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Cape Town's trade in wild medicines: ecological threat or essential livelihood resource?

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Cape Town is the urban centrepiece of a globally unique and highly diverse natural environment which should take priority in conservation management. But these biological assets also directly serve a local market of over 5 100 traditional healers and herbalists. The author discusses this important informal economy, business and cultural activity in the face of the broadening threats to conservation in the region, and the growing potential tension this presents in terms of policy and management.

Introduction

The mountains, valleys, plains, beaches, agricultural and open spaces in and around Cape Town are crammed with approximately 3 000 species of plants, of which 70% are found nowhere else in the world. Residents have access to a range of protected land and marine nature reserves, beaches, parks and road reserves. These areas are revered by many a middle-class Capetonian – hikers, botanists, birdwatchers and the like – and have gained international recognition for their uniqueness and beauty. In addition, the natural splendour has given rise to a profitable tourist industry.

However, not all of Cape Town's approximately 3.7 million inhabitants necessarily share such perspectives. Nearly 40% of the residents of Cape Town exist on the economic margins, including those living in more than 130 000 informal dwellings (shacks) in approximately 230 informal settlements located largely on the Cape Flats (City of Cape Town, 2011). For many of these people the importance of 'Cape nature' is very different. Thousands have created

livelihoods around the (formally illegal) wild harvest and informal trade of locally growing plants, animals and other natural materials.

These practices mostly relate to economic and/or cultural needs. Many people gather such species for cash-based informal trade – in townships and street markets and at traffic intersections – as foods, building materials, firewood and cut flowers. Others serve the significant cultural business of traditional healing based on wild-harvested medicine. Cape Town is home to a wide variety of traditional healers, from herbalists such as Rastafarians and the Xhosa *amaxwele*, to spirit diviners called the *amagqhira* (*sangomas*), who specialise in resolving culturally-related problems.¹ Such practitioners rely heavily on materials harvested in the wild.

The use of wild-harvested resources by the traditional healers trading in the City may increasingly clash with the internationally-important conservation objectives of Cape Floristic Region (CFR²). For example, Cape Town Nature Conservation reported the confiscation from arrested illicit harvesters of over 16 000 bulbs of *Tulbaghia capensis* (wild garlic), destined for local and regional herbal-medicinal markets, from the 300-hectare Tygerberg Nature Reserve in 2010/11.

Given this potential for conflict, we set out to document this wild-medicine economy to better understand its nature and its implications for both biodiversity and the informal livelihood and business activities enabled by this economy.

The scope of the harvest and trade of wild resources in Cape Town

In 2011 and 2012 we conducted a census of ‘wild resource’ enterprises in six Cape Town working-class suburbs (Delft South, Capricorn, Overcome Heights, Seawinds, Sweet Home Farm and Imizamo Yethu). The investigation revealed over 100 practising traditional healers in these suburbs. All of them harvested and traded wild-gathered medicinal plants and animals that had been collected locally and regionally. We documented the demographics of 59 of these individuals, their income and business challenges, the species involved, the quantities collected,

¹ Similar situations exist elsewhere in South Africa (Mander *et al.* 2007; Botha *et al.* 2004; Dold & Cocks 2002)

² The Cape Floristic Region (CFR) comprises an area of nearly 90 000 km², including most of the Western Cape and the Klein Karoo, and the western coastal parts of the Eastern Cape (up to Port Elizabeth). It includes eight conservation areas, including Table Mountain National Park, the Cederberg Wilderness Area and Baviaanskloof. For a map, see: http://www.conservation.org/where/priority_areas/hotspots/africa/Cape-Floristic-Region/Pages/default.aspx

and the locality of the harvest. We interviewed law enforcement staff and obtained data from City nature conservation officials.

The investigation revealed that the harvest of wild plants for the traditional medicine trade is one of the most culturally entrenched and widespread practices in townships and informal settlements. Compared to other groups that use natural resources, such as gatherers of cut flowers, firewood and food, there is a relatively high number and a wide variety of traditional healers, all of whom stressed the great importance of wild-harvested medicines to them.

The scale of the local harvest and trade was surprising. At least 250 plants from 70 different families are harvested locally for all purposes (Petersen *et al.* 2012). Of these, 52% are utilised for cultural or medicinal purposes. Furthermore, 198 animal species are locally extracted, of which 33 (including virtually all the indigenous reptiles) are harvested for processing into traditional medicines (with the majority of other species harvested being marine organisms used as bait or food).

