MINISTRY OF ENVIRONMENT, TOURISM AND HOSPITALITY INDUSTRY

FORESTRY COMMISSION ZIMBABWE

JAPAN FOREST TECHNOLOGY ASSOCIATION (JAFTA)

Revised Country Project Idea Note

Restoration of forest landscape in identified bio-diversity hotspots in North Western Zimbabwe.

SADC-JICA Programme for Indigenous Forest Landscape Restoration

Targeted GCF-SAP Funding

Enhancement of Transboundary Forest Fire Management

Project Proponent: Forestry Commission of Zimbabwe in Collaboration with Japan International Cooperation Agency (JICA)

Contact person(s) for project communication: (1) Mr Steven Zingwena Deputy General Manager, Forestry commission of Zimbabwe

Funding summary:

	Total (in US$)
	1,000,000

List of Acronyms

EMA	Environmental Management Agency
EWS	Early Warning System
FC	Forestry Commission
GCF	Green Climate Fund
GCM	Global Climate Models
HNP	Hwange National Park
ICT	Information and Communication Technology
IPCC	International Panel for Climate Change
JAFTA	Japan Forestry Technology Association
JICA	Japan International Cooperation Agency
KAZA-TFCA	Kavango Zambezi Trans-Frontier Conservation Area
M&E	Monitoring and Evaluation
NTFP	Non-timber Forestry Products
SADC	Southern Africa Development Cooperation Agency
UNCCD	United Nations Convention to Combat Desertification
ZIM-ASSET	Zimbabwe Agenda for Sustainable Socio-Economic Transformation

Introduction

SADC was established for poverty alleviation and livelihood improvement, regional development, peace and security, economic development of people. However, climate change vulnerability and impacts such as temperature rises, frequent drought, rainy season change, fluctuation and decrease of river flow rate, and frequent wildfire are predicted in SADC region.

Whereas strategy developments towards climate change impacts have progressed, implementation on the ground at trans-boundary area has not been sufficiently addressed. Frequent forest fire, illegal firewood harvesting and encroachments have led to deforest and degrade indigenous forest-landscape in trans-boundary area. Forest fires happened in trans-boundary areas easily cross a border since a national boundary is set in a forest, especially in inland countries of SADC. Residents around these areas across the border for illegal logging and harvesting of Non-timber Forest Products (NTFPs) and mismanage fire causing repeated burning exceeding ecosystem's recovery ability. A forestry department, which is in charge of forest fire fighting, does not have enough information of fire and ability to implement prevention and control measures. Also, a lack of concrete cooperation structure for a cross-border fire event among neighboring countries causes further expansion of burnt areas. Additional to these backgrounds, due to the impacts of climate change, deforestation and degradation in indigenous forest-landscape and forest fire risk increase are highly anticipated. Therefore, countermeasures to sustainably manage forest resources in trans-boundary area are the urgent issue to be tackled.

1. Brief Background

Vegetation Types

The Acacia woodland covers a significant portion of the Sikumi Forest and a small portion consists of *Miombo* and *Baikiaea* woodlands. The Ngamo Forest is mostly composed of *Baikiaea* woodlands or the teak forest. Dominant species include: *B. plurijuga* (Zambezi teak), *Guibourtia plurijuga*, *Pterocarpus angolensis* (Mukwa) and *Afzelia quanzensis* (Pod mahogany) are found. The ecosystem in the other project areas like Hwange National Park and Binga consists mainly of the *Colophospermum* mopane woodlands dominated by C-Mopane on all soil types. The Mopane species is known for its tapering roots which deeply encore through the top soil towards the water table in search of the much needed water source in these dry habitats. Mixed woodlands such as *kurkia acuminata, adansonia digitata, cassia abbreviata, schlerocarcya caffira* are common in this area. Besides, riverine and alluvial woodlands include *Acacia Albida*, *Acacia tortilis, Acacia robusta, Zizi phus mucronata*, *Combretum imberbe* among others.

Forestry and Forest Conservation in Zimbabwe

Zimbabwe has 24 gazetted indigenous forests that cover about 800 000 ha. Their size ranges from 567 ha (Ungwe) to 144 000 ha (Gwaai). The forests were gazetted between 1926 and 1960 to control the wanton harvesting of commercial indigenous timber species used to produce mine props, railway sleepers, flooring parquets and furniture. According to Zimbabwe's land use classification, gazetted indigenous forests are located in natural regions IV and V, which are characterized by low and erratic rainfall and are on the fragile Kalahari Sand ecosystem. The forests are important for watershed and soil protection (catchment area protection), biodiversity conservation, wildlife habitats and as a source of commercial timber and non-timber forest products such as honey, mushrooms, edible insects and indigenous fruits. The forests are generally critical for the management and protection of the fragile Kalahari sand ecosystem. Gazetted forests contribute to Zimbabwe's Gross Domestic Product through the forestry and tourism sectors. Substantial quantities of indigenous timber products are exported as furniture, flooring and wood carvings. In addition, the forests generate revenue from photographic safaris and sport hunting.

Furthermore, gazetted indigenous forests provide employment in the areas of commercial timber harvesting, safari operations, forest management and wood carving. About four timber concessions are operational in the forests at any one time. The concessions employ some 300 people in forest management and sawmilling. Each concession is allowed to harvest a maximum of 4 800 cubic meters under bark of timber of various species per year. The average stumpage royalty for the various timber species is about $30, with chargeable fees ranging from $25 to $52.

