
Readiness Proposal

**with the International Savanna Fire Management Initiative (ISFMI)
for Belize**

26 February 2022 | Pipeline Development and Knowledge Sharing and Learning



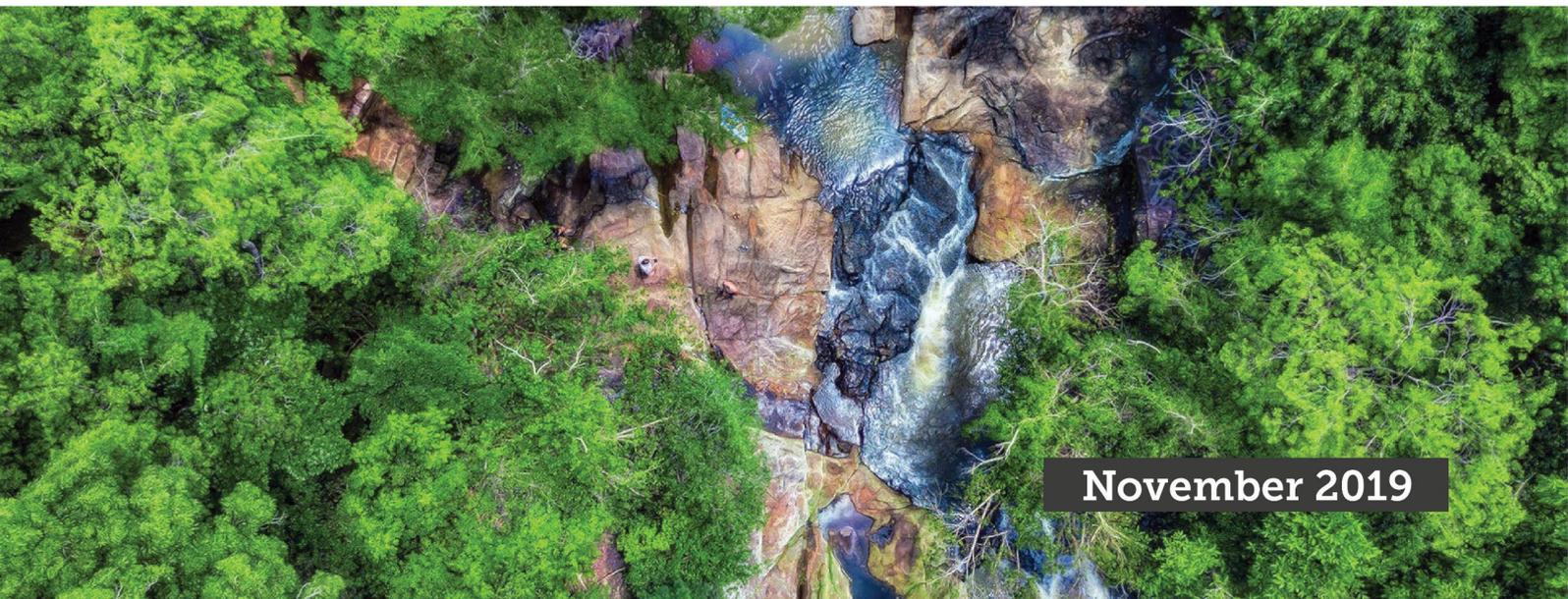
**GREEN
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READINESS & PREPARATORY SUPPORT

PROPOSAL TEMPLATE



Proposal title:	Traditional Savanna Fire Management Readiness Proposal to facilitate Emissions Reductions in the AFOLU sector in Belize
Country:	BELIZE
National designated authority:	Ministry of Finance, Economic Development and Investment
Implementing Institution:	International Savanna Fire Management Initiative
Date of first submission:	12 May 2021
Date of current submission / version number	10 February 2022 V.3



November 2019

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Note: Environmental and Social Safeguards and Gender

Throughout this document, when answering questions and providing details, please make sure to pay special attention to environmental, social and gender issues, particularly to the situation of vulnerable populations, including women and men. Please be specific about proposed actions to address these issues. Consult Annex IV of the Readiness Guidebook for more information.

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1. SUMMARY

1.1 Country submitting the proposal	<p>Country name: Belize</p> <p>Name of institution representing NDA or Focal Point: Ministry of Finance, Economic Development and Investment</p> <p>Name of contact person: Dr. Osmond Martinez</p> <p>Contact person's position: Chief Executive Officer</p> <p>Telephone number: +501 822 2345</p> <p>Email: ceo@med.gov.bz</p> <p>Full office address: Sir Edney Cain Building First Floor, Left Wing Belmopan, Belize C.A.</p> <p>Additional email addresses that need to be copied on correspondences: Leroy Martinez Economist/ GCF-FP leroy.martinez@med.gov.bz ana.mahmud@med.gov.bz</p>
1.2 Date of initial submission	12 May 2021
1.3 Last date of resubmission	8 October 2021
1.4 Which institution will implement the Readiness and Preparatory Support project?	<p style="text-align: right;">Version number V.2</p> <p><input type="checkbox"/> National designated authority</p> <p><input type="checkbox"/> Accredited entity</p> <p><input checked="" type="checkbox"/> Delivery partner</p> <p>Please provide contact information if the implementing partner is not the NDA/focal point</p> <p>Name of institution: ISFMI Pty Ltd</p> <p>Name of official: Mr. Sam Johnston</p> <p>Position: Programme Director</p> <p>Telephone number: +61 (0) 407728528</p> <p>Email: johnston@isfmi.org</p> <p>Full office address: Level 1, 225 George Street, Sydney NSW 2000 Australia</p> <p>Additional email addresses that need to be copied on correspondences: ramos@isfmi.org monagle@isfmi.org</p>
1.5 Title of the Readiness support proposal	Traditional Savanna Fire Management Readiness Proposal to facilitate Emissions Reductions in the AFOLU sector in Belize

1.6 Type of Readiness support sought

Please select the relevant GCF Readiness objective(s) below (click on the box – please refer to Annex I and II in the Guidebook):

- I. Capacity building
- II. Strategic frameworks
- III. Adaptation planning
- IV. Pipeline development
- V. Knowledge sharing and learning

1.7 Brief summary of the request

Challenges and Gaps that the Proposal is Designed to Resolve

1. Belize, through national commitments and strategies, has identified the land sector as important to its climate change mitigation and adaptation response. Indeed, in the *National Climate Change Policy Strategy and Action Plan to Address Climate Change in Belize (2014)*, Belize identified AFOLU (including forest fires) as an important threat that would be aggravated by climate change. One of the key strategic aims identified was to “ensure the conservation, utilization and sustainable use of forest resources” by properly managing forest fires. Strengthening forest fire management and response and facilitating local level partnerships with communities are also prominent in Belize’s strategy. Nevertheless, despite these goals, the potential of emissions reductions Traditional Fire Management (ER TFM) to address land sector issues arising from frequent wildfires in this region remains unrealized.
2. High intensity late dry season wildfire in Belize occurs on a significant scale and contributes to biodiversity loss, expedites de-afforestation and forest degradation, undermines food security, and damages infrastructure, with more than 300 hectares of forest destroyed by fires every year. Climate change is likely to exacerbate late dry season wildfire in the region, further increasing the importance of employing approaches that reduce the risk of late dry season wildfire.
3. Belize has a long tradition of traditional fire management practice that utilized traditional knowledge and practice to manage burning in the early dry season and prevent wildfires in the late dry season. However, current regimes large focus on fire suppression, alongside other pressures, frequently prevent Indigenous peoples and local communities from conducting early dry season burning, allowing more destructive fires with higher emissions levels, to take hold later in the year. In Belize, as in other countries in the region, the potential of Traditional Fire Management (TFM) to address land sector issues arising from frequent wildfires remains unrealized.
4. Traditional fire management, using a science-based emissions reduction methodology that shifts fire patterns from the late to the early dry season, alongside a community development-based approach, has been successfully proven in northern Australia to reduce emissions from fire by up to half, while supporting adaptation to climate change, preventing forest loss and degradation, protecting biodiversity and creating employment, community income and other co-benefits in remote Indigenous communities. Such emissions reductions from Traditional fire management activities are able to be measured and verified, with offsets traded in carbon markets, or activities supported through other funding sources including other types of corporate partnerships.
5. The potential of traditional fire management to reduce fire emissions, support adaptation and create multiple biodiversity, social and economic co-benefits in Belize specifically has been established through international studies. Nevertheless, Belize has not yet developed a high level of awareness of the potential of emissions reductions through traditional fire management within

its territory, and does not have the local capacity or enabling environment to support development of emissions reductions traditional fire management projects.

