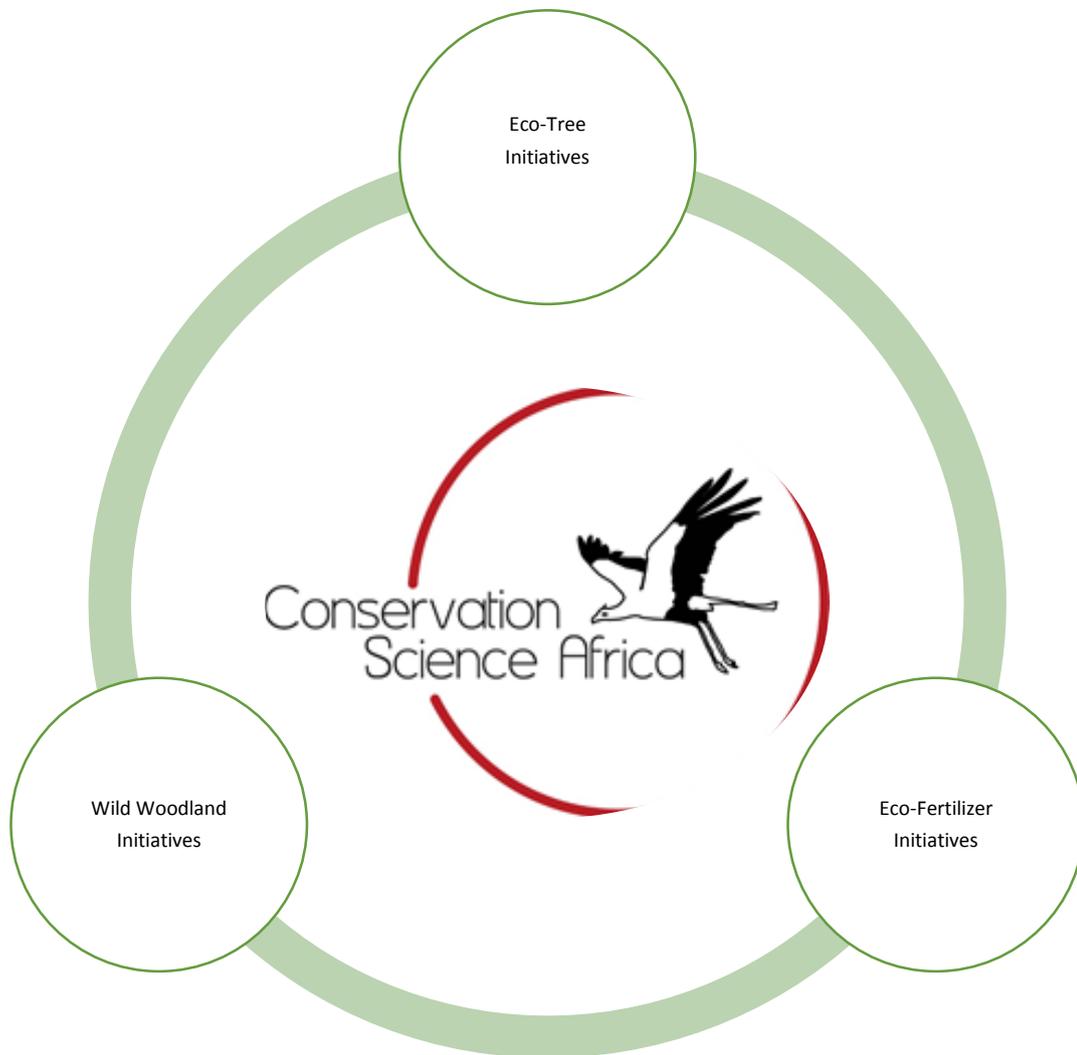


TREE INITIATIVES IN ZIMBABWE'S COMMUNAL LANDS



AGRICULTURE, FORESTRY AND OTHER LAND USE ECO-INITIATIVES

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ZIMBABWE Tree Initiatives

Eco-Tree, Eco-Energy and Wild Woodland Initiatives are based on scientific, socio-economic (including the maintenance of ecosystem services) and cultural objectives, with the aim to mitigate the complex challenges ecosystems face from socio-economic and climate change issues.