The management of the gazetted forests is based on forest management plans that embrace the following activities; fire management, game water supply, wildlife management, community engagement and forest zoning. However, the management plans are outdated. In addition, the inadequacy of financial and human resources has compromised the management of the forests.

Climate Change Profile

Global Climate Models (GCMs) indicate that most of southern Africa, including Zimbabwe, is likely to experience higher temperatures in coming decades but the picture for rainfall is less clear. The International Panel for Climate Change (IPCC) Fourth Assessment Report suggests that by 2050 Zimbabwe's temperatures will be 2 to 40C higher than the 1961-1990 baseline, while rainfall will be 10 to 20 percent less. Other model simulations show annual rainfall declining by 2080 by 5 to 20 percent from the 1961-90 average in all of the country's major river basins, with possible decreases in rainfall especially during the period of the rainy season onset (September to November). While average annual rainfall appears to have changed little over the last 50 years, droughts and floods have become more frequent and severe and the onset of the rains less dependable.

1.1 Challenges

1.1.1 Climate Change Challenges

The Hwange game reserve, forests, resettlement and communal areas surrounding it are impacted upon by climate change and habitat degradation. Its soils are infertile and have low water holding capacity hence they are unable to support meaningful biomass production and sustained ground water supplies. The forests are impacted upon by climate change; and increasing land encroachment for settlements, cropping and livestock grazing.

Global warming: As is the case in other parts of the country, the HNP is subjected to global warming due to climate change. This is manifested in the high occurrence of droughts and floods in some areas. Climate models suggest that the country's water resources will dwindle and evergreen forests of the eastern part of Zimbabwe maybe reduced to seasonal forests.   The KAZA TFCA system is getting drier as a result of the effects of climate change. This adversely impacts on the amount of forage and water available to wildlife and leads to wildlife migration to neighboring areas-e.g. communal lands leading to human-wildlife conflicts.

Rainfall: Hwange Game reserve is part of the KAZA TFCA area which lies in Agro-ecological region four of Zimbabwe used to receive an average rainfall of 450mm-600mm per year during the 1980s but there had been notable changes due to the impacts of climate change and global warming. According to the Meteorological Department, the average maximum monthly rainfall for the year 2012 was 231,2 mm in January and 0.0mm. Seasonal dry spells are however rife in the region. Seasonal droughts are also characteristic of this region due to the impact of the Botswana Upper High (BUH) from the Kalahari Desert.

Temperature: Temperatures had not been spared by climate change. Temperatures had significantly increased over time in the region with heat waves being recorded since the 1990s. The Meteorological Department (2012) recorded a highest monthly maximum temperature of 33,5 Celsius in October and 5.8 Celsius minimum temperature in July. This is in contrast with a range of between 20 degrees Celsius and 25 degrees' Celsius maximum temperature which dominated the region in the 1980s and part of 1990s.

1.1.2 Environmental Degradation, Forest fires and Deforestation

Subsistence and commercial wildlife poaching. Some 876 snares were recovered in 2011 in the HNP alone. In addition, 32 poachers were arrested. In the national forests, Subsistence and commercial wildlife poaching is rife as well. Some 900 snares were recovered in 2011. In addition, nine wildlife poachers were arrested. Commercial timber poaching: 17 timber poachers were arrested in 2011.

Uncontrolled forest fires. In 2011 96 500 ha were affected by veldt fires in the HNP alone. In 2011 the forests recorded a total nine forest fires that affected 47 405 ha.

Inadequate game water supplies. From a total of 80 watering points in the HNP, only 56 are functional. From a total of 15 watering points in the two forests, only five are functional. This forces wildlife to aggregate at a few watering points which results in habitat destruction. However, more even distribution of watering points could lower the water table with adverse effects on the corridor and downstream-e.g. Kavango delta. Since its inception, the Park has been abstracting underground water for wildlife during the dry season. However, the sustainability of such water abstraction in the long run has never been assessed.

Low soil fertility: The forests' soils are infertile and have low water holding capacity hence they are unable to support meaningful agricultural production.

1.2 Project Rationale

The forests in the Hwange game reserve need to be restored so that they enhance the economic value of the game reserve through tourism. Restoration of these forests will also contribute to enhanced carbon sequestration capacity of the forests, thereby militating against global warming. It also speaks to Vision 2030 which aims to make Zimbabwe attain a higher middle class economy status by year 2030. The project will also address issues of gender equity and social integration.

1.3 Potential Beneficiaries

This activity will benefit Zimbabwe in terms of enhanced resilience of the KAZA trans-frontier park ecosystem and ecosystem services. Reduced encroachment of the National game reserve forests controlled burning along trans-boundary area and elimination of illegal NTFP's harvesting and logging that causes deforestation and forest degradation. Also, KAZA-TFCA is regarded as important watershed area of Zambezi river basin, which Victoria Falls exists as the famous tourist destination is existing. Therefore, this activity will benefit not only the conservation and restoration of ecosystem, but also suitability and restoration of ecosystem services in the Hwange Game reserve.