Proposed Project Strategy

- 6. This proposal seeks Readiness support for a project to ready Belize for future development of an ER TFM sector, and use of ER TFM as a key climate change and fire management response. Specifically, the proposal seeks support to a) develop a Project Concept Note and an evidence base to inform a further pipeline of projects (Outcome 4.1) and that b) strengthens partnerships for the sharing of knowledge (Outcome 5.2).
- 7. This approach targets stakeholders representing each of government, research institutions, and communities, given that the multifaceted and interdisciplinary interaction required for building an enabling environment for ER TFM requires capacity, engagement and coordination among a diverse range of actors, including, potentially, actors in the broader region towards cross border management approaches and joint technological MRV capacity.

How GCF Readiness Support Activities will advance this outcome and How the Change will be visible over Time.

- 8. The ultimate goal of the proposed readiness interventions, when coupled with implementation of activities to be outlined in the Concept Note intended to be developed as part of the proposed readiness support, is that Belize has the requisite capacity and enabling environment for development of an emissions reduction traditional fire management sector, including through technologies and coordination as is determined is required, that will lead to establishment of self-sustaining emissions reductions traditional fire management projects that reduce emissions, protect biodiversity, prevent forest loss and degradation, and create employment opportunities for remote Indigenous and local communities.

1.8 Total requested amount and currency

USD 399,313

1.9 Implementation period

24 months

1.10 Is this request a multiple-year strategic Readiness implementation request?

- Yes
- No

For more information on how a country may be eligible to access Readiness support through this modality, please refer to **Annex IV of the Readiness Guidebook**.

1.11 Complementarity and coherence of existing readiness support

9. Belize has had four previous GCF readiness interventions, with one being a regional intervention. The first readiness intervention focused on the strengthening of the National Designated Authority (NDA) and the development of a country programme. Project activities were implemented over two outcomes namely - NDA capacity to undertake fund-related responsibilities and engage national stakeholders strengthened; and a strategic framework for engagement with the GCF developed.

10. The second readiness intervention complemented the first by continuing to strengthen the NDA's coordination mechanism to allow it to effectively manage the non-objection procedure and associated platforms. In addition, the government received assistance to help the Development

Finance Corporation (DFC) and Belize Social Investment Fund to seek GCF accreditation.

11. In 2019, Belize received readiness support to enhance the regional approach aimed at articulating clear actions to combat climate change in the Caribbean. This readiness intervention covered the countries of Dominica, Haiti, Jamaica, Saint Lucia, and Saint Vincent and the Grenadines. In addition, Belize is providing financial support for a readiness project with the CARICOM Development Fund, which will support the development of a credit risk abatement facility in the Caribbean sub-region

12. In 2020, Belize received readiness support to strengthen private sector access to climate finance. This readiness intervention was designed to build awareness and to strengthen capacity of the private sector to engage with GCF.

13. To date Belize has not secured GCF funding specifically to support Indigenous and local communities' innovations and contributions to climate change mitigation and adaptation. This will be the first proposal to do so. Importantly, this Readiness support will look at the gaps, barriers and lack of focus on access to funding from the GCF by indigenous peoples and local communities. This readiness proposal is aligned with other national initiatives (as per the table below).

14. A multi-country Readiness proposal titled "*Formulate Regional Traditional Savanna Fire Management Emissions Reduction Project Concept Note for Zambia, Mozambique and Botswana*" has been submitted to the GCF and is relevant because the work in Belize will build from and complement the ongoing work in Southern Africa and a growing international community of practice.

NDA is confident to express that all these readiness projects are clearly coordinated, and no overlapping will occur while implementing them.

Title of Proposal	Scope/objective:	Amount Awarded:	Delivery Partner	Area of complementarity and coherence with current readiness proposal
NDA Strengthening and Country Programming support for Belize through CCCCC	To set the necessary foundations for enhancing access to and catalyse mobilization of climate finance to assist the GOB in the implementation of its contribution to the Paris Agreement. The GOB will work with accredited entities to develop projects and programmes as prioritized in the country programme and will seek support	\$300,000	CCCCC	This readiness support looked at the strengthening of the NDA and led to the development of a strategic framework for engagement with the GCF and the development of Belize's first country programme, whereby Forestry was identified as a vulnerable sector to be addressed. The current TFM proposal will work directly with the Forest Department and other stakeholders on strengthening capacity and will catalyse mobilization of financing for TFM projects in Belize.

	for project development.			
Support for the accreditation of the Development Finance Cooperation and Social Investment Fund of Belize	To further aid the country in implementing its climate change action plan by strengthening its capacities to effectively and efficiently access, manage, disburse and monitor climate financing.	\$355,365	CCCCC	This readiness support looked at further strengthening of the NDA in its role, but also the identification of new national entities to seek accreditation, and post accreditation support for PACT. Importantly, the Country programme was further updated under this support whereby the current TFM proposal was added as one of the concepts to be submitted to the GCF.
Belize readiness support for strengthening Belize' Private Sector to access climate finance	The project seeks to improve Private Sector's understanding of GCF processes and design bankable funding proposals. The Private Sector is a key client group for the DFC. The work to be undertaken through this current readiness grant request will support and be supported by the work being undertaken	300,000	CDB	Through the development of private sector engagement at both the readiness and full proposal stage in Belize, the ISFMI network will be linking interested private sector entities in Belize into a global investor network interested in fire management projects whose aim is to link private sector entities with projects, and with each other, with the idea of building investor interest and capacity by the sharing of experience within the private sector, as well as linking the private sector with climate financing experts should they need extra support.
NDA Strengthening and Country Programming support for Belize through CCCCC	To set the necessary foundations for enhancing access to and catalyse mobilization of climate finance to assist the GOB in the implementation of its contribution to the Paris Agreement. The GOB will work with accredited entities to develop projects and programmes as prioritized in the country programme and will seek support for project development.	\$300,000	CCCCC	This readiness support looked at the strengthening of the NDA and led to the development of a strategic framework for engagement with the GCF and the development of Belize's first country programme, whereby Forestry was identified as a vulnerable sector to be addressed

2. SITUATION ANALYSIS

Abbreviations, Glossary, Use of Terms

BUR	Biennial Update Report (UNFCCC)
CARICOM	CARICOM - Caribbean Community
CH4	Methane
ER TFM	Emissions Reduction Traditional Fire Management, being the application of traditional fire management practices in applicable rainfall bands that generate emissions reductions, as measured by an approved emissions reductions methodology of the kind developed and approved by the Australian Government.
ERF	The Australian Government's Emissions Reduction Fund
GHGI	Greenhouse Gas Inventory
GT CO2 -eq	Gigatonne carbon dioxide equivalent (= 1,000,000,000 tonnes (1 Billion))
ISFMI	International Savanna Fire Management Initiative
Methodology	An emissions reduction methodology of the kind developed and approved by the Australian Government.
MRV	Monitoring, Reporting and Verification (i.e. of emissions reduced through fire management practices that shift fire from late to early dry season patterns, subsequent to an approved methodology).
Mt CO2 -eq Mt CO2-e yr-	Mega tonnes carbon dioxide equivalent (= 1,000,000 tonnes (1 Million))
NAFI	The North Australian Fire Information Service
NO2	Nitrous Oxide
PACT	Protected Areas Conservation Trust (Belize)
SavBat	The Savanna Burning Abatement Tool. A tool developed by the Australian government to automate the GIS processes and mathematical equations required to estimate the net abatement for projects registered under savanna fire management determinations of the Australian Government's Emissions Reduction Fund (ERF).
t CO2 -eq	Tonnes carbon dioxide equivalent
TFM	Traditional Fire Management
WiFi	The Women in Fire Network

Introduction

15. Traditional fire management, using a science-based emissions reductions methodology that allows those carrying out such activities to monitor, verify and report on the volume of emissions reduced, alongside a community development-based approach (ER TFM), has been successfully proven in northern Australia to reduce emissions from fire by up to half, while supporting adaptation to climate change, protecting biodiversity and creating employment, community income and other co-benefits in remote Indigenous communities. This experience is detailed in Annex II to this proposal.

