

Supplementary files

Table S1. Dominant and prominent woody species found and utilised within the study area

| Species | Common Name | Conservation Status | Common use | References |
|---------------------------|-------------|---------------------|--|------------------------|
| <i>Adansonia digitata</i> | Baobab | Least Concern | Fibrous bark is used to make various useful items such as mats and ropes, fishing nets, fishing lines, sacks as well as clothing. It is also believed that a man who drinks an infusion of the bark will become strong. Worshipped as a symbol of fertility. Leaves are said to be rich in vitamin C, sugars, potassium tartrate, and calcium. Seeds are also edible and can also be roasted for use as a coffee substitute. Fallen flowers are relished by wild animals and cattle alike. | Foden & Potter (2005a) |

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|--|------------------------|---------------|--|--|
| <i>Boscia foetida subsp. rehmanniana</i> | Smelly shepherd's tree | Least Concern | The root is pounded to make porridge. It is commonly used as a substitute for coffee or chicory. The root is also used to make a beer and to treat haemorrhoids. The leaves are nutritious and are often browsed by cattle, although the milk is then said to be tainted. An infusion of the leaves is used to treat eye infections in cattle. The fruits are used in traditional dishes and the flower buds as caper substitutes in pickles. It is said that if the fruits wither before the millet crop is ripe, the harvest will be a failure. Household utensils are made from the wood. If the wood is burnt, it is believed that cows will produce only bull calves. | Foden & Potter (2005b) |
| <i>Commiphora tenuipetiolata</i> | corkwood | Least concern | Medicinal bark use and used traditionally for soap. Carving household items and ornaments | Foden & Potter (2005d) |
| <i>Commiphora glandulosa</i> | Tall common corkwood | Least concern | Carving household utensils and ornaments. Fencing and game graze on this tree. stores plenty of water in the roots and stem and humans chew the soft heartwood to rehydrate | www.tropical.theferns.info |
| <i>Commiphora viminea</i> | Red-stem corkwood | Least Concern | | von Staden (2017) |

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|--|----------------------------|---------------|--|------------------------|
| <i>Commiphora mollis</i> | Velvet-leaved Corkwood, | Least Concern | | Foden & Potter (2005e) |
| <i>Commiphora africana</i> | African Myrrh | Least Concern | | Foden & Potter (2005f) |
| <i>Sclerocarya birrea</i> subsp. <i>caffra</i> | Marula | Least Concern | <p>Traditional healers use the hard nut in their divining dice. Powdered bark is used to treat pregnant women. Bark treats dysentery, diarrhoea, rheumatism and has a prophylactic effect against malaria. Excellent remedy for haemorrhoids. Laxatives. Treatment of gonorrhoea. In the former homeland of Venda, it was a criminal offence to cut down a living tree of this species. The wood is used for furniture, panelling, flooring, carvings, and household utensils like spoons. The inner layer of bark makes a strong rope. Drums and yokes for certain animals are made from the wood of this tree. Fruit is edible, eaten either fresh or made into a delicious jelly. It also makes alcoholic beer known as Mukumbi by the VhaVenda people.</p> | Williams et al. (2008) |

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|--------------------------------|-----------------------|---------------|---|------------------------|
| <i>Combretum mossambicense</i> | Knobbly creeper | Least Concern | Used for the treatment of leprosy, problems relating to the eyes, for blood purification and to treat bacterial infections and oxidative related diseases by indigenous people of Venda. Leaf extracts were investigated for bioactivity against a variety of bacterial strains and their antioxidant potential was evaluated. The main antibacterial compound isolated was acacetin. Treat infectious diseases including, diarrhoea and other ailments, such as gastrointestinal disorders and infections that cause many problems in human health | Foden & Potter (2005c) |
| <i>Combretum vendae</i> | Venda bushwillow | Least Concern | | Hahn & Raimondo (2014) |
| <i>Terminalia prunioides</i> | Purple-pod terminalia | not listed | Important in traditional medicine. The leaves and roots are boiled in water and | Raimondo et al. (2009) |

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| <i>Terminalia sericea</i> | Silver terminalia | not listed | the infusion is taken orally for the treatment of coughs, diarrhoea, and stomach-ache. The leaves can be used as an antibiotic for wounds. In the case of bleeding, a paste can be made by cooking the leaves in water and placing them on the wounds. The wood is used as a source of energy for cooking and boiling water, for constructing huts, for fencing material and for solid structures. | Foden & Potter (2005g) |
| <i>Ximenia americana</i> var. <i>microphylla</i> | Small blue sourplum | Least Concern | The leaves can be dried and crushed to make powder to break fever. They are also used as a substitute for spinach and eaten by animals such as giraffe. An infusion made from the root is used as remedy for diarrhoea and abdominal pain, mental illness, fever and bilharzia. The fruits are eaten raw and | Foden & Potter (2005h) |