ECO-TREE : Communal Land Tree Planting for Fruit and Carbon Sequestration

- This CSA project will promote garden tree growing through providing investment opportunities for clients looking to offset their carbon footprint.
- The project design document is under construction using the Verified Carbon Standard (VCS). Project classification is within the category Agriculture, Forestry and Other Land Use (AFOLU) and sub-category Afforestation, Reforestation and Revegetation (ARR).
- The project business model is being based on clients looking to offset their carbon footprint through purchasing and co-owning in-situ garden trees in Rural District Council Communal Land homesteads.
- The project will follow the programmatic approach outlined in the VCS guidelines for project grouping. As a grouped project, the initiative will comprise of a set of grouped project activity instances, with instances added to the project over time subsequent to project validation.
- The grouped project boundary will be Zimbabwe, and added home tree activity instances will be in Communal Area villages within this boundary.
- Rural District Council structures will be used to guide, and assist in determining and delineating project instances.
- An ex ante estimation for the initial home tree project activity instance has been made using a default data estimate for 1000 trees that has been sourced from an urban home tree planting project in South Africa that has been verified by VCS. Based on this default data, the initial home tree project activity instance for home tree planting will be 369 tonnes of carbon dioxide equivalent (CO₂e) over a period of 40 years at an average rate of 9.2 tonnes of CO₂ e per annum.
- The initial home tree project activity instance will be in the Hwange Communal Area of the Hwange Rural District Council. This project instance will be made up of 250 homestead garden areas, where each homeowner will grow up to 4 trees in their garden.
- Home tree project activity will be added to the project over the course of the crediting period. The average rate of sequestration per home tree project instance will be below the 16,000 tonnes of CO₂e per annum small-scale limit set by the methodology. It is neither a micro nor a mega project in terms of the VCS 2007.1 guidelines.
- Duration of the home tree project activity/crediting period: Start of tree project: 2015
Crediting period: 40 years
- Project development will facilitate homestead food security, agro-forestry education, climate change and environmental awareness, and encouragement for further community participation in other AFOLU projects.

ECO-ENERGY : Powering Agriculture through Eco-fertilizers

- A Waste Worx bio-manufacturing process recycles locally and readily available organic waste using microbes, earthworms, other micro-flora and micro-fauna, to produce a clean and consistent, concentrated, proprietary liquid fertilizer
- The business model (Agri-Initiative Zimbabwe 2012 winner) is based on a cost-effective waste-to-eco-fertilizer conversion that utilizes local, readily available waste on-site, minimal equipment and low capital investment.
The urban business component centres on bulk production and wholesale marketing of eco-fertilizer products

The rural business component is based on :

- Joint venture partnerships with large-scale commercial farming enterprises for on-site estate production
- Product manufacturing through rural community enabling adaptations in low resource/income settings.
- Use of the eco-fertilizer product and its by-products (nutri-mulch and eco-compost) enrich the labile carbon fraction of the soil, ensuring well-balanced and biologically active soils with increased potential for nutrient turnover and water holding capacity.
- The soil labile fraction of organic matter is measurable using a new, simple and inexpensive soil test developed by Michigan State University (Culman et al; 2013).
- Measures of the soils biologically active labile carbon fraction reflect long-term management and short-term seasonal changes, as well as predict crop performance. The size of the soil's labile carbon pool provides a useful predictor of agronomic performance.
- The mitigating clean energy innovation contributes to resilient agricultural production on an environmentally-friendly basis through enhancing soil fertility and soil conservation.

WILD WOODLAND – Tourism Eco-Initiatives

Central to Victoria Falls, CSA's Wild Woodland focus is within the Zimbabwe sector of the developing Kavango-Zambezi Trans-Frontier Park where unique wildlife settings and landscapes are home to the tourism industry.