16. The history of fire dependant landscapes around the world is remarkably similar. Originally all of these landscapes were dominated by fire regimes that were actively managed by Indigenous peoples and local communities by lighting low-intensity, early dry season fires to create fire breaks and prevent the build-up of fuel, which minimised later dry season destructive wildfires. With colonisation by Europeans of these landscapes, such fire management activities were suppressed for a variety of reasons, resulting in a lack of management and increased risk to life and property.

17. The potential of Traditional fire management to reduce fire emissions and create multiple biodiversity, social and economic co-benefits has been extensively documented in Australia¹ and international studies and pilot activities have established the relevance of this approach in Mesoamerica, in general, and Belize, specifically.²

Nevertheless, Belize, alongside other countries in the region, has not yet developed a high level of awareness of the potential of ER TFM in Belize to contribute to a range of national climate and other goals, or established an enabling environment for its implementation. The alignment of TFM with Belize national plans and targets is described in Annex I to this proposal, noting in particular that:

- a. TFM aligns with the identification by Belize of the AFOLU as important to climate mitigation being the second largest emitter of GHG, noting that policies to manage forest fires and slash and burn practices could reduce the volume of emissions from the AFOLU sector and the government is currently exploring alternative fire management practices.
- b. TFM aligns with the focus of the 2019 Belize Country Strategy on improved community resilience to climate change events: TFM addresses issues of deforestation, maintaining healthy ecosystems through sustainable management and increasing the resilience of human communities, particularly those whose livelihoods depend on forest resources as identified in Belize's 2011 Intended Nationally Determined Contribution;
- c. TFM strengthens forest fire management and response capacity as critical counterpart in addressing some of the key drivers of deforestation as identified as a goal within the 2014 Belize National Climate Change Policy and Action Plan to Address Climate Change;
- d. TFM aligns with the Policy Statement 12 in Belize's 2015 National Forest Policy that "the government shall recognize the importance of fires as an ecological process, encourage its proper use and management in the protection and enhancement of terrestrial ecosystems giving special consideration to human welfare and safety".
- e. TFM is supportive of the 2015 National Protected Areas Systems Plan that notes that both the plan and its implementation must use and draw upon the scientific, technical and traditional knowledge of local and indigenous communities, and that management of protected areas shall respect, preserve and maintain the traditional knowledge, innovations and practices of indigenous peoples and local communities.

18. This proposal is geared towards addressing those gaps, such that Belize ultimately has the requisite capacity and an enabling environment for an emissions reduction traditional fire management sector, that will lead to establishment of self-sustaining emissions reductions traditional fire management projects that reduce emissions, protect biodiversity, prevent forest loss and degradation, and create employment opportunities for remote Indigenous and local communities. Further detail describing the problem the proposal aims to address, the project strategy proposed, and complementary initiatives, is set out below.

Problem Statement

Wildfire and Contribution to Global Emissions

19. Wildfires annually burn a total land area of between 3.5 and 4.5 million km², and affect every region of the world. Wildfire smoke alone is estimated to kill around 340,000 people annually. In 2017, insured losses from wildfires totalled USD14 billion. Wildfires have been estimated by the Economics of Ecosystems and Biodiversity (TEEB) to destroy ecosystem services in the range of US\$146–US\$191 billion per year.³ Wildfires are a major driver of forest degradation and desertification.

¹ UNU-IAS ISFMI. *The Global Potential of Indigenous Fire Management. Findings of the Regional Feasibility Assessments*. 2015. Tokyo; Russell-Smith et al. Opportunities and challenges for savanna burning emissions abatement in southern Africa. *Journal of Environmental Management*. Volume 288, 15 June 2021, 112414 <https://doi.org/10.1016/j.jenvman.2021.112414> and Edwards, A. et al. Transforming fire management in northern Australia through successful implementation of savanna burning emissions reductions projects. *Journal of Environmental Management*. [s. l.], v. 290, 2021. Disponible em: <https://discovery.ebsco.com/linkprocessor/plink?id=822ffe37-b56c-36da-b5cf-6acb7eebbbeb>. Acceso em: 9 fev. 2022.

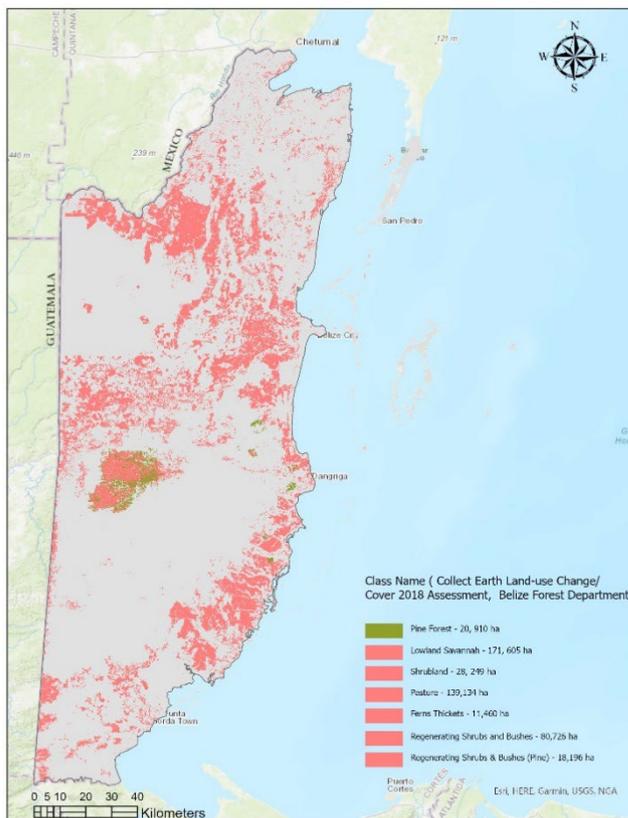
² UNU-IAS ISFMI. *The Global Potential of Indigenous Fire Management. Findings of the Regional Feasibility Assessments*. 2015. Tokyo; Smith, C. E. (2019) 'Fire trace : plans and practices of conservation and development in Belize's coastal savanna, 1920 to present'. Available at: <https://discovery.ebsco.com/linkprocessor/plink?id=a5fbacf5-734a-3c50-91a1-24b5212b54a>; *Mena Report* (2021) 'Building Capacities in Forest Fire Management Among Indigenous Peoples and Local Communities in Belize', 6 May. Available at: <https://discovery.ebsco.com/linkprocessor/plink?id=e04debce-08b7-3c44-a441-50d92c4446ef>; and Michelakis, D. et al. (2016) 'Woody structure and population density of pine (*Pinus caribaea* var. *hondurensis* (Caribbean Pine) dominated lowland tropical savanna woodlands under different protection and management regimes', *CARIBBEAN JOURNAL OF SCIENCE*, 49(1), pp. 1–16. Available at: <https://discovery.ebsco.com/linkprocessor/plink?id=c3022819-1b33-326c-8211-f4ffc9b1372>

³ KLC et al. Savanna Fire Management: Lessons from 15 years of promoting a Nature Based Solution Case Study for the UNFCCC Standing Committee on Finance Call for Inputs for the Next SCF Forum: Financing Nature-based Solutions.

20. Fire dependant ecosystems such as savannas, in addition to tropical dry forests, including the pine forests of Belize, cover around one-sixth of the global land surface. A major problem in these landscapes arises due to poor fire regimes resulting in the prevalence of large destructive fires that emit more greenhouse gases than well-managed areas. The net carbon emissions from wildfire between 1997 and 2014 – due to destructive wild fire, deforestation and fire in tropical peatlands – which is a measure of the poor fire regime was 2Gt CO₂e⁻¹ (2000 M CO₂-eq).⁴

21. The IPCC predicts that it is highly likely that global fire activity will increase as a result of climate change.⁵ NASA predicts that wildfire could increase by as much as 35% by 2100 and that most of these increases will take place in these fire dependent landscapes.⁶

Wildfire in Belize



22. Wildfires in Belize are a significant and widespread ecological disturbance, dramatically affecting land cover.

23. Many of Belize's forests and savannas⁷ (see map adjacent), are fire adapted landscapes, with appropriate early dry season fire regimes a necessity for fuel reduction and pine regeneration.

