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POLICY BRIEF

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Natural resource products contribute to poverty mitigation amongst urbanising communities in sub-saharan Africa

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1. URBANISATION IN SUB-SAHARAN AFRICA: CHANGING THE LOCUS OF POVERTY

Urbanisation is a global phenomenon that is changing the face of the Earth, as well as how people earn a living and secure their livelihoods. In 2006 the number of urban people in the world surpassed the number of rural people, and this gap will continue to grow. In only 16 years (by 2030) just under two-thirds of the world's people will be urban dwellers. Whilst most of the developed world and large parts of Latin America already have more than three-quarters of their populations living in cities and towns, most countries in Asia and sub-Saharan Africa are still catching up. This means that they are experiencing massive migrations from rural to urban areas as rural people wish to swap the insecurities of rural living for the allure of secure employment and better services for health, education, sanitation and transport in towns and cities.

Sub-Saharan Africa (SSA) is the most rapidly urbanising region of the globe. According to UN-Habitat, in 1990, only 28 % of the region's inhabitants lived in towns and cities; that increased to approximately 32 % in 2001 and 41 % in 2010. The size of the urban population is likely to surpass the rural one around 2025. Contrary to popular belief, most urban residents in SSA (and globally) live in small towns rather than massive megacities; with just over half living in towns of less than 200,000 people and 78 % living in towns of less than 500,000 residents. Only 14 % of urban dwellers live in cities of more than one million people. Many new urban households maintain strong links to relatives and clans in rural areas, with circular migration patterns emerging as the urban transition takes place over several decades.

The implications of this extremely rapid urbanisation in SSA countries for livelihoods and poverty are widely debated. UN-Habitat highlights a relatively unique aspect of urbanisation in SSA as being the accompanying high rate of growth in informal settlements or slums. In other words, not all rural migrants to towns and cities find secure incomes or shelter. Some slum areas have become permanent features where inter-generational poverty is reproduced. Although urban areas are producing an increasing share of national wealth in SSA countries, some argue that slowly the nexus of poverty is shifting towards urban areas. Rates of poverty are high in rural areas of SSA, but migration and internal population growth means that in some countries the number of urban poor almost matches the number of rural poor, and it is likely to grow. The informal economy contributes an average of 40 – 45 % of total urban GDP, which is higher than any other region of the world.

2. NATURAL RESOURCE USE IN URBAN LIVELIHOODS: THE UNSEEN CONTRIBUTION

2.1 Extent of use of non-timber forest products use by urban communities

Taking a stroll through any of the poorer sectors in African cities immediately reveals the use of many different types of natural resources. The most obvious are usually the use of firewood or charcoal for energy, timber for construction of houses, shelters or fences, and thatching fibres (grass, reeds, palm fronds) for roofing or screening. A closer look may well reveal inhabitants carrying fodder for their livestock or fruits collected from various urban or peri-urban spaces. Local markets are likely to reveal vendors offering wild fruits, indigenous vegetables, bushmeat, medicinal plants and traditional or cultural artefacts. The prevalence of use can be significant. For example, well over 70 % of urban dwellers in SSA use firewood or charcoal as their primary form of energy for cooking. Use of medicinal plants is commonplace, even in relatively rich countries and cities. The recent random household survey by Schlesinger et al. (2015) (1,158 households) along the rural-urban continuum of six medium-sized towns in five SSA countries showed that more than one in five urban and peri-urban households use firewood, wild fruits, vegetables, mushrooms, honey and insects, bushmeat, medicinal plants and brooms made of wild harvested natural resources (grasses, reeds, palm fronds). Significantly, the prevalence of use did not decline with increasing duration of residence in urban areas, i.e. it is not restricted to new migrants to urban centres.

Carrying fodder for urban livestock

2.2 *Collection of natural resource products from urban and peri-urban places*

The above section shows that many urban and peri-urban households use natural resources as part of their everyday living. However, in terms of their role in contributing income (cash or non-cash) to the household, it is necessary to disaggregate those who procure them via purchase from those who either collect or grow their own. The same Schlesinger et al. (2015) dataset shows that self-collection from urban spaces and the peripheries of towns is high.

