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People and the River

→ Socio-economics in the Basin: Sustainable Livelihoods:

Subsistence Farming and Artisanal Fisheries

Subsistence Farming

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▼ **Socio-economics in the Basin**

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Sustainable Livelihoods

→ **Subsistence Farming**

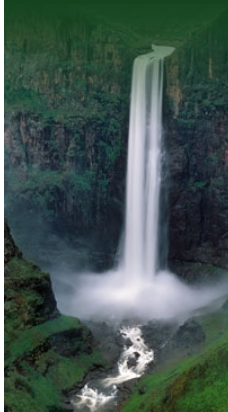
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Lesotho is primarily a country of subsistence farming, with most people growing food for their own consumption and where possible, maintaining small to medium sized herds of livestock (cattle and goats). Maize, wheat, and sorghum are the main crops, along with peas, beans, and potatoes. Most of the good farming areas are in the northwest lowlands, surrounding the capital of Maseru. The rest of the country is either too mountainous or generally too dry to produce high crop yields. These areas are also characterised by fragile soils, where pressures from increasing cultivation and grazing have led to degradation of fields and pastures. Loss of vegetative cover from firewood removal, animal browsing and overgrazing has led to widespread and obvious gully erosion of hillsides (FAO 2005).

Food production in Lesotho has been shrinking for years due to erratic rainfall and soil erosion, while HIV prevalence has weakened subsistence farming communities (WFP 2009). Lesotho imported an estimated 70% of its cereal in 2004, mostly from neighbouring South Africa.

In Botswana, Namibia and South Africa there is both a commercial agricultural sector and a traditional, mainly subsistence, sector. The portion of Botswana that falls within the Orange-Senqu River Basin contains rural settlements mainly reliant on subsistence livestock farming. Overgrazing of fragile ecosystems in the Kalahari is resulting in less palatable plant species becoming established. This is because utilisation of land by livestock production has increased from 13 000 km² in 1950 to around 32 000 km² by 1990, enabled by exploitation of groundwater resources - See information on the [Tsabong Groundwater Resource Project](#) provided in the [Groundwater](#) section.

For this see the following box, which documents a worrying development already in the late 1990s:

Box: Desertification in Botswana

Botswana is one of the most seriously desertified countries in the Kalahari Region of Southern Africa. Problems include overstocking, large-scale vegetation depletion and changes, especially around livestock water points, and accelerated soil erosion by wind, sheetwash and gullying. Part of the desertification problem is natural in such a semi-arid and drought-prone environment. But the greater part is due to pressure of commercial exploitation of a fragile ecosystem. Owing to the increasing pressure of the already crowded communal grazing areas of the east, owners of large herds have, in the last three decades, been moving westwards, establishing permanent cattle posts in the Kalahari Sandveld and spreading conditions of overstocking and degradation of vegetation on a large scale. The move into the Kalahari sandveld has been facilitated by the Tribal Grazing Lands Policy (TGLP), introduced in 1975, which encouraged owners of large herds to move them out of the crowded settlement areas, to the sandveld where they would be given exclusive rights to land for fenced commercial ranches. Impetus was also provided by the impact of modern science and technology that provided veterinary care and new sources of water from deep boreholes. Recent satellite imagery reveals that there has been considerable uncontrolled development of cattle posts in areas set aside for wildlife management, resulting in the emergence of land use conflicts and extensive degradation of the tree savannas.

Source: Darkoh 1997



Subsistence agriculture in Namibia.

Source:DRFN 2008
(click to enlarge)

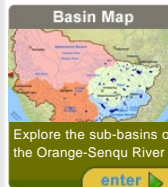


Subsistence agriculture in Lesotho approximately 60 km north-east from Maseru; note the dongas (gully formations) in the foreground.

Source:Hatfield 2008
(click to enlarge)

About 70% of the Namibian population depends on agriculture, mostly subsistence farming in communal areas. Like Botswana, Namibia is also struggling with land degradation due to overgrazing, which is further compounded by agricultural practices that result in depletion of soil nutrients. Livestock farming dominates agricultural practices in the Orange-Senqu River basin part of Namibia. In South Africa also, subsistence farming is mostly restricted to communal lands or the former homelands. Up to 2,5 million households subsist in this sector, relegated to farming on 13% of available agricultural land (OECD 2006).

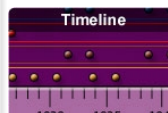
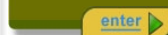
In the lower Orange-Senqu, stock raising, mainly of goats and sheep, is important to the local economy. Land is owned communally and access to almost all grazing



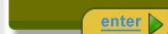
Explore the sub-basins of the Orange-Senqu River



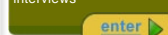
Tour video scenes along the Orange-Senqu River related to People and the River



View a historical timeline of Orange-Senqu countries, including water agreements & infrastructure construction



Journey along the Orange-Senqu River through images and interviews



is open to the members of the associated communities. Households in other parts of the basin, normally women-headed, practice labour-intensive small-scale agriculture.

Artisanal Fisheries

Artisanal fisheries can range in size from little more than active subsistence fishing, where part of the catch is regularly sold, to much larger operations. Livelihoods based on artisanal fishing can be a reflection of activities that have traditionally been part of a family or other social group and are now organised within local cooperatives. At the more informal end of the artisanal fishery, livelihoods are based on the same type of traditional equipment, skills and knowledge that support the subsistence fishery, with products that are sold and consumed as part of the family economy. The middle range of artisanal livelihoods is somewhat more market-focused, but it is at the upper end of the fishery where the major livelihood shift takes place.

Artisanal freshwater fishing along the Orange River is limited to the Richtersveld area of the Northern Cape Province of South Africa, the region around Aussenkehr in Namibia and Lesotho. Artisanal fishing is carried out for food security and livelihood purposes; subsistence fishing differs from artisanal fishing because it is not part of the cash economy (AFIRM 2009).

Indigenous freshwater fish diversity in the Orange River is poor despite the river's large size; only fifteen indigenous fish species have been recorded to date. The most common indigenous species of fish are yellowfishes. Exotic species introduced are: Rainbow trout, Brown trout, Common carp, Largemouth bass and Bluegill sunfish. In Lesotho fishing is exclusively subsistence, and targets both indigenous and exotic species.

In addition to these freshwater instream fisheries, there are some very localised examples of small scale aquaculture in the region, such as Naute Aqua, located at the [Naute Dam](#) in Keetmanshoop, Namibia.

Next: Ecotourism ►