24. Savannas in Belize, however, are under significant pressure due to agricultural expansion, increasing migration from adjacent countries and expanding agriculture. Linked to these factors, fire frequency is increasing in the dry season and fire extent expanding, with the most extensive forest fires resulting from escaped human fires, and naturally ignited wildfires that are exacerbated by increasingly dryer and warmer seasons. Such fires are of an intensity and extent that they lead to forest degradation and the loss of biodiversity. Such fires threaten the reproduction of pine species, killing seedlings and impacting the future of existing sustainable logging operations.

⁴ UNU-IAS ISFMI. *The Global Potential of Indigenous Fire Management. Findings of the Regional Feasibility Assessments*. 2015. Tokyo.

⁵ IPCC. Fifth Assessment Report. 2014. www.ipcc.ch; Also see, IPCC. AR6. WGI Report. Technical Summary. Africa.

https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_TS.pdf

⁶ NASA Earth Science News. *NASA Models Earth's Fiery Past and Future*. 2010. www.nasa.gov/topics/earth/features/fiery-past.html

⁷Belize is well known for its forests and is reported to have the highest forest cover in both Central America and the Caribbean. It is estimated that currently 61.75 % of Belize is under Forest. "For Belize, the forest is a plot of land with an area of 0.5 hectares or more, with trees 5 meters or higher, and a canopy cover of 30% or higher. This definition also includes forest plantation. In addition, it includes an ecosystem that due to biotic conditions (terrain, soil type, rainfall, et cetera), the trees cannot grow higher than 5 meters.

Belize divided its 'forest category' into five subcategories/subdivisions. These are mature broad-leaf forest, secondary broad-leaf forest, pine forest, mangrove forest, forest plantation and regenerating forest (this is disturbed forest). Mature Broad Leaf is occupying 52.95%, followed by Mangroves at 3.22%, Secondary Broad Leaf Forest at 2.42 %, Regenerating Forest at 2.16%, Pine Forest at 0.95% and Forest plantation at 0.06% (Collect Earth Landuse Change Assessment 2018, Belize Forest Department). Grassland, which occupies 20.33% (499,369 ha) and includes, Ferns and thickets, Pastures, Regeneration Bush and Shrubs / Regeneration Bush and Shrubs (Pine), Lowland Savannah and Shrublands (Belize Forest Department, 2018). Topographic mapping reveals that there are approximately 206,000 ha of savanna throughout northern and southern Belize. In the last 50 years, the forest cover in Belize has steadily decreased due, in general, to the expansion of the agricultural frontier and unplanned urban and rural expansion, illegal logging, encroachment, forest/bush fires, and other uncontrolled conversions of forests (such as climate-related hurricanes, storms and pests). Today, only approximately 22-27% of savannas remain undisturbed.

25. A particular wildfire management challenge for Belize is that fire dependent Savanna ecosystems are embedded in a matrix of fire sensitive broadleaf and riverine forests or adjacent to fire-vulnerable coastal mangroves. This matrix means that out of control wildfires in environments such as savanna and pine forest create a significant threat to biodiversity in adjacent fire sensitive landscapes.

The Australian Experience

26. The Australian experience is directly relevant to addressing climate change and other goals and targets in Belize given the analogous landscapes and ecological communities, wildfire patterns, similar role of fire in the landscape and the innovative fire management technologies developed in Australia that could be applied also in Belize to address wildfire challenges. For that reason it is important to detail the Australian experience in this proposal given that the proposed project strategy draws from this experience. In Northern Australia, Aboriginal people have managed land for at least 65,000 years by using traditional Traditional Fire Management. Building on these ancient practices, Australia has developed leading technologies that aid communities to manage wildfires, that reflect an understanding of the role that fire plays in climate change, and that allows for the verification of the volume of emissions reduced from Traditional Fire Management as compared to the baseline. The core principle informing this approach is that managed burning in the early dry season prevents late dry season, high intensity, destructive wildfires. Such late dry season wildfires decimate biodiversity, and result in higher emissions volumes than managed burns in the early dry, that are gentle, protect biodiversity, and result in lower emissions volumes. Such early dry season practices, though they can be applied by a range of landholders, reflect and largely mirror traditional fire management practice. Importantly, emissions reductions activities are generated on an annual basis and do not entail any permanence requirements, so having significant practical advantages over REDD+ approaches, though noting in future that the high sequestration potential of traditional fire management will increasingly be recognised.

27. The essential tools that together make up these TFM 'technologies' are:

- Scientifically based emissions reductions methodologies approved by government that calculate the volume of emissions from methane and nitrous oxide reduced from a shift from late dry season to early dry season fire patterns. Each methodology is valid for a particular rainfall band.
- A robust Monitoring, Reporting and Verification system (the NAFI system) using satellite and adjunct information technologies that allow project proponents to monitor, report on and verify the volume of emissions reduced, as well as to monitor and manage fires in real time.
- An automated emissions calculation tool administered by government (the SavBat tool)⁸ developed by the Australian government to automate the GIS processes and mathematical equations required to estimate the net abatement for projects registered under savanna fire management determinations of the Australian Government's Emissions Reduction Fund (ERF).⁹
- A supportive legal and regulatory system that supports TFM activities, including through the ER.

28. The first project to use TFM to generate carbon credits was the Western Arnhem Land Fire Agreement (WALFA) that started in 2006. A decade later there are now 75 TFM projects that have been approved in Australia by the Government, with 25 either Indigenous community owned or having significant indigenous community involvement, reducing wildfire by 50%, generating nearly 10m tonnes of mitigation worth over \$90m annually. The application of Traditional Fire Management has also generated substantial additional or co-benefits including creating market-based jobs in remote and vulnerable communities, improving biodiversity, reinvigorating culture and custom, improving food security and health. In particular, these projects have generated several opportunities for the employment of women, and of youth, in positions as rangers, managers and in project governance.¹⁰

Potential for Reduction of Emissions from Wildfire in Belize - Current Patterns and Future Projections

29. The International Savanna Fire Management Initiative's Global Feasibility Study¹¹ found that the annual emission reductions potential from reducing CH₄ and N₂O emissions from savanna and tropical dry forest fires through methodology based Traditional Fire Management could be expected to be in the vicinity of 0.1 to 0.15 Gt

While vast savannas are widely studied, smaller pockets of savannas have received less attention. However, these smaller savannas are key components in the preservation of biodiversity and contributions to the economy via tourism. Belize contains many of types of grassland – namely upland savannas known as the Mountain Pine Ridge and the lowland savannas of the northern and southern coastal plains.

⁸ For more information on the SavBat tool see <https://savbat.environment.gov.au>

⁹ For more information on the ERF see, <http://www.cleanenergyregulator.gov.au>

¹⁰ For a summary of the Australian ER TFM experience, see Annex II to this proposal. For access to numerous resources on the Australian experience consult www.isfmi.org

¹¹ UNU-IAS ISFMI. *The Global Potential of Indigenous Fire Management. Findings of the Regional Feasibility Assessments*. 2015. Tokyo.

CO₂ -eq per year, with significant additional savings from carbon sequestration. A further study suggests that global opportunities for emissions reductions potentials through early dry season burning are apparent for 37 countries globally, with an annual potential emission saving of 69.1 MtCO₂-e yr⁻¹.¹²

30. This Global Feasibility Assessment also made preliminary findings suggesting the applicability within and feasibility of Traditional Fire Management in Mesoamerica – specifically in pine forests in Belize, Mexico and Guatemala. The study found Belize has significant potential for a shift to Early Dry Season fire patterns, the overall reduction of intense wildfire and corresponding, significant emissions reductions. While broad parameters are understood, the readiness interventions proposed would give rise to further data to support emissions reductions potential calculations for Belize. Further breakdown on the emissions profile of Belize is included within Annex I.