The principal beneficiaries are the Forestry Commission, the Department of Wild Life and National Parks Management and Environmental Management Agency (EMA) that will have it Fire early warning system linked with the SADC JICA satellite-based Early Warning System. There are number of secondary beneficiaries in the program as follows:

- ✓ Forestry commission staff, Game Rangers and stakeholders in the vicinity of the Hwange Game reserve will be equipped with and trained me in the use of hand held PC Tablets to acquire satellite-based information on forest fire outbreaks

- ✓ Establishment of national stakeholder coordination and information sharing platforms

- ✓ Forestry commission and parks and wildlife staff trained M&E and reporting

- ✓ Establishment of integrated use of strategic fire information for planning and control purposes and

improved trans-boundary forest fire intelligence gathering and information sharing.

1.4 Geographic Scope

The project will be implemented in the Hwange Game reserve in north western Zimbabwe. The game reserve is part of the KAZA TFCA that is shared with Namibia, Botswana, Angola Zimbabwe and Zambia.

1.5 Policy Framework

Zimbabwe is a signatory to the following local and international conventions which have direct effect on sustainable management of forest landscapes and improved community livelihoods in project areas:

- ✓ The United Nations Convention to Combat Desertification (UNCCD), which guides UN Member States on redeeming the functionality of the environment through reduced land degradation, desertification and mitigate the effects of drought through national action programs that incorporate long-term strategies supported by international cooperation and partnership arrangements.

- ✓ The Convention on Biological Diversity of the United Nations, guides Member States on preventing depletion of natural resources within their territorial boundaries;

- ✓ The SADC Protocol on Forestry, guides SADC Member States on sustainable management of forest resources;

- ✓ Sections 72 and 73 of the Zimbabwe Constitution provide for the rights of citizens to land and to a safe environment;

- ✓ Zimbabwean National Forest Policy provides for the involvement of communities in sustainable forest management;

- ✓ Forest Act Chapter 19:05 which controls, regulates and promotes sustainable utilization of indigenous forests and exotic plantations;

- ✓ Communal Land Forest Produce Act Chapter 19:04 which controls and regulates the management and sustainable exploitation of firewood, timber and other forest produce in all communal areas;

- ✓ Zimbabwe Agenda for Sustainable Socio-Economic Transformation (ZIM-ASSET) a national policy framework requiring forest programs to contribute to national food security and nutrition;

- ✓ The Climate Response Strategy requires forestry programs to address climate change impacts;

- ✓ Government's Vision 2030 entails that Zimbabwe should become an upper middle economy by year 2030.

2. Objectives

2.1 Broad Objective

The main objective is to restore the indigenous forest landscape in the North Western Hwange National Game Reserve through reduction of forest fires

2.2 Narrow Objectives

- ✓ To enhance the capacity of the Department of Wild Life and National Parks Management, Forestry Commission and Environmental Management Agency to detect and monitor wild fires through a satellite-based Integrated Early Warning System (EWS)

- ✓ To strengthen national implementing stakeholders' capacity to coordinate participatory program planning implementation and reporting

- ✓ To strengthen trans-boundary cooperation and information sharing regarding forest fires detection, prevention, and control

- ✓ Strengthen implementing entities and stakeholders' capacity to gather and analyze data in order to produce information for evidence-based decision-making, learning and planning.

2.3 Key Outcomes

It is hoped that by the end of the project, the following results will have been achieved:

- ✓ Strengthened Capacity of the Forestry Department/National Parks to detect, track and relay information on fire outbreaks through a satellite based Early warning systems, information gathering, dissemination

- ✓ Improved Operational Capacity of the Forestry Department/National Parks to conserve forest resources through better enforcement of forestry regulations, effective policing, fire prevention, forest resources management and stakeholder coordination

- ✓ Enhanced Stakeholders' capacity for participatory program planning, implementation and evaluation through collaborative partnerships and strategic alliances

- ✓ Strengthening capacity for Trans-Boundary Stakeholder Coordination Trans-boundary, Forest fire Monitoring, Prevention and Response

- ✓ Stakeholders Capacity Strengthening for participatory (knowledge management): collect and analyze data in order to produce information for evidence-based decision-making, planning and learning

3. Implementing Agencies

The executing entity is the Forestry Commission (Zimbabwe) in collaboration with the National Parks Directorate. An integrated participatory approach will be implemented considering that the area has multiple land use systems involving many sectors and policies. The key actors are as follows:

- ✓ Ministry of Environment, Tourism and Hospitality Industry: Forestry Commission Lead agency

- ✓ Ministry of Agriculture, Lands, Water, Climate and Rural Resettlement

- ✓ Ministry of Local Government, through the participation of Traditional Leadership

- ✓ Ministry of Women Affairs, Youth and Community Development; through the participation of women and youths;

- ✓ Farmers Cooperatives and Associations within the identified Districts;

- ✓ Ministry of Home Affairs; through the involvement of Police in forestry law enforcement;

- ✓ Non-state actors that include CBOs, NGOs as follows:

  - o CAMPFIRE, REDD+, NGAMO Safaris, Painted Dogs Safaris, Conservancies, and Farmers Organizations

4. Target Area

Hwange National Game Reserve, a part of Zimbabwe's area of Kavango - Zambezi Trans-Frontier Conservation Area (KAZA TFCA). (North-Eastern Hwange National Game Reserve). Refer to Annex 1. At 14,651 km², Hwange National Park in Matabeleland is the largest national park and game reserve in Zimbabwe. It was established 1928 as a game reserve. Hwange has been a national park since 1961. Its exact location in terms of geographic coordinates is Latitude: 18° 44' 6" (18.735°) south and Longitude: 26° 57' 18" (26.955°) east (refer to Map below)