Product	Proportion of urban and peri-urban households collecting for themselves
Firewood	29%
Medicinal plants	25%
Edible insects	20%
Indigenous vegetables	17%
Indigenous fruits	15%

2.3 *Earning cash income via trade*

Many urban households also benefit from trade in natural resources through selling wild foods, firewood, medicinal plants and crafts on the sidewalk or in local markets. These products might have been harvested within the city itself, the peri-urban periphery, or transported in from rural areas. The proportion of households trading is highly variable between and within different towns. The Schlesinger et al. (2015) data revealed that just under one-third of a random sample of all households across the urban-rural continuum sold at least one natural resource. The most common were wild vegetables (6.8 % of households), edible insects (6.8 %), indigenous fruits (4.4 %), wild fish (3.3 %), wild mushrooms (3.1 %), bushmeat (2.4 %) and medicinal plants (2.3 % of households). The income earned is equally variable. For full-time traders it can be the major cash income source for the household. For part-time traders it is useful supplementary income.

2.4 *Contributions towards easing urban poverty*

The cash and non-cash income derived from the widespread use and trade of natural resources must ease poverty of some households to some degree. However, there has only been limited consideration of this in research and policy fora, other than the recent analyses of Davenport et al. (2011), Kaoma and Shackleton (2015) and Ward & Shackleton (2015), all from South Africa. These different studies show that cash and non-cash income to urban households from use and sale of natural resources can be highly variable, typically somewhere between 10 – 20 % of income. Importantly, each study also determined the proportion of urban households that would fall below the poverty line if such natural resource income was unavailable, which is about 2 - 9 % more households. Given that South Africa has generally higher formal incomes than most other sub-Saharan countries, then the proportional contribution of these products to overall income is therefore likely to be a lot higher in other SSA countries.

Town	% total hh cash and non-cash income from natural resources	% increase in number of hhs falling below poverty or indigence line if natural resource income is removed
Zeerust	26.8	10
Fort Beaufort	17.9	9
Tzaneen	17.3	8
Bela Bela	16.1	6
Grahasmtown	10.9	9
Bathurst	10.3	7
Phalaborwa	1.2	7
Queenstown	0.5	1

SECURING NATURAL RESOURCES IN URBAN LIVELIHOODS: POLICY RECOMMENDATIONS

The above sections have shown that natural resource use amongst urbanising households is (i) widespread, (ii) of value, (iii) can ease poverty for some and (iv) hardly recognised by most SSA urban planning professions and municipal operations. Therefore, there is a policy vacuum in this respect and in some instances there are antagonistic policies that constrain or undermine the value and poverty mitigation benefits offered by natural resources. We briefly introduce nine policy recommendations below.

1. Zonation planning must identify and secure natural areas

Most urban areas in SSA have ample green space. This includes both undeveloped remnant lands, as well as formal parks. The former may be used for a variety of proposes and sooner or later may be converted to infrastructure or buildings. The latter are largely designated for recreation and aesthetics. In terms of promoting availability of natural resources for urban livelihoods, it is important for municipalities to ensure that:

- there is sufficient urban green space measured by either unit area targets per person or a percentage of the town surface area
- there is a viable mix of natural and stylised green spaces
- such green spaces be formally designated and secured against encroachment and development
- as cities expand, areas of natural vegetation, treed areas and waterways on the periphery should be secured
- green spaces are designed to serve multiple functions and thereby offer multiple ecosystem services and benefits.

2. Large trees should be retained when infrastructure and housing developments occur

At a finer scale, common practice is that when new infrastructure and housing developments are planned and constructed, the site is cleared with bulldozers and all trees and shrubs removed. This removes sentinel trees from the landscape which could be hundreds of years old and offer numerous ecosystem services. During site visits, planning authorities should identity and mark large trees that should be retained and not removed during the construction phase. Contractors should be required to not remove or damage the designated trees during construction.

3. Re-evaluate bylaws against urban foraging

Although useful resources can be found throughout every city, many cities have bylaws against harvesting, collection or urban foraging. These laws or policies need to be reconsidered and, where possible, removed. Foraging should be permitted in natural areas, whereas in some aesthetic parks it may be limited to non-destructive harvesting. If required, the offtake can be limited by prescribing the types of tools that may or may not be used during harvesting activities.

4. Scale up tree plant planting in public spaces

Following international practices, the need for trees in urban spaces is gaining ground in SSA cities and towns. Historically and currently, planting is prioritised along the main arterial roads and within the central commercial district, as well as in the more affluent residential areas. It is necessary to scale the planting of trees up and out, so as to embrace all neighbourhoods and urban spaces. Trees in the affluent suburbs are for aesthetics; trees in poorer suburbs are for aesthetics and for life. Municipalities need to ensure sufficient budget for tree propagation, planting and maintenance, including cover for all areas of the city.