*Traditional Fire Management in Belize*¹³

31. In common with other countries around the globe, Belize has a long tradition of traditional fire management practice that utilized traditional knowledge and practice to manage fire in the early dry season to prevent wildfires in the late dry season¹⁴. Traditional Fire Management (TFM) in Belize is a longstanding practice where fire is used to manipulate ecosystems for production of crops, for hunting, clearing out brush and dead vegetation to establish travel corridors, etc. The Maya are the country's Indigenous population and have used fire traditionally for hunting, agriculture and forest management for centuries. These traditional uses may be responsible for the characteristic structure and areal extent of the forests. TFM also exists in most other rural populations of Belize. The use of fire has been handed down through generations for activities such as milpa burning and hunter fires. Belize's Hispanic population, like those across the Yucatan and elsewhere likely learned fire practices from the Maya. It can be deduced that the Mayas understood the benefits of increased carbon through burning at the end of the dry season just prior to the first rains arriving.

32. Despite this long history of traditional fire management, government policy has for some time now been centred around fire prevention and aggressive suppression and, in many areas the capacity and resources to deal with fire effectively has been limited. The overstocking of certain species (pine primarily) in combination with this suppression of fire has made grasslands, pine forest, and savanna in Belize susceptible to drought, insect infestation and high intensity, destructive forest fires, with regimes focused on fire suppression preventing the early dry season burning that would prevent late dry season conflagrations. This leads to more destructive fires with higher emissions levels taking place later in the year, as have been observed in recent years.

33. As discussed in relation to alignment with policy below, Belize has recently begun to recognize the important ecological role that fire plays in fire-dependant ecosystems and the important economic role that it plays for agriculture and rural communities, and there recently have been some initial successful attempts to use traditional fire knowledge to address fire management needs while meeting some of the socio-economic needs of the communities. TFM is increasingly being recognized as a key overall strategy for protecting ecosystems, communities and economies from the impacts of widespread and severe burning. Importantly, TFM is a low cost technology that will be affordable for Belize local indigenous communities to implement as it can utilise traditional low or no cost ignition methods with the primary input being human planning and the human supervision of fire.

Alignment with Belize and International Emissions Reductions Goals

34. The UNFCCC's Paris Agreement provides important opportunities for land use management and carbon trading to which ER TFM can make an important global contribution. Intended Nationally Determined Contributions (INDCs) have placed a significant importance on land use in the form of Agriculture and Forestry. Over 100 Parties have referred to actions in the agriculture sector and emphasized the importance of integrating adaptation into agriculture and food production and ensuring food security and sustainability of agriculture. Parties have introduced various programmes and policies, such as promoting sustainable agriculture and land and resource management, implementing integrated adaptation programmes for agriculture, developing climate criteria for agricultural programmes and adapting agricultural calendars. Properly managing wildfire will play an

¹² Lipsett Moore et al. Emissions Mitigation Opportunities for savanna countries from early dry season savanna fire management. *Nature Communications* (2018)9:2247 DOI: 10.1038/s41467-018-04687-7

¹³ Belize's TFM knowledge will differ from Australia and Africa because fire here is embedded on culture. Belize is culturally and ethnically diverse. It is within the rural people of Belize that the common thread of fire use and knowledge exists through lessons learned from the Mayas who spent several thousand years refining these practices. Many of the communities of Southern Belize still use fire in a manner that is similar to what is considered TFM.

¹⁴ UNU-IAS ISFMI. *The Global Potential of Indigenous Fire Management. Findings of the Regional Feasibility Assessments*. 2015. Tokyo; Myers R.L., Rodríguez-Trejo D.A. (2009) Fire in tropical pine ecosystems. In: *Tropical Fire Ecology*. Springer Praxis Books. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-540-77381-8_20 and Rodríguez-Trejo, D.A, P.A. Martínez-Hernández, H. Ortiz-Contla, M.R. Chavarría- Sánchez, and F. Hernández-Santiago. 2011. The present status of fire ecology, traditional use of fire, and fire management in Mexico and Central America. *Fire Ecology* 7(1): 40-56. doi: 10.4996/fireecology.0701040.

important role in securing these objectives. Indonesia, as an example, accounts for wildfire as a significant source of GHG, with Indonesia's National Carbon Accounting System (INCAS) having shown interest in integrating savanna burning emissions in its accounting system.

35. Belize, through their NDC's and other national commitments and strategies, have identified the land sector as important to climate mitigation and adaptation response¹⁵. In Belize, as stated, Agriculture, Forest and other Land use (AFOLU) is the second largest emitter of GHG. This is mostly due to the conversion of land for agricultural purposes, slash and burn agricultural practices and forest fires. Policies to manage forest fires and slash and burn practices could reduce the volume of emissions from the AFOLU sector and the government is currently exploring alternative fire management practices. The detailed country mapping attached as Annex I details the relationship between INDCs and updated NDCs, alongside other national goals, plans and strategies for climate change and other related areas, noting where and how they align with the proposed Traditional Fire Management methodology-based approach and proposed interventions and project strategy.

36. Nevertheless, the potential of Traditional Fire Management to address land sector issues arising from frequent wildfires in this region remains unrealized. Noting that in-depth policy, regulatory and capacity gap analysis is provided for within the interventions proposed, challenges and gaps that must be filled in order to bridge the distance between the potential of TFM in Belize and the capacity of Belize to benefit from this potential, and that will require Readiness interventions to further articulate, include that:

- a. Awareness gaps: there is limited awareness of the Australian experience of emissions reductions TFM in Belize and its potential for Belize among government, academia, or at the community level.
- b. Technology gaps: The technologies required to support development of an emissions reductions sector are not currently available in Belize or the broader Meso-American region, namely a fit for purpose MRV system, fire management accounting tools, or emissions reductions methodologies applicable to Belize ecosystems.
- c. Human capacity gaps: Development of emissions reductions TFM projects in Belize will require human capacity across a range of disciplines and within government, academic institutions and communities that is not currently available in Belize but that can be easily developed with targeted capacity building activities.
- d. Regulatory gaps: Emissions reductions TFM needs to be supported by a regulatory enabling environment, with options needing to be assessed through a full gap analysis.
- e. Institutional gaps: TFM requires coordination between different levels of government and governance at the community level, and between different government services. Such coordination for TFM will need to be supported to facilitate TFM projects.

Interventions Proposed

Project Strategy – Alignment with GCF Objectives and Outcomes

37. Readiness activities are proposed under GCF Objectives 4 and 5, with the proposed outputs as follows

Objective 4: Paradigm-shifting pipeline development: Development of a Project Concept Note.

- Outcome 4.1: An increase in the number of quality project concept notes developed and submitted.
 - Output 4.1.1 Submission to GCF of Project Concept Note for building an enabling environment for development of an ER TFM in Belize.
 - As context to this output, note that the Concept Note(s) will necessarily, given the subject matter, need to draw from in depth scientific data that is not currently available and that must be obtained through field assessment. For that reason, a separate field assessment activity (4.3.1 a)) and associated budget has been included to meet this need. Other discrete elements, namely a survey and gap analysis of national capacity and policy and regulatory enabling environment (Activity 4.3.1 b)) and MRV Options (Activity 4.3.1 c)) are necessary to inform the Concept Notes development, as identified in the Logical Framework.

38. Objective 5: Knowledge Sharing and Learning

- Outcome 5.2: Partnerships established to foster development and dissemination of methods, frameworks, and information systems for enhanced climate finance programming at subnational, national, and regional levels.

¹⁵ For a full description of Belize's relevant plans, strategies, climate change, fire and traditional knowledge context, informing how they align with the Project objectives, please see Annex 1.

- Activity 5.2.1 a) i) and ii) Awareness among all relevant target country stakeholder groups as to a) what ER TFM is and b) the potential for ER TFM in Belize, as demonstrated by participation by Belize stakeholders in a virtual seminar, and, for pilot site communities, community workshops designed for communities to build the capacity necessary to provide input within the concept note development process and to provide Free Prior and Informed Consent (FPIC) to field work in their community lands.
- Activity 5.2.1 b) Stakeholders in Belize, including women, have participated in activities of the ISFMI Network (Stakeholders for the purpose of this activity are taken to be research institutions, researchers, community organisations, community members, students, NGOs, government representatives, among others) including the annual Savanna Fire Forum and the global virtual Women in Fire Network workshop.