Map of Hwange National Park: The safari Source.com

5. Program Structure

The SADC JICA program is composed of 4 components (Figure 1). These are forest fire monitoring system as component 1, integrated forest fire management as component 2, transboundary cooperation and forest fire response as component 3, and learning and information sharing management as component 4. Zimbabwe is eligible for components 1 and 4. However selected activities from components 2 and 3 will also be eligible for funding.
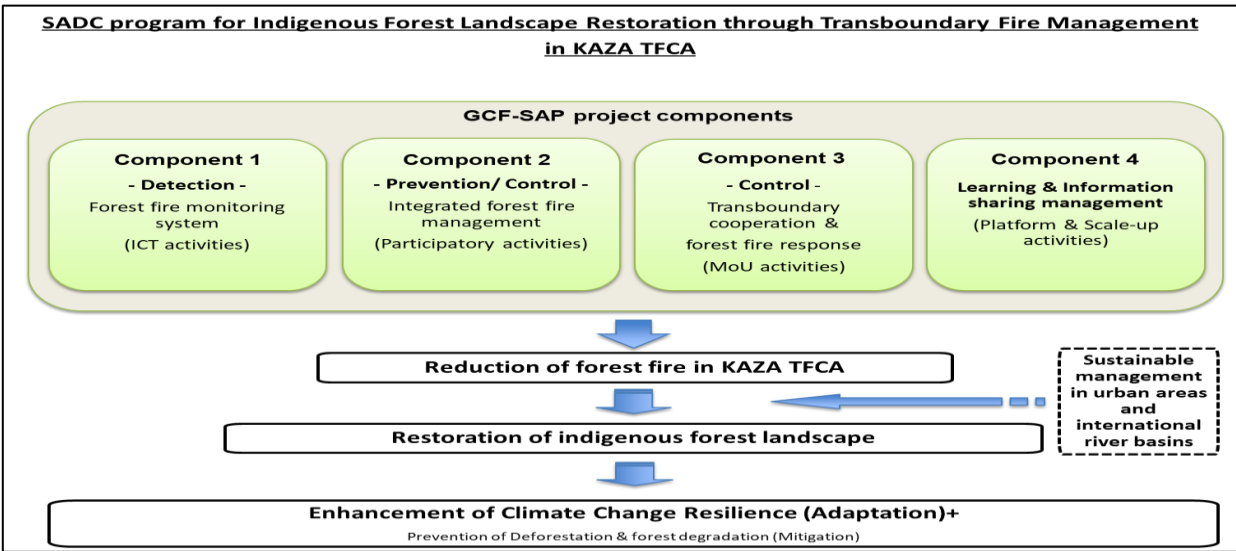

Figure 1. Program structure

6. Proposed Activities

Key Result Area	Strategic Objectives	Activities
Component 01: Establishment and Strengthening of Early Warning, Information Technology and Monitoring, evaluation & reporting systems	**SO 1.1**: Capacity strengthening Forestry Department: Early warning systems, information gathering, dissemination	Activity 1.1.1: Procurement of ICT equipment
		Activity 1.1.2 Integration/networking of SADC/KAZA satellite systems with EMA
		Activity 1.1.4 Human Capacity strengthening (FC, DNPWLM,) ; Forest Fire detection, Communication, Control & Monitoring
		Activity 1.1.5procurement of ICT consultancy services for integration and information sharing (databases/portals) between the proposed JICA/GCF EWS and existing systems like EMA and Firefight
		Activity 1.1.7 Strengthen the stakeholder-based clearing house mechanism based on the participatory model
Component 02: Enhancement of Forest fire Prevention Capacity and Participatory Forest Management	**SO 2.1**: Strengthened Operational Capacity of the Forestry Department Fire prevention, Forest resources management, Stakeholder coordination	Activity 2.1.1: Train forestry/National Parks officials in forestry regulations
		Activity 2.1.2: Conduct regular patrols to enforce the forest act and prosecute offenders.
	SO 2.3: Stakeholders' Participatory Program Planning, implementation and coordination	Activity 2.3.1: Establish a Project Steering Committee (working group) for governing the implementation of the project.
		Activity 2.3.3: Conduct quarterly meetings of the project steering committee for reviewing the progress of the project and making of key decisions.
		Activity 2.3.4: Stakeholder alliances and networking with existing initiatives like REDD PLUS, CAMPFIRE
		Activity 2.3.5: MoU Forestry department & National Parks forest fire prevention & control
Component 03: Enhancement of	**SO 3.1**: Capacity Strengthening	Activity 3.1.1: Protocols/MoU Trans-boundary forest fire prevention & control

Trans-Boundary Cooperation and Forest Fire Response	Trans-Boundary Stakeholder coordination Trans-boundary, Forest fire Monitoring, Prevention and Response	Activity 3.1.2: Establish/support trans boundary TWG for information sharing, planning and program coordination (KAZA secretariat Activity)
		Activity 3.1.3: Quarterly trans-boundary TWG feedback meetings
Component 04: Learning, Information Sharing Management (platform & scale-up activities)	**SO 4.1**: Stakeholders Capacity Strengthening participatory (knowledge management): program Monitoring, Evaluation & Reporting	Activity 4.1.1: prepare a project M&E Reporting plan and MIS (Complete with data capturing and data verification tools)
		Activity 4.1.2: Routine program progress monitoring & reporting
		Activity 4.1.3: participatory program evaluation/assessment (baseline, mid-term & end term)
		Activity 4.1.4: Operations research/assessments

*These activities will be implemented for strengthening forest fire response by forest officers and game rangers of the Hwange Game reserve. Capacity building activities will be organized at central and local levels with the procurement of necessary devices including tablet PCs.

