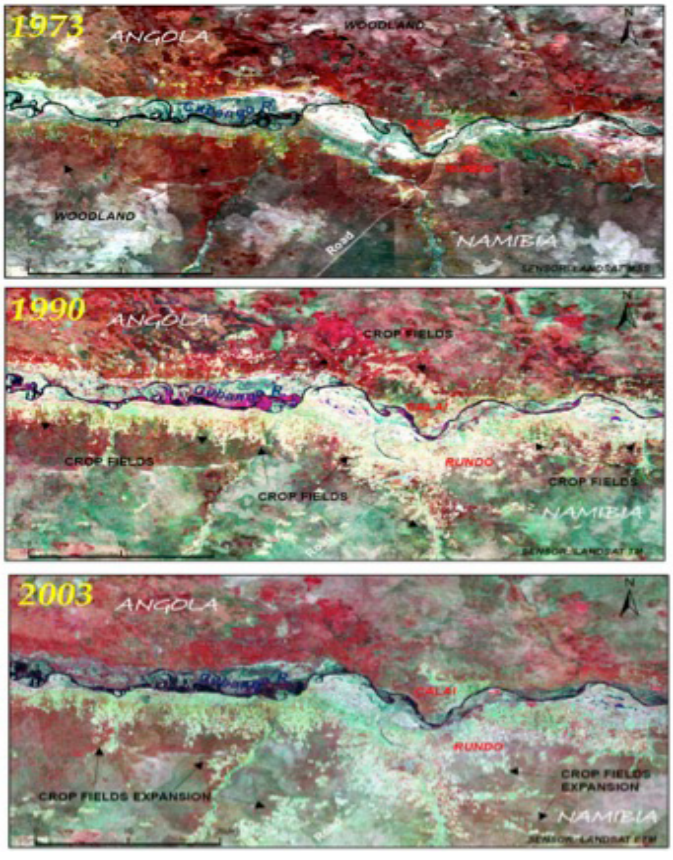
The progressive increase in the mosaic of croplands in different parts of the upper Cubango River

IN 1973, settlements and cropland were relatively small and isolated, as shown by the white patches among the overall red colouration, which indicates high vegetation cover.

IN 1990, the (white/light green) croplands had expanded markedly; covering much of the land area in the central part of the picture, and the earlier dense vegetation cover has more or less disappeared as woodlands have been cleared.

BY 2003, the crop field areas have been extended, although the woodland ridge between the Cutato and Cuchi Rivers remains relatively undisturbed.

RUNDU/CALAI LANDCOVER CHANGE



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