39. The Relationship of GCF defined Objectives to GCF Outcomes and proposed Outputs, Activities and Deliverables is further described in the Logical Framework. The Theory of Change within this proposal further describes how the outputs proposed will contribute to the desired impacts and, ultimately, the overarching goal being that Belize has the requisite capacity and enabling environment for an emissions reduction traditional fire management sector, that will lead to establishment of self-sustaining emissions reductions traditional fire management projects that reduce emissions, protect biodiversity, prevent forest loss and degradation, and create employment opportunities for remote Indigenous and local communities. In summary:

- Scientific, legal, policy, and regulatory assessments, a capacity gap analysis, an MRV options paper and roundtable aligned with GCF Outcome 4.3.1 will inform Concept Note development and the identification of further needs in regards of an enabling environment that supports ER TFM projects, so resulting in a Concept Note and an evidence base to inform a broader project pipeline.
- Partnership building activities aligned with GCF Objective 5 will facilitate knowledge exchange and directed at national stakeholders, that builds capacity both in the short term through stakeholder workshops (in particular the virtual multi-stakeholder seminar and community in person workshops of Activity 5.2.1 a) i) and ii) respectively), as well as in the long term through participation of stakeholders in activities of the ISFMI Network, including the annual Savanna Fire Forum, and the virtual meetings of the Women in Fire Network that allow community women to connect globally. Note that the ISFMI Network, administered by the ISFMI, is a global community of Traditional Fire Management knowledge and practice that has proven success in linking experts, practitioners and other stakeholders in fire prone savanna and tropical dry forest regions globally, through ongoing substantive exchange and support and including activities such as the annual Savanna Fire Forum in which network members participate. The Women and Fire Network within the broader ISFMI network provides a specific and focused forum for women stakeholders to reflect on the role of women in TFM and to consider project design and implementation explicitly taking into account the perspective of women and girls. For example, the Women in Fire Network has convened in person meetings in the Tsolido Hills region of Botswana, has involved women in pilot prescribed burning activities in the Tsodilo Hills, hosts an active ongoing whatsapp chat and has held virtual forums linking community women in Southern Africa and the Americas, with women government officials and community women working on fire in Australia. Proposed Activity 5.2.1 b) will support stakeholders from Belize to participate in the activities of the ISFMI Network and Women in Fire Network, and so benefit from the long term capacity building and networking generated through these activities, by providing telecommunications access to these virtual meetings from the remote locations in which the community members often reside.
- These networks are expected to support the development and implementation of TFM in Belize into the future, ensuring sustainable the building of local expertise and experience supported by international expertise, resources, and experience.
- Note also that additional partnerships and knowledge exchange will be facilitated through the field assessments Activity 4.3.1 a) in which local PhD students will take part, as has been successfully facilitated thus far in similar activities undertaken under the Australian government ISFMI grant in Botswana, further building capacity and partnerships among national scientists to support national technical capacity and leadership on ER TFM in the long term.

40. Interventions are targeted at stakeholders representing each of government, research institutions and communities, given the multifaceted and interdisciplinary interaction required for building an enabling environment for ER TFM, and required capacity, engagement and coordination among a diverse range of actors.

Relationship to and advantages over other Fire Management Strategies

41. ER TFM is complementary to other fire management activities, notably community-based fire management approaches and projects, by building on more general capacity for fire management in communities and among other stakeholders, such as through assistance provided by government or other donors, while additionally having potential to lead to verification of carbon offsets generated and, ultimately, create sustainable income streams for local communities through sale of offsets in carbon markets and other private sector partnerships. On that latter point it is unique, being an approach to fire management that differs from others being that it has a built-in economic incentive ensuring that management strategy is implemented on a sustainable basis. ER TFM is also unique in that it builds on traditional practices, so leveraging from community knowledge and supporting co-benefits associated with recognition and support for Indigenous knowledge and the continuity of traditional responsibilities for land management. It is also a comparatively low-cost technology – once the initial methodologies and MRVs systems are established the annual fire management activities can be accomplished with minimal equipment. As is starting to occur in Australia, it is anticipated that future carbon sequestration impacts of TFM will also be built into the methodologies, further increasing the potential of TFM activities for communities and the country.

Complementary Initiatives

Building from Past ISFMI Achievements

42. The proposed interventions are informed and enabled by the foundational work that ISFMI has already completed globally and in southern Africa, namely:

- a) ISFMI Global Feasibility Assessment 2012 – 2015¹⁶

From 2012-15, the ISFMI undertook a three year \$3m detailed assessment of the feasibility of adapting savanna burning “technology” to countries in Asia, Africa and Latin America (funded by the Australian Government).

This Feasibility Assessment concluded the following:

Traditional Fire Management and savanna burning methods are globally applicable and relevant, potentially a significant global mitigation option and global adaptation mechanism for predicted increases in wildfires. It also found widespread international interest in these methods. The Feasibility Assessment showed that these methods provide a potentially important example of an international carbon credit, or offset, that is credible, reliable, transparent and avoids many of the pitfalls raised by other land use credits or offsets, like REDD+, such as permanence, land tenure, governance issues as well as monitoring, reporting and verification issues.

Scaling-up this “technology” in a phased manner, with the next stage being a proof of concept stage, is feasible and demand driven.

The Assessment also made preliminary findings suggesting the applicability within and feasibility of Traditional Fire Management in Belize specifically both through the Latin America regional feasibility study, and a specific sub-regional analysis focused on Belize.

This assessment demonstrated that high intensity late dry season wildfire in Belize contributes to biodiversity loss, facilitates forest degradation, undermines food security, and damages infrastructure.

This readiness proposal will build on the findings of the Feasibility Assessment by providing the resources to identify how to apply ER TFM in Belize and hence implement the key outcome of the Feasibility Assessment in Belize. It will identify a series of pilot sites that have the best potential to benefit from the development of ER TFM, identify the way to develop the supporting MRV systems and join the international network of experts working on this issue. This readiness will further identify the relevant Traditional Knowledge, will support pilot site legal and governance assessments, will provide the necessary baseline fire review, vegetation fuel type maps, and other research necessary to test the applicability of ER TFM in Belize.

¹⁶Regional Feasibility Assessment for Latin America (Part VIII Central America: Belize Pine Savannas) in the ISFMI Global Feasibility Assessment is available at <https://www.isfmi.org/news-items/blog-post-title-two-7f5n>

b) Proof of Concept Botswana 2018 -2021

Building on the findings of the feasibility assessment, the Australian Government elected to continue its support for testing the feasibility of Traditional Fire Management outside Australia by providing a \$4m grant to the ISFMI to establish the first proof of concept sites in Botswana in the Tsodilo Hills region, in order to confirm that the technology can be successfully adapted to the local context of other countries.

The proof of concept site undertook the following activities:

- Identifying relevant Traditional Knowledge
- Free, Prior and Informed Consent (FPIC) integral to all community activities.
- Pilot Site Law and Governance Assessment
- Identify necessary project consents and licences
- Baseline fire review
- Validated vegetation fuel type map
- Design a platform for MRV
- Methodological Development to measure the carbon impact of TFM for the sites
- Fire Management Program for the sites

Learnings and best-practices from the Botswana project will inform the process, pilot site selection and methodologies for Belize.

43. Progress has been excellent, with research findings published within the peer reviewed Journal of Environmental Management in June 2021¹⁷ indicating that development of a high rainfall methodology will be possible for Botswana and that the proof of concept site has the potential to produce the type of outcomes seen in Northern Australia. Further work on other rainfall bands in Botswana and on other aspects of the enabling environment for emissions reductions TFM in Botswana would build on these achievements. These results provide strong support for the hypothesis that ER TFM can be widely technically applicable outside Australia, in Southern Africa and likely in other analogous landscapes globally including Belize, where there is a history of TFM, which has been disrupted, there is a fire dependant ecology, widespread support within the local communities, research institutions and government for TFM and access to ER TFM expertise. The Southern African experience also provides new insights into transposing the Australian ER TFM experience into different countries and contexts. For example, the work being undertaken on other rainfall bands in Botswana will allow wider and better coverage of Belize. Developing the MRV system for Southern Africa helps identify challenges and find solutions to a proposed MRV system for Belize, such as different satellite feeds or software platforms or support services. TFM experts from Australia develop their training skills by working in different environments, cultures and languages. This capacity development of the experts means that they are better at helping communities in other countries like Belize. The Southern African work also expands the network of experts involved in ISFMI which provide more expertise to access for Belize. This Readiness intervention will draw on all these emerging lessons and expertise to improve the application of ER TFM in Belize.