Rationale of Proposed Activities

Component 01: Under CP01, proponents will mainly focus on procurement of ICT equipment that includes handheld tablets, computers and servers that will enable Zimbabwean stakeholders to link up with the satellite-based early warning systems for fire detection and monitoring covering the program site. Additionally, proponents strengthen capacity of Forest Officers, Park Rangers and staff from selected Non-state actors and partner NGOs like CAMPFIRE, REDD+, NGAMO Safaris, Painted Dogs Safaris, Conservancies and Farmers Organizations in the use of handheld tablets. .This should assist Forestry Commission and National Parks departments' capacity to detect, monitor and relay fire outbreak information timely.

Environmental Management Agency

Part of the funding will be used to link existing early warning system that is housed under the Environmental Management Agency (EMA) and exiting data portals and databases to the proposed SADC JICA satellite-based system. The current early warning system used by EMA cannot produce real-time data. It is thus proposed that the EMA system be linked to the JICA-SADC satellite-based system in order for it to be able to access timely data and to be able to generate real-time data for national use. The Environmental Management Agency is a statutory body responsible for ensuring the sustainable management of natural resources and protection of the environment, the prevention of pollution and environmental degradation, the preparation of Environmental Plans for the

management and protection of the environment. It was established under the Environmental Management Act [Chapter 20:27] and enacted in 2002. EMA is mandated to collect, produce and disseminate environmental information to society through the Environmental Education and Publicity (EEP) unit. It is also responsible for the planning of comprehensive and co-ordinated communication programmes such as National Environmental Day commemorations, International Exhibitions such as ZITF, Agricultural Exhibitions, World Environment Day commemorations, Word Wetlands day, national fire awareness week, etc. through the Environmental Protection Unit it provides ecosystem protection services like Veld fire management Wetlands protection, Alien Invasive species management and environmental compliance inspections.

EMA Fire Early Warning System capacity and challenges

The Agency has been using near real time equipment acquired through the African Monitoring of the Environment for a Sustainable Development (AMESD) project which was funded through the European Development Fund. The AMESD financial agreement was signed in 2006 between European Union and African Caribbean Pacific (ACP) secretariat and regional economic community's (RECs).

Under the AMESD project a near real time fire monitoring equipment was donated to EMA. The equipment for fire monitoring has the following capabilities; fire prediction, fire monitoring/detection and also assess fire danger. The Fire monitoring System has the following capabilities:

    i.   Indicate the Satellite that detected the fire
   ii.   Show time of fire detection
  iii.   Show fire Intensity at the time of detection.
  iv.   Identify the land cover on the ground.
   v.   Identifies fire danger

Plate 1 & 2 Satellite installation at EMA Offices

If the satellite system is down data is also accessed from the following websites:
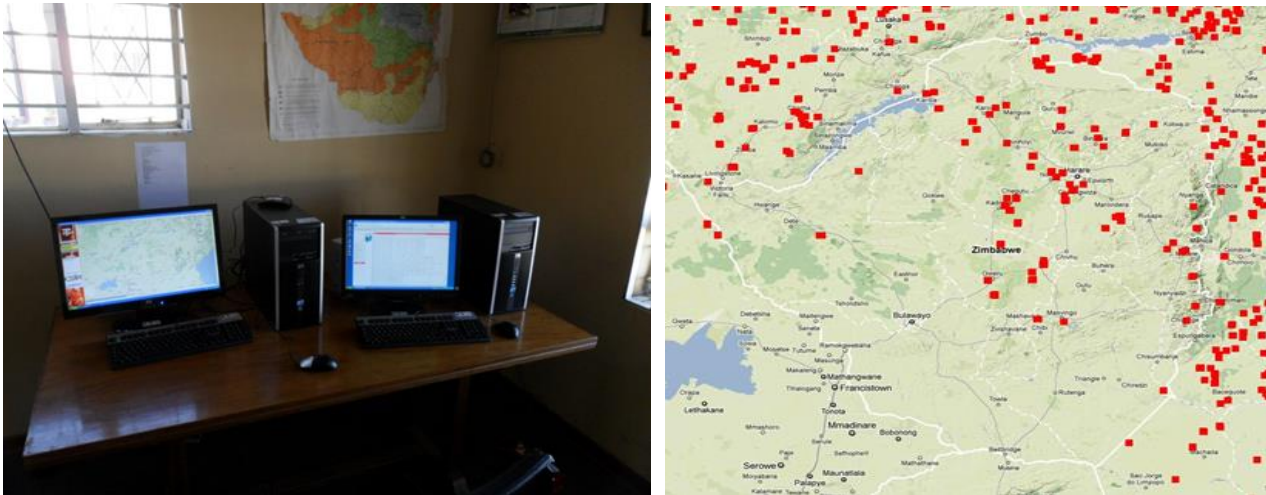
Plate 3 & 4 receiving station at EMA Offices and Active fires

The Agency needs assistance to integrate the real time fire information to different stakeholders such as

1. Property owners
2. Estate managers
3. Forest Managers
4. Traditional leaders

Currently the information is being disseminated via email and phone calls. A daily fire alert email is sent out to stakeholders and when there is a big fire a phone call is done to the respective property manager. A gap to capacitate stakeholders with firefighting equipment still remains. Equipment such as blowers, fire beaters and fire cans/knap sack sprayers are essential to fight fires.