Subsequently, the research findings from the sample were extrapolated, using demographic data from the City of Cape Town and census data from Stats SA (2011) to indicate the scale of this trade in the City (documented in Petersen *et al.* *pending*).

The value of the wild-medicine economy in townships in Cape Town

Based on our extrapolations, we estimate that some 5 100 full-time practising traditional healers operate within the city's 232 township settlements. These Cape healers trade an estimated 1 300 tonnes of biological plant material per year. (This is similar to the estimated 1 500 tonnes traded annually in Durban). This material is collected and traded from across South Africa to be sold as traditional medicines in the city. Of this, approximately 260 tonnes is harvested within the City boundaries, and a further 320 tonnes per year from the broader Western Cape. The ecologically unique CFR thus contributes approximately 45% (by weight) of the total trade in medicinal plants that occurs in the City.

Healers do not rely only on local sources. For example, the Xhosa *amagqirha* and *amaxwhele* source approximately 85% of their medicinal materials from beyond the Western Cape – largely from the Eastern Cape. Conversely, Coloured Rastafarians (invariably linked to the Khoi traditions of herbalism) rely heavily on CFR biological materials with 72% of their medicinal supplies sourced from within the region. Nevertheless, the main groups of healers target very similar species for the manufacture of medicine, even if they have been obtained from different regions.

Based on the number of healers, the volumes traded and the prices obtained, it is estimated that in Cape Town's townships the total trade in traditional medicines is worth approximately R170 million per year. Plant medicines sourced from the CFR comprise approximately R75 million of this total, which includes material valued at approximately R35 million collected in Cape Town alone. (This amount is more than the annual municipal conservation management budget of approximately R30 million.) This direct 'use value' is not included in typical local economic analyses and points to a considerable undervaluation of natural capital in Cape Town.

Conservatively estimated, the business activities of the traditional healers in Cape Town's townships provide direct income for approximately 17 300 people (based on average household size). Thus, access to the relevant natural resources is an important factor in the economic survival of these people and their families, most of whom are poor. It is also worth noting that the wild medicine sector empowers women – it is estimated that more than 55% of *amagqirha* are female. Our research also reveals that the trade provides between 60% and 80% of traditional healers' household income, creating a heavy reliance on access to wild-medicine resources (see Petersen *et al.* pending A).

The ecological effects of harvesting local wild medicine

At first glance, harvesting from nature in the area around Cape Town does not appear to have a noticeably negative impact on natural areas. On average, the local harvest of all 5 100 resident healers is less than one kilogram of wild medicinal material per healer per week. However, as evidenced in Tygerberg Nature Reserve, for example, relatively minor individual harvests may have a large collective impact if key medicinal species were to be selectively (or excessively) collected by many individual harvesters.

Petersen *et al.* (2012) highlight that over 70% of locally harvested plants are either killed or reproductively maimed during the collection process; 28% of all plant species collected in the city have been recognised as 'vulnerable to endangered' by the World Conservation Union Red List. An example is the harvesting of tortoises, where high prices have led to high harvesting rates. (Tortoises' vital organs are in demand in the traditional medicine trade.) City law enforcement data revealed a spike on 2010/11 in the harvesting of tortoises within City reserves.

Local harvesting also is unevenly spread throughout the City: collections are more clustered in conservation areas that are close to lower-income residential areas such as the Cape Flats, or

within the Table Mountain National Park adjacent to economically marginalised informal settlements. This can have a greater effect on the ecology in a particular area.

That said, it is important not to view the potential effect on the ecology of such selective removal of natural resources for medicinal purposes in isolation. Many other urban activities have similar effects. These include property development and other urbanisation projects (where over 3,533 ha of land in and around the city were developed into housing projects and wine estates between 2002 and 2007: Geyer *et al.* 2009), as well as climate change and exotic weeds, which all are major threats that could transform city ecosystems (Rebelo *et al.* 2011).

Policy challenges: whose interests, whose ecosystem, whose survival?

Current trends in the use of resources and in the growth of the population of the City suggest that unsustainable rates of collecting natural resources in protected areas are likely in the future. This presents a considerable challenge for conservation officials. Policymakers need to balance the priorities of socio-economic development (in a largely informal economy), the cultural requirements of large sections of the local population and limited control and influence over thousands of wild resource harvesters, whilst maintaining ecosystem integrity in key natural habitat areas.