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|--------------------------|------------------|---------------|---|-------------------------|
| <i>Ximenia caffra</i> | Large sourplum | Least Concern | seeds are crushed for extraction of the oil, which is edible and is also mixed with red ochre for cosmetic use on skin and hair. Roasted and pounded seeds are used for wounds. Oil from the seed is used to soften human skins and for softening animal hides. It is also used for lamps. Used in soup, and in beer as an aphrodisiac. Powdered dried leaves are taken orally for fever and infertility and extracts of the leaves are used as a gargle for tonsillitis, and as a vermifuge. Porridge is made using a decoction of the roots, and eaten once a day for nausea in pregnancy; the root decoction is also taken for infertility | Foden & Potter (2005h). |
| <i>Grewia bicolor</i> | White raisin | Least Concern | The leaves are browsed by game and livestock. The fruits are edible, but not very popular. This species makes a good screen for the garden, being very attractive with its shiny green leaves and large, handsome, golden yellow flowers. Wood for axe handles and sticks. Often used to manufacture rope. | Raimondo et al. (2009) |
| <i>Grewia flavescens</i> | Sandpaper raisin | Least Concern | | Boon (2010) |
| <i>Grewia hexamita</i> | Giant raisin | Least Concern | | Foden & Potter (2005f) |
| <i>Grewia flava</i> | Velvet raisin | Least Concern | | Foden & Potter (2005) |

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|--|---------------------|---------------|--|-----------------------------|
| <i>Senegalia nigrescens</i> | Knob thorn | Least Concern | The wood is hard and drought- and termite-resistant but frost-tender; it has been used to make fence posts and mine props. The knob thorn yields good quality firewood producing lasting coals and severe heat. It also makes a good bonsai subject. | Kyalangalilwa et al. (2013) |
| <i>Vachellia tortilis</i> subsp. <i>heteracantha</i> | Umbrella thorn | Least Concern | The timber is used for fence posts, firewood, furniture, and wagon wheels. Gum from the tree is edible and is used as a poor man's gum. The pods and leaves are high in nutrition and are browsed by game and livestock. | Kyalangalilwa et al. (2013) |
| <i>Dichrostachys cinerea</i> subsp. <i>africana</i> | Sickle bush | Least Concern | The hard and durable wood is also termite resistant, making it ideal for fence posts. Used to make tool handles, milk pots, smoking jars, and fibre from the bark. Planted to serve as live fencing and as a fodder. The roots are used as a local anaesthetic for ailments such as snake bites, scorpion stings and toothache. It also makes high quality firewood. | von Staden (2016b) |
| <i>Cordia monoica</i> | Septee saucer-berry | Least Concern | Parts of this tree are used medicinally to treat sore eyes, fever, and wounds. The sapwood is used to build | von Staden (2016a) |

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| | | | huts, and dry sticks rubbed together are used to make fire caused by friction heat. The durable pinkish heartwood is used to make attractive furniture. It polishes nicely and is easy to work with, as it does not chip when cut and planed. | |
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Text S1. Questionnaire used during the study

DEMOGRAPHIC DETAILS

1. Location of household

| | |
|----------------------------------|--|
| Household Number | |
| Settlement Name | |
| Household GPS Coordinates | |

2. Family structure of household

| | |
|---|-------|
| 1. Who is the head of this household? Resident married male <input type="checkbox"/> Resident married female <input type="checkbox"/> Married male working away <input type="checkbox"/> Married female working away <input type="checkbox"/> Widow <input type="checkbox"/> widower <input type="checkbox"/> Divorced male <input type="checkbox"/> Divorced female <input type="checkbox"/> Single/never married male <input type="checkbox"/> Single/never married female <input type="checkbox"/> | |
| 2. If the head of the household is away, who makes most of the domestic decisions? Wife <input type="checkbox"/> Son <input type="checkbox"/> Other <input type="checkbox"/> | |
| 3. For how long have you lived in this village/community? | Years |

SAFETY NET AND DAILY NET ASSESSMENT

1. Does your household own any livestock? Yes ☐ No ☐ , if Yes,

| Animal | Number | Animal Shelter | Store bought Food Source for Animal | Relative Contribution | Non Store bought Food Source for Animal | Relative Contribution |
|---------|--------|----------------|-------------------------------------|-----------------------|---|-----------------------|
| Cattle | | | | | | |
| Sheep | | | | | | |
| Goats | | | | | | |
| Chicken | | | | | | |
| Rabbits | | | | | | |
| Other | | | | | | |
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| | | | | | | |

Key for relative contributions: 1 = less than 20%; 2 = up to 50%; 3 = more than 50%

INCOME

1. Education Level of Household

| Name/ Code of Household Member: 0 = Male Head; 1 = Female Head; 2 = Mother of head; 3 = Father of head; 4 = Son/Daughter of head; 5 = Grandchild of head; 6 = Son/Daughter in law of head; 7 = Other family members | Age | Sex (1 = Male; 2 = Female) | Education (highest qualification attained) 1 – Primary; 2 – Junior certificate (ZJC); 3 – Ordinary Level; 4 – Advanced Level; 5 – College Certificate; 6 – Diploma; 7 –Degree; 8 – Other and specify. |
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2. Which people in this household have a full-time, part-time or casual job? Please indicate details of employment in the table below.