Component 03: limited activities are proposed that mainly seek to strengthen transboundary project information sharing and expedite project implementation. These activities include preparation of the necessary MoUs, diplomatic protocols and support for the establishment of a transboundary Technical Working Group to oversee program implementation. The TWG is conceived as a governance structure to oversee program implementation across the KAZA TFCA countries that are part of the program.

Component 04: Under this component, proponents target the establishment of a holistic and robust program M&E system that is complete with and M&E Plan, data collection and verification tools, databases to support the MIS, preparation of routine reports and for participatory program evaluation. It is further proposed that selected operations research activities be done. This is done with a view to generating evidence to be sued to support reporting, decision-making, information sharing, planning and learning among stakeholders. A portion of the funds will be used for capacity strengthening of the staff that will be responsible for the M&E system.

7. Work Plan

Refer to annex 03

8. Budgets

Refer to annex 02

9. Period of the project

5 years (tentatively 2020-2025)

10. Monitoring and Evaluation

Project Management Unit (PMU) will organize "Joint Coordination Committee (JCC)" annually in collaboration with SADC Secretariat and the member states. In every six months, the EEs in each member state will organize "Steering Committee (SC)" to monitor periodically. Monitoring and evaluation will be conducted guided by the GCF M&E framework. In addition to mid-term and terminal evaluation, monthly reports, semi-annual monitoring sheets, and annual progress reports will be drafted.

The Project Management Unit, in collaboration with the JCC, Forestry Commission and National Parks and other key stakeholders will conduct routine monitoring of program implementation and supervision of this project. The monitoring and reporting system of the proposed project will be gender sensitive and will follow guidance from the GCF and the GESI Plan provided for the program, ensuring that the project maintains a simple and interactive monitoring system allowing for tracking program outputs against inputs and program impact and outcomes against planned targets. It is expected that it will be based on the following core activities:

Routine Monitoring: Progress monitoring will track implementation efficiency by focusing on outputs vis-a-vis inputs in order to provide evidence on accomplishment of the core activities planned under each component. This will be scrutinized using agreed targets and milestones. This will help the strategic and operational managers to identify which activities are ahead, behind or on schedule. The Accredited Entity and executing entities will be responsible for ensuring routine monitoring on the use of inputs (including finances) and implementation of activities.

Quarterly Progress Report: The implementing agencies will submit consolidated quarterly physical progress reports to the Executing Entity and the NDA. The EE will aggregate and submit a consolidated report (both financial and physical) to GCF after verification has been done. Quarterly reporting will

capture input, activity and output-level information. The narrative section of the quarterly report, therefore, will include a summary of activities and outputs contributing to expected outcomes.

Annual Program Review and Information Sharing: The EE's will undertake an annual learning event to reflect on the progress made and changes being observed and to take stock of progress made. These learning events will help sharing of experiences and lesson-learning among the stakeholders and implementing entities (including regional entities, as relevant).

Annual Performance Assessment: The Executing entities will submit an annual Performance Assessment Report (PAR) on the project Outputs. The PARs inform two monitoring activities at the project coordination level – annual monitoring missions and annual reviews/reports – and will leverage the lessons and insights from responses to the M&E. The reporting process is similar to that for quarterly reports. Executing entities will aggregate component reports before submission to their respective Project Management Unit. The report combines national and GCF reporting requirements, which include but are not limited to, reporting on:

Progress made towards project Objective and project Outcomes – each with indicators, baseline data mid-term and end-term targets; Project Outputs delivered per project Outcome (annual); Financial reports; Lesson learned/good practice; and Annual Work Plan (for the following year).

11. Risk Factors & Mitigation Strategies

Severe drought and other extreme weather events: Particularly severe drought and linked temperature increases will result in higher risk of veldt fires. Higher wind speed could lead to increased risk of veldt fires especially in the dry seasons. While the project interventions are designed specifically to address the effects of increasing climate variability, such extreme weather events could negate project benefits when they occur. In order to mitigate this, updated and improved climate change projections will be developed and used to fine-tune technical aspects of program activities.

Insufficient availability of necessary financial resources to upscale best practices: To mitigate the risk, a detailed and full project proposal will be developed and the Ministry of Lands will participate actively in the design and planning process. This will allow for integration of project outcomes into the mainstream of the government programs and budgets. This reduction will be reinforced through the collaborative planning process that has been adopted, which has built the commitment of the relevant stakeholders to mobilize resources in support of the project, and in particular in relation to operational items

Failure of the EE and IE to institutionalize early warning system and meteorological /climate observation information: While the government has shown high levels of commitment to the project

during the preparation stage, this will need to be translated into budget lines so that satellite-based fire detection and surveillance early warning system and meteorological/observational components are institutionalized and continue to be operational after the life of the project. Lobbying and advocacy to show the utility and value of these components for sound planning will be an ongoing project activity to promote this.

12. Environmental and Social Safeguards

The program design and implementation will be closely aligned with the GESI action plan provided for the program. Additionally, the proposed scope of activities will largely result in positive environmental and social impacts, and the minor social effects are anticipated. These can be mitigated with integration of appropriate measures and implementation of good practices. In summary the below are likely to be some of the impacts:

Positive

- ✓ No conversion of natural habitats or land will occur, because all activities will be implemented on an existing protected National Game reserve. However, forest restoration will be promoted to rehabilitate degraded ecosystems.