Increasing law enforcement and arresting marginalised people for transgressing conservation regulations are likely to alienate nature conservation authorities – who already struggle to keep watch over natural habitat areas – from the local population. It is also unlikely to stop illegal harvesting and trade.

Indeed, authorities should accept and prepare for the fact that the rate at which natural resources are used will increase in future. Another solution that builds an inclusive and sustainable conservation sector must be found. Gaining common ground between parties with divergent perspectives (preservationist outlooks supported by law versus a utilisation outlook driven by cultural and economic necessity) will not happen quickly or easily. It would require acknowledgement that there are alternative user communities of people with legitimate needs in the City, despite the formal illegality of many harvesting actions. This will demand wise leadership in handling delicate situations and trade-offs.

The development of inclusive solutions will require good information. First, a well-grounded shared understanding of sustainable harvest rates for commonly targeted species is necessary, coupled with projected harvesting rates based on a careful analysis of the likely economic and cultural demand of the healers and the consumers of wild medicine.

Secondly, it is important to understand the different motives of wild-resource harvesters – for example, culturally motivated traditional healers in contrast to commercial operators – since they may react differently (or unexpectedly) to policy interventions. Policymakers should not make assumptions in this respect.

Thirdly, new sources of wild-medicine materials should be probed. Options may include using nursery- or farm-grown materials to replenish harvested species in wild habitats (even if they may be illegally harvested again), or piloting the local farming of medicinal plants on suitable land to which there would be free access. In specific contexts, growing selected species in commercial nurseries could bolster market supply. In addition, permits and other economic or management tools may be important in legitimising the harvesting of plants and animals.

Conclusion

In terms of its biodiversity, the conservation areas in Cape Town are an asset of global importance which rightfully demand strict ecological protection for the sake of current and future generations. However, the natural resources in these habitats also represent a growing competing interest in the form of wild medicinal (and other) products that are culturally *and* economically critical to the lives and livelihoods of many thousands of City residents.

While the harvesting of natural resources in the city is largely uncontrolled at present, smart interventions could enhance conservation efforts without undermining the cash economy of wild medicines – by finding ways that benefit both the conservation sector and the economically marginalised communities.

A great deal of mutual understanding will need to be developed amongst all participants and interested parties. An essential element of successful interventions would be to involve users and producers of traditional medicines in the planning, design and implementation of policy measures.

References

- Botha, J., E. T. F. Witkowski, & C. Shackleton. 2004. Market profiles and medicinal plants in the Lowveld, South Africa. *Environmental Conservation* **31**(1):38-46.
- City of Cape Town (2011). *City statistics*.
<http://www.capetown.gov.za/en/stats/Pages/CityStatistic.aspx>
- Dold, A. P. & M. L. Cocks. 2002. The trade in medicinal plants in the Eastern Cape Province, South Africa. *South African Journal of Science* **98**:589–597.

- Geyer, H., B. Schloms, D. du Plessis, and A. van Eeden (2011). Land quality, urban development and urban agriculture within the Cape Town urban edge. *African Journals On Line* (59). <http://www.ajol.info/index.php/trp/article/viewFile/77220/67674>.
- Mander, M., L. Ntuli, N. Diedrichs, & K. Mavundla. 2007. *Economics of the traditional medicine trade in South Africa*. FutureWorks Report for Ezemvelo KZN Wildlife, South Africa.
- Petersen, L. M., A.J.E. Charman, E. J. Moll, R. Collins, and M. T. Hockings (*pending*). The scale of trade in Cape Town's informal economy of traditional healing and wild harvested medicine. *Society and Natural Resources*.
- Petersen, L. M., E. J. Moll, R. Collins, and M. T. Hockings (2012). Development of a compendium of local, wild-harvested species used in the informal economy trade, Cape Town, South Africa. *Ecology and Society* **17**(2): 26. <http://www.ecologyandsociety.org/vol17/iss2/art26/>
- Petersen, L. M., E. J. Moll, R. Collins, and M. T. Hockings (*pending A*). Using value chain analysis to understand consumer demand for wild harvested traditional medicine in Cape Town's informal economy. *Local Environment*.
- Rebelo, A. G., P. M. Holmes, C. Dorse, and J. Wood (2011). Impacts of urbanisation in a biodiversity hotspot: Conservation challenges in Metropolitan Cape Town. *South African Journal of Botany* **77**: 20-35.