5. Street width must be sufficient to accommodate trees

A key constraint in many densely populated areas is that the width of streets and adjacent sidewalks (pavement) is too narrow to accommodate the planting of trees on one or both sides. This is especially so in poorer, high density suburbs. Whilst small-statured species can be used, there must be sufficient space for pedestrians to be able to walk unhindered along the street. It is therefore necessary that city plans and regulations ensure that pavements are sufficiently wide to allow for trees.

6. Plot sizes must be sufficient to accommodate food gardening and fruit trees

If private homestead plots are of sufficient size, many households can plant or retain useful species, particularly ones that provide food. If plot sizes are too small this is not possible. This is a planning issue and can be addressed by guaranteeing that plot sizes are sufficiently large to allow for some productive gardening and retention of useful trees


Orange trees as street trees


Urban street trees


Collecting firewood in an urban park


Apple trees in an urban park

species if the residents desire. If this is practically difficult in some settings, then designating areas for allotment or communal gardens and woodlands can help local livelihoods. Providing trees at low cost to households can also promote urban greening and the benefits it provides.

7. Formal tree planting initiatives in public spaces should include fruit tree species

Tree-lined boulevards are generally seen as attractive. And boulevards lined with fruit trees are edible too. Why shouldn't fruit trees be included in plantings in public areas? Indeed, they are. Many cities in the Mediterranean countries have streets lined with orange trees, even though not all are the prime edible variety. Brisbane (Australia) has streets planted with macadamia nut and Vancouver (Canada) is planting a variety of fruit and nut species in parks and along streets. Some cities in India have planted mangoes and figs, whilst the wild plum is a common street tree species in many towns in the Eastern Cape of South Africa. The Kilakila area of Port Moresby (Papua New Guinea) is lined with tropical almond, mango and coconut. Planting of fruit tree species provides fruits for urban residents, tourists, birds and small fauna. Some consider fallen fruit as unsightly and messy, but if the fruit is harvested by residents this is not a concern. If local residents do not harvest all the fruits then local entrepreneurs can be contracted to harvest the remainder for making jams, chutneys or drying, thereby providing employment and income.

8. Informal sector vendors should be encouraged

Whilst it is clear that urban residents do make extensive use of 'wild' resources, many of them purchase the required goods from informal markets and vendors. Yet, in many cities authorities place high registration fees on such vendors, or limit where they can operate. Both of these actions undermine the livelihoods of the vendors, as well as the supply of preferred goods and resources to urban consumers. Having more enlightened policies around informal vending can benefit both parties and help ease income poverty. It is also an opportunity to work with vendors around resource sustainability.

9. Household income surveys must account for own consumption of natural resources

An established facet of good policies and strategies is that they are based on solid information and insight. Therefore, to catalyse sound policies for natural resource use by urbanising communities, it is necessary that policy-makers and authorities have appropriate information about the extent and nature of resources used and their role in alleviating poverty. Thus, use of home grown or locally collected resources should be part of local household income surveys.

FURTHER READING

1. Davenport, N., Gambiza, J. & Shackleton, C.M. 2011. Use and users of municipal commonage around three small towns in the Eastern Cape, South Africa. Journal of Environmental Management, 92: 1149-1460.
2. Davenport, N.A., Shackleton, C.M. & Gambiza, J. 2012. The direct use value of municipal commonage goods and services to urban households in the Eastern Cape, South Africa. Land Use Policy, 29: 548-557.
3. Kaoma, H. & Shackleton, C.M. 2014. Homestead greening is widespread amongst the urban poor in three medium-sized South African towns. Urban Ecosystems. DOI 10.1007/s11252-014-0362-3.
4. Kaoma, H. & Shackleton, C.M. 2014. Collection and use of urban tree products by households in poorer residential areas of three South African towns. Urban Forestry & Urban Greening, 13: 244-252.
5. Schlesinger, J., Drescher, A. & Shackleton, C.M. 2015. Socio-spatial dynamics in the use of wild natural resources: evidence from six rapidly growing medium-sized cities in Africa. Applied Geography (in press).
6. Shackleton, C.M., Hebinck, P., Kaoma, H., Chishaleshale, M., Chinyimba, A., Shackleton, S.E., Gambiza, J. & Gumbo, D. 2014. Low-cost housing developments in South Africa miss the opportunities for household level urban greening. Land Use Policy, 36: 500-509.
7. Shackleton, S.E., Chinyimba, A., Hebinck, P., Shackleton, C.M. & Kaoma, H. 2015. Multiple benefits and values of trees in urban landscapes in two small towns in northern South Africa. Landscape & Urban Planning (in press).