Relationship to Other Projects and Processes: Past, Present, Anticipated

44. The proposed readiness activities build on past efforts towards the development of capacity for activities relevant to Traditional Fire Management in the region and complements current and anticipated activities.

Detailed mapping and consideration of the complementarity of these activities at the country level has been completed, including in relation to REDD+ focused support, and is set out in Annex I to this proposal. Also described in Annex I is the relationship of this Readiness Proposal to other GCF programming in Belize

Noting the additional detail provided in Annex I, a summary of the key links between existing national goals, policy and other relevant initiatives to the proposed readiness support for Belize is as follows:

¹⁷ The abstract of the Journal of Environmental Management Article is available via the link <https://www.isfmi.org/news-items/isfmi-team-confirms-feasibility-of-emissions-reductions-traditional-fire-management-in-southern-africa>. Full text access can be requested through the ISFMI (secretariat@isfmi.org)

Alignment of Proposed Interventions with National Goals and Policies:

45. Belize is fully committed to the international regimes established for the promotion of sustainable development, the protection of biodiversity and the fight against climate change, with Belize having ratified the Paris Agreement in 2016. As such, and as further described in Annex I, Belize has developed several policy frameworks in support of sustainable development and action to combat climate change over the last decade. Belize submitted its Nationally Determined Contribution (NDC) to the UNFCCC in 2015 and is currently undertaking a full review of existing policies such as forest and land-use policies with the aim of enhancing their effectiveness and better align them with the national climate change commitments. Of particular alignment with ER TFM as an approach to fire management are that:

- a) The 2019 Belize Country Strategy Framework, including a Country Programme for engagement with the Green Climate Fund – identifies improved community resilience to climate change events as key to Belize Country Strategy.
- b) Belize's 2011 Intended Nationally Determined Contribution indicates that Belize's contribution will address issues of deforestation and afforestation, maintaining healthy ecosystems by sustainable management, and increasing the resilience of human communities, especially those whose livelihoods depend on the use of forest resources.
- c) Belize's 2014 National Climate Change Policy and Action Plan to Address Climate Change identifies strengthening forest fire management and response capacity as critical to addressing some of the key drivers of deforestation.
- d) In Belize's 2015 National Forest Policy Statement 12 states that "the government shall recognize the importance of fires as an ecological process, encourage its proper use and management in the protection and enhancement of terrestrial ecosystems giving special consideration to human welfare and safety".
- e) Belize's National Biodiversity Strategy and Action Plan 2016 – 2020 notes that effective fire management is key to ensuring balanced and sustainable development. It further recognizes that fire is the highest threat for the Belizean Pine Forest, with increasing frequency of fires resulting in ecosystem degradation.
- f) The 2015 National Protected Areas Systems Plan and its implementation must use and draw upon the scientific, technical and traditional knowledge of local and indigenous communities. The plan also states that management of protected areas shall respect, preserve and maintain the traditional knowledge, innovations and practices of indigenous peoples and local communities.

46. Of further specific relevance to this proposal, are the following current policy, legislative and operational/institutional frameworks, including both some that offer some support for community-based approaches to land and fire management, and others that represent gaps and barriers in terms of developing an enabling environment for ER TFM. Annex III provides a summary table of relevant institutions named in the proposal who have a mandate on fire management.

- a) Belize has a Wildland Fire Management Policy that serves as a basis to protect its forest resources, essential for the country's long-term sustainable development given that its economy is natural resources based. The Policy is based on a set of five dimensions with ten guiding principles. The Policy considers the current state of affairs in wildland fires management, the threats and negative impacts of wildland fires, the identified emerging needs of all stakeholders and the role of communities, especially rural ones. Relevant to TFM, the Policy focuses on community participation in wildland fire management, it provides an enabling framework for changes in practices and behaviour in thematic areas such as safety; fire management and ecosystem sustainability; response to wildland fires; use of wildland fire; wildland fire management; suppression; prevention; use of fire in rural livelihoods; protection priorities; planning; and improved organizational capability.
- b) There are three regulations that govern fires in Belize. The Agricultural Department is charged with the application of the Agricultural Fires Act (2000) which permits the setting fire on land which is under cultivation or in course of preparation for agricultural purposes. It seemed, at one point, that that Department abandoned this law, and the continued existence gave a false regulatory mechanism in theory but not in practice. When the regulation was created, there was more respect for the law and environment. Agriculture Department did demonstrations of best practice and had more interaction with farmers; however, this is no longer the case. The Agriculture Department has restarted the enforcement of this legislation following increasing numbers of fires during the drought experienced in Belize in recent years.
- c) The Forest Fire Protection Act (2000) is enforced by the Forest Department and was enacted after Hurricane Hattie hit Belize. Its purpose is to authorize the Government to declare fire protection areas

and supports the development of fire protection plans for areas so declared. It gave authority to Government to gain access to private estate to control fires and request reimbursement from expenses incurred for fire suppression. Its provisions authorized the Government to carry out some prescribed burns in controlled areas. Section 11 also authorizes the Government to respond to outbreak of a forest or bush fire, whether within or outside of the declared controlled area (upon any land), with or without assistants, and take such measures necessary to suppress the fire(s). This Act has only been applied once. The penalty described in the Act is applicable to any person who enters or remains within a controlled area without written permission or to a person who is authorised but contravenes or fails to comply with any condition or restriction expressed in the permission granted to them.

- d) The Negligent Use of Fires Act is for individuals to take legal action against other individual(s) who have caused damage through negligent use of fire. Its provisions hold any person liable for the setting of fires or any person who is negligent, careless or improperly uses or manages fire in or upon any land or place. This regulation is applicable in both rural and urban setting.
- e) The National Fire Service is charged with addressing structural fires in urban setting. However, they have increasingly been responding to brush and bush fires in the rural/urban/forest interface. Though they may not be trained and/or equipped to respond to fires in this setting, they are the government agency called upon most often to respond in extreme situations.
- f) The Forest Department is tasked with addressing fire-related concerns but there is not a specific unit nor specific funding allotted to fire management in Belize. While fires affected many regions and are of relevance to many Ministries and Departments – including the Ministry of Agriculture, Climate Change Office, Forest Department, among others – there is very limited national coordination on fire management and, often times, it is unclear which Ministry should respond when fires are involved. In terms of monitoring and data availability, fire data is only available for the Pine Ridge region making it difficult to track and respond to fire in other regions. The Forest Department has identified capacity building and training among community groups as essential as they are the first responders; currently, there are only limited programs aimed at creating this capacity in communities.
- g) Note that an analysis within the “Forest Fire Communication Strategy 2017-2020” documents people’s awareness, opinions, behaviours and participation in forest fire management. The situational analysis uncovered diverse circumstances that account for the lack of inclusiveness in forest fire management. At the local community level, the primary issues that were noted were the lack of involvement of village leaders in forest fire monitoring and enforcement, and residents were widely unaware of their land tenure rights and responsibilities, or forest fire laws, regulations and forest fire risks. At the organizational level, there was limited enforcement of fire laws and regulations, lack of cohesive legislations, limited understanding of departmental roles and undefined jurisdiction, lack of coordination among inter-government agencies in forest fire management, lack of collaboration between government and its partners; insufficient funding for forest fire management and unclear forest fire management processes.

47. As evident from the descriptions above, the detailed information in Annex I, and input from national stakeholders captured in the Forest Fire communication Strategy, currently, despite broad overarching policy alignment with the goals of ER TFM at the level of national strategies for climate change and biodiversity protection, the fire management status quo in Belize is constrained by the following factors: (1) insufficient national coordination and planning, (2) limited organizational capacity and human resources, (3) incomplete policy directives, (4) insufficient data and monitoring equipment, (5) insufficient coordination and engagement with communities and other stakeholders affected by fire. Legal instruments currently do not allow for the use of fire and fire management practices for preventive measures in Belize, especially by local communities and local leaders. Legal reform would also be beneficial to help Belize align its current laws with climate change goals. The readiness interventions proposed aim to capture, through the survey and gap analysis, Belize’s policy, regulatory and capacity needs to build an enabling environment that would better support ER TFM.