- ✓ No production activities are allowed nor shall take place in the officially proclaimed Game reserve that is a protected area that is part of the KAZA TFCA.

- ✓ Access to the Game reserve is generally restricted to authorized people and use of land and environmental natural resources is strictly controlled through legislation

- ✓ No physical displacement of people will be undertaken in this project. Hwange game reserve has no human settlements in it except for housing Parks and wildlife management staff. All activities will be implemented either on existing or unproductive or degraded farming lands that are already utilized (with recognized user rights) by local people who have acquired land as part of the Traditional Authority at, Communal Land.

- ✓ Access to the game reserve (for local fishing or tourists) will be provided for on existing routes

- ✓ This impact will have a positive benefit for the most vulnerable people .

Negative

No negative impacts are anticipated to arise from program implementation

Gender considerations: The proposed project addresses gender dimensions guided by the GESI ACTION PLAN provided for within the project design and implementation. As women are key players in managing basic household resources, as care takers, as well as participants in income generating

activities, the design of the proposed project addresses the cultural, the physical, as well as the information and capacity related obstacles preventing women from being actively engaged in, supporting, promoting and maintaining the adaptation solutions that the project will be implementing. To this end, a gender analysis and action plan was prepared that accounts for gender and social inclusion implications, including the level of awareness, commitment and accountability of all stakeholders to ensure the participation by women

Appendices

Annex 1: Project site map
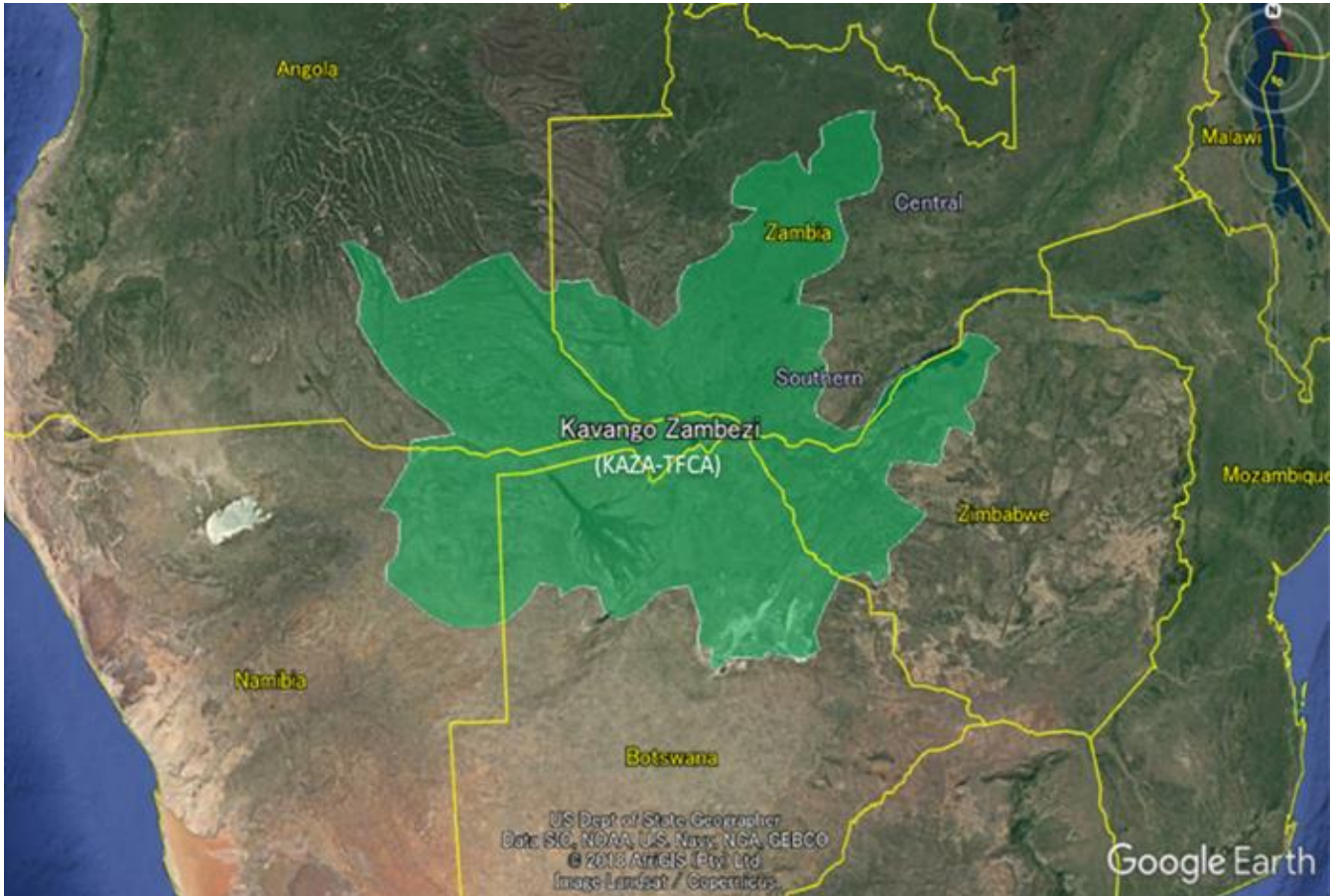
Annex 02: Proposed Budget