| Name Code | Job type | Full-time/part-time/casual | Self-employed (describe) | Local/Remittance | US\$/month (if possible) |
|-----------|----------|----------------------------|--------------------------|------------------|--------------------------|
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Codes: 0 = Head 1 = Wife; 2 = Mother of head; 3 = Father of head; 4 = Son/Daughter of head; 5 = Grandchild of head; 6 = Son/Daughter in law of head; 7 = Other family members

NATURAL RESOURCE USE

1. Was it bought or collected (in the past 3 months)?

| Bought | Collected | Both |
|--------|-----------|------|
|--------|-----------|------|

2. IF RESOURCE WAS BOUGHT: NB Make sure units are clear for all questions

| 1. From where? List markets, villages, neighbours, etc. | 2. Was it bought from family, friends, traders or strangers? | 3. How often over the last 3 months? Show per day/week/month/or no. times over 3 month period | 4. How much each time? (Quantity and unit, e.g. 20kg bag, 3 cups, etc.) | 5. Cost per unit? (record unit) | 6. Total cost |
|--|--|--|---|---------------------------------|---------------|
| | | | | R | R |

3. IF RESOURCE WAS COLLECTED: NB make sure units are clear for all questions

| 1. Who collects it? List names | 2. Where from? (Name of forest, beach, etc.). | 3. How long does it take to collect (including travelling there) | 4. How often was it collected over the last 3 months? Show per day/week/month/or no. times over 3 month period | 5. How much is collected each time? (Quantity and unit, e.g. 20kg bag, 3 cups, etc.) | 6. Was any of this sold or bartered? Y/N | 7. Was any of it processed at all? Y/N |
|---|--|--|---|--|---|---|
| | | | | | | |
| 8. Were there any costs (transport, hired labour, processing, etc)? Give total cost. | 9. Do you need a permit to collect? Y/N | 10. Was there enough for everyone? Y/N | 11. Do you know the price of this product in the community per unit? | 12. Total no. of times in 3 months (daily x90, weeklyx12, monthlyx3) | 13. Gross value (5x11 or 5x4.3) | 14. Net value (13-8) |

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| | | | | | R | R |
|--|--|--|--|--|---|---|

4. IF PRODUCT WAS SOLD OR BARTERED (3.6 above)

| | | | | | | | |
|--|--|---|---|---|---|---|---|
| 1. Where is it sold? List markets, villages, friends, etc. | 2. Who are the main buyers: family, friends, traders or strangers? | 3. What is the selling price per unit? | 4. How often have you sold in the last 3 months? Show per day/ week/month/or no. times over 3 month period | 5. How much do you sell each time? | 5. Has household always sold product? Y/N | 6. If no, when did selling start (year)? | 7. Will household continue to sell product? Y/N |
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| 8. Why did your household start selling this product? | | | | | | | |

5. IF RESOURCE WAS PROCESSED AT ALL (3.7 above):

| | | | |
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| 1. How much was processed before sale? | 2. How much was processed before own use? | 3. Who processed it? List names | 4. How long does it take to process? |
| | | | |
| 5. If you have any processing costs, please explain in detail what they are (inputs per unit): | | | |

J. Natural Resource Harvesting

1. Were any of these products bought or collected by anyone in the household in the past three months? Enumerators attach a page (NATURAL RESOURCE USE) for each resource used or collected and by whom

| Resource | Bought Y/N | Collected Y/N | If yes for bought OR collected: page no. ____ of ____ |
|---|---------------|------------------|--|
| 1. Fuelwood | | | |
| 2. Wild fruits | | | |
| 3. Wild herbs/spinach (not vegetables such as cabbage etc.) | | | |
| 4. Wild animals or birds for food (Bushmeat - NB. Tell them answer is secret) | | | |
| 5. Fish | | | |
| 6. Insects for food | | | |
| 7. Birds eggs | | | |
| 8. Poles for housing (note if use poles from plantation) | | | |

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| 9. Poles for fencing (gardens/fields/home) or kraals | | | |
| 10. Wood for household items such as spoons, axe handles, etc (see list) | | | |
| 11. Wood for carvings to sell | | | |
| 12. Wood for furniture | | | |
| 13. Thatch grass | | | |
| 14. Grass for hand sweepers | | | |
| 15. Twigs for hand sweepers | | | |
| 16. Reeds for weaving (mats etc.) | | | |
| 17. Reeds for construction (buildings & roofing, etc.) | | | |
| 18. Wild honey | | | |
| 19. Honey beer | | | |
| 20. Medicinal plants | | | |
| 21. Mushrooms | | | |
| 22. Traditional beer | | | |
| 23. Sand/Soil/Clay/Termite mounds | | | |
| 24. Roots or tubers | | | |
| 25. Seeds | | | |
| 26. Other (specify) | | | |

Perceptions on NR use:

1. Do you think that NR's contribute in some noticeable way to your day to day subsistence?
2. Should they not be available, would you note a significant change to your subsistence?
3. What are the most important contributions of NR's to your daily lives in your opinion? (prompt naming of all resources, and their relative importance).