Set to become the largest conservation area in the world, Park design aims to reverse the trend towards the fragmentation of natural habitats through reclamation. Thirty six game reserves are included in the Park development which covers an area of 287,132 square kilometres and covers areas within 5 countries – Zimbabwe, Zambia, Namibia, Botswana and Angola.

Within the Park zone, livelihood challenges faced by rural communities are difficult growing conditions where arid climatic conditions, poor soils and human-wildlife conflict exist. Scenario simulations also show that projected climatic change will impact on the area through erratic rainfall and increasing temperature. With resident villagers not adequately equipped with conservation-farming skills, the issues of rural poverty and associated land and habitat degradation, and deforestation exist. Poaching is prevalent in the wildlife areas where people traverse to hunt and supplement their immediate food and financial requirements. With their inherent biodiversity and socio-economic impacts, wildlife crimes continue to be a major environmental threat, and ecosystem linkages in and around wildlife areas are being eroded.

Although implementation of effective law enforcement strategies is critical in combating wildlife poaching and habitat destruction, a paradigm shift in reacting with resident communities is necessary. This is being developed through CSA's Wild Woodland Initiatives which are based on conservation farming schemes that extend beyond traditional agriculture.

- Wild Woodland Growing, as the entry phase scheme, focuses on household vegetable garden and crop plot production to help improve food security at household level. The use of eco-fertilizers is encouraged, together with conservation tillage for soil and water conservation, mulching, and rotational cropping. To mitigate against "shifting agriculture" and associated deforestation, emphasis is on intensive, well managed, high yielding homestead gardens and plots, and not extensive fields which are hard to manage under prevailing conditions, and under threat from wildlife crop raiding. Drought resistant crops are encouraged (small grains, sunflowers, sweet potatoes, cassava, cow peas and other

legumes). Other Wild Woodland schemes are being incubated, and include developing woodland, bird, bee, livestock, game, and fish eco-enterprises.

- Wild Woodland planning involves close co-operation with government to develop a conservation farming strategy that helps ensure a regular source of income to farmers, through a viable market oriented approach, and pro-poor value chain. This is clearly linked and supportive of government strategies involving economic development related to wildlife, tourism, agriculture and the environment. Relevant technical government institutions are being engaged, and a vertical and coherent approach is being encouraged with support at local, district and national levels. To foster the skills and improve capacity of all actors, a strong component on Wild Woodland visibility, info-dissemination and education through information sharing meetings and “on-ground” Wild Woodlands workshops is being used. Employing a “train, build, operate and ownership transfer” methodology, eco-enterprise partnerships, with clearly defined ownership is encouraged.
- Strong risk analysis, and possible risk mitigation measures for Wild Woodland activities are being researched to find means that reinforce the resilience of farmers to shock and disaster.
- Wild Woodland plans include a REDD+ Corridor Project (Zimbabwe) based on developing a community conservation corridor that links the Zambezi National Park and Hwange National Park. The project goal is to activate the payment for ecosystem services principle which will be vital to help address community attitudes and perceptions to wildlife through finding genuine and tangible ways for communities to benefit from the wildlife they live alongside. The REDD Corridor Project takes into account that the key to survival and growth of wildlife is large areas of good habitat, and where wildlife needs to be able to move between Protected Areas with minimal persecution. The project aims to ensure that the National Parks are connected through defined corridors with moderate to low population density, and where farmers will tolerate game moving through. (REDD+ is defined as “Reducing Emissions from Deforestation and Forest Degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries”).

CONSERVATION SCIENCE AFRICA

CSA is a multi-national group that incorporates Waste Worx Pvt. Ltd trading as Conservation Science Africa (Zimbabwe), Winter Brothers Properties Pty. Ltd trading as Conservation Science Africa (Botswana), the African Carbon Exchange Pty. Ltd (Botswana) and the Conservation Science Africa Foundation (Zimbabwe).