Activities	Costing Unit (US$)	Quantity	Unit Cost	Sub Total (US$)
Activity 1.1.1: Procurement of ICT equipment (hand held tablets & Laptops	per tablet/laptop	80.00	750.00	60 000.00
Activity 1.1.2: Integration/networking of SADC/KAZA satellite systems with Environmental Management Agency (EMA) Early Warning System	IT Consulting/Man days	60.00	350.00	21 000.00
1.1.3 Human capacity Strengthening of EMA staff in the use of SADC-JICA EWS	per round of training (per person)	50.00	500.00	25 000.00
Activity 1.1.4: Human Capacity strengthening (FC, DNPWLM,) ; Forest Fire detection,	per round of training (per person)	120.00	500.00	60 000.00

Communication, Control & Monitoring				
Activity 1.1.5: Funding support for integration and information sharing (databases/portals) between the proposed JICA/GCF EWS and existing systems like EMA and Firefight	per IT consulting day	60.00	350.00	21 000.00
Activity 1.1.7: Strengthen the stakeholder-based clearing house mechanism based on the participatory model	per IT consulting day	60.00	250.00	15 000.00
Activity 2.1.1: Train forestry/National Parks officials in forestry regulations	per round of training (per person)	120.00	380.00	45 600.00
Activity 2.1.2: Conduct regular patrols to enforce the forest act and prosecute offenders.	per patrol weekly 5 pax	1 200.00	120.00	144 000.00
Activity 2.3.1: Establish a Project Steering Committee (working group) for governing the implementation of the project.	per meeting	80.00	500.00	40 000.00
Activity 2.3.3: Conduct quarterly meetings of the project steering committee for reviewing the progress of the project and making of key decisions.	per meeting	500.00	250.00	125 000.00
Activity 2.3.4: Stakeholder alliances and networking with existing initiatives like REDD PLUS, CAMPFIRE	per meeting	200.00	250.00	50 000.00
Activity 2.3.5: MoU Forestry department & National Parks forest fire prevention & control				-
Activity 3.1.1: Protocols/MoU Trans-boundary forest fire prevention & control				-
Activity 3.1.2: Establish/support trans boundary TWG for information sharing, planning and program coordination	per meeting	20.00	2 000.00	40 000.00
Activity 3.1.3: Quarterly trans-boundary TWG feedback meetings	per meeting	20.00	2 000.00	40 000.00
Activity 4.1.1: prepare a project M&E Reporting plan and MIS (Complete with data capturing and data verification tools)	per consulting day	50.00	250.00	12 500.00
Activity 4.1.2: Routine program progress monitoring & verification reporting	per consulting day	180.00	250.00	45 000.00
Activity 4.1.3: participatory program evaluation/assessment (baseline, mid-term &	per consulting day	360.00	250.00	90 000.00

end term)				
Activity 4.1.4: Operations research/assessments	per assessment	300.00	250.00	75 000.00
Sub Total				**909 100.00**
Program Overheads		0.10		**90 910.00**
Grand total				**1 000 010.00**

Annex 03: Proposed Work plan

Activities	Yr 01				Yr 02				Yr 03				Yr 04			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Activity 1.1.1: Procurement of ICT equipment (hand held tablets & Laptops	X	X														
Activity 1.1.2: Integration/netw orking of SADC/KAZA satellite systems w ith Environemtal Management Agency Early Warning System			X	X	X											
1.1.3 Human capacity Strengthening of EMA staff in the use of SADC-JICA EWS		X	X	X												
Activity 1.1.4: Human Capacity strengthening (FC, DNPWLM, community members) ; Forest Fire detection, Communication, Control & Monitoring		X	X	X												
Activity 1.1.5: Funding support for integration and information sharing (databases/portals) betw een the proposed JICA/GCF EWS and existing systems like EMA and Firefight			X	X												
Activity 1.1.7: Strengthen the stakeholder-based clearing house mechanism based on the participatory model			X	X												
Activity 2.1.1: Train forestry/National Parks officials in forestry regulations			X	X	X	X	X	X								
Activity 2.1.2: Conduct regular patrols to enforce the forest act and prosecute offenders.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activity 2.3.1: Establish a Project Steering Committee (w orking group) for governing the implementation of the project.	X	X														
Activity 2.3.3: Conduct quarterly meetings of the project steering committee for review ing the progress of the project and making of key decisions.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activity 2.3.4: Stakeholder alliances and netw orking w ith existing initiatives like REDD PLUS, CAMPFIRE		X		X		X		X		X		X		X		X
Activity 2.3.5: MoU Forestry department & National Parks forest fire prevention & control	X															
Activity 3.1.1: Protocols/MoU Trans-boundary forest fire prevention & control	X															
Activity 3.1.2: Establish/support trans boundary TWG for information sharing, planning and program coordination	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activity 3.1.3: Quarterly trans-boundary TWG feedback meetings	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activity 4.1.1: prepare a project M&E Reporting plan and MIS (Complete w ith data capturing and data verification tools)	X	X	X													
Activity 4.1.2: Routine program progress monitoring & verification reporting	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activity 4.1.3: participatory program evaluation/assessment (baseline, mid-term & end term)		X	X				X	X							X	X
Activity 4.1.4: Operations research/assessments				X				X			X					X