Extent to which Proposed Interventions build from and Support past, present or anticipated interventions:

48. As noted, ER TFM complements other fire management approaches and activities, including community-based fire management approaches and projects, by building on more general capacity for fire management in communities and among other stakeholders, while additionally having the potential to lead to verification of carbon offsets generated and, ultimately, create sustainable income streams for local communities through the sale of offsets in carbon markets and through creation of other private sector partnerships.

49. In Belize, the proposed readiness activities build on past efforts for the development of capacity for fire management including at the community level, and complement current and anticipated activities. Specifically:

- a) The Toledo Institute for Development and the Environment’s pilot programs have managed lowland savanna through a schedule of prescribed burns to reduce the volume of flammable material in the

ground vegetation layer and thus the intensity of wildfires. These pilot studies found that management involving prescribed burning to control wildfire appear to result in greater forest complexity and biodiversity, a finding that supports the evidence base necessary for the development of ER TFM and consistent with the hypothesis that ER TFM will help protect Belize's biodiversity.

- b) Belize's Forest Department has gradually increased its capability to prevent, detect and fight fires in collaboration with other federal, state, private and community fire management agencies. Recent improvements in satellite imagery and computer capability, together with improved formal training and the creation of fire brigades, have improved fire management systems. In Belize, recent programs have tried to maintain fire regimes while refining management practices to achieve multiple objectives from fire such as forage production, wood production and recreational opportunities. Despite some successes, the government of Belize is actively looking for ways to improve fire management and support community livelihoods.
- c) This Readiness support will also compliment the SAP Concept note titled "Building Climate Resilient 'Guardians of the Forest and Regenerative Agriculture' Communities in Forest Buffer Zones Across Rural Belize." The project promotes forest protection, regenerative agricultural systems and strengthening of existing livelihoods that depend on healthy forests to succeed. Activities will occur in protected areas buffer zones to strengthen regulations and promote responsible use of forest and landscape resources through ecosystem-based adaptation and good agricultural practices that involve integrated water and soil management with sustainable livelihood enterprises. Agreements will be implemented to ensure there are no adverse resettlement or biodiversity impacts. The activities seek to improve resilience to climate change events, building capacities, developing stakeholder networks, generating national policies and implementing effective coordination at the community and national level to support the project's initiative.
- d) There is a need in Belize for legal revision and amendment of all Wildland Fire related laws and regulations (Fire laws under FD, Agriculture Department & the Fire Service) in order to modernize, strengthen, and harmonize those legislations for effective enforcement and improved fire management. Jurisdiction for each institution need to be clearly defined as well as their roles and responsibilities. Legislation will need to establish the role of communities and rural development agencies in fire management. Wildland fire management partners will require a collaborative and coordinated approach to wildland fire management in general – legislative review and enforcement, response, sharing of resources, plan development, etc. This readiness will support and address these need through a legal review

50. In terms of coordination, the FD in late 2019, made an attempt in establishing a National Wildland Fire Working Group (NFWWG), which comprised government agencies that worked with fire management to some degree. The NFWWG is a recommendation of the Wildland Fire Policy & Strategy of 2009. The Group was to serve as an advisory body to the FD to advice on their sector policies, plans, strategies and challenges and concerns relevant to fire management. They were also to offer technical support and guidance on the development of policies, legislations, management plans, strategic plans, work programmes, communication plan among others on wildland fire management, which were to be endorsed by the FD. At the time, the interest level was low and the under resourced agencies were unable to actively participate. Participation was further compounded by the COVID 19 pandemic in March of 2020. In early 2021 there was an interest to reactivate the NFWWG, however, this has yet to materialize. Such initiatives are solely policy recommendations that are not supported by legislation. This Readiness proposal will support in moving this initiative forward.

I

3. LOGICAL FRAMEWORK

Outcome	Baseline ¹⁸	Targets	Outputs	Activities (brief description)	Deliverables ¹⁹
<p>Outcome 4.1:</p> <p>An increase in the number of quality project concept notes developed and submitted.</p>	<p>Emissions Reductions Traditional Fire Management as a climate change intervention not identified as part of the current iteration of the Country Programming pipeline.</p> <p>As of February 2022 the GCF pipeline currently indicates that so far for Belize there have been submissions of 5 Concept Notes, 1 SAP FP and 3 SAP Concept Notes.</p>	<p>Submission of one GCF Concept Note focused on building an enabling environment for development of an ER TFM sector in Belize.</p>	<p>Output 4.1.Finalized GCF Concept Note for building an enabling environment for development of an ER TFM sector in Belize.</p>	<p>Activity 4.1.1 a i):</p> <p>Undertake assessments to identify at least one technically feasible Pilot Site for Traditional Fire Management projects in Belize through preliminary scientific baseline analyses.</p> <p>Activity 4.1.1 a ii): Conduct validation exercise of deliverable 4.1.1.a by key national stakeholders</p>	<p>Deliverable 4.1.1 a i) 1:</p> <p>(1). Baseline fire and emissions review in identified site(s) area, presented in report format. [completed by month 10]</p> <p>Deliverable 4.1.1 a i) 2:</p> <p>(2). Preliminary vegetation and fuel review in identified site(s) area, presented in report format. [completed by month 10]</p> <p>Deliverable 4.1.1 a i) 3:</p> <p>(3). Preliminary biodiversity review in identified site(s) area, presented in report format. [completed by month 10]</p> <p>Deliverable 4.1.1 a i) 4:</p> <p>(4) Analysis of potential for any cross-border management approach, presented in report format. [completed by month 10]</p> <p>Deliverable 4.1.1 a i) 5:</p> <p>(5) Findings on suitability for development and application of ER TFM in proposed pilot site area(s), presented in report format [completed by month10]</p>

¹⁸ Please briefly elaborate on current baselines on which the proposed activities can be built on, processes that are in place that the current Readiness proposal can strengthen, or any gaps that the proposed activities would fill in. If more space is needed, please elaborate this in Section 4.

¹⁹ Please include tangible and specific deliverables for each activity proposed, Please note that during implementation all deliverables should be included within the implementation reports for GCF consideration.

					<p>Deliverable 4.1.1.a ii): Reports forming Deliverable 4.1.1 a i) 1 – 5 reviewed and adopted by national stakeholders, ISFMI and NDAs as reflected in executive summary to validated assessment report that integrates all reports under Deliverable 4.1.1 a i) 1 – 5. [completed by month 12]</p>
				<p>Activity 4.1.1 b Conduct one survey and gap analysis of i) social, cultural, economic, land tenure and governance context in site areas, i) national capacity, policy and regulatory enabling environment for fire management generally, and for development of ER TFM sector, including mapping of organizations currently engaged in fire management and opportunities for improved national and sub-national coordination, and iii) possibility for cross</p>	<p>Deliverable 4.1.1b) Finalized report of survey and gap analysis reviewed and accepted by NDA. [completed by month 14]</p>

				border and regional approaches to ER TFM.	
				<p>Activity 4.1.1 c (i): Assess options for development of Satellite based fire emissions Monitoring, Reporting and Verification (MRV) and emissions accounting tools in Belize, including exploration of regional approaches.</p> <p>Activity 4.1.c(ii): Conduct 4 Virtual Roundtables (2 national and 2 regional) for 20# of stakeholders on MRV Options identified through Activity 4.1.1.d</p>	<p>Deliverable 4.1.1 c (i) : One Completed Options paper on Satellite based fire emissions Monitoring, Reporting and Verification (MRV) and emissions accounting tools in Belize and region reviewed and accepted by national stakeholders, ISFMI and NDA. [completed by month15]</p> <p>Deliverable 4.1.1 c (ii) : Roundtables (2 national, 2 regional) on MRV options undertaken, and associated report of roundtable drafted, reviewed and adopted by participants. [completed by month 16]</p>
				Activity 4.1.1 d) Identify through z consultative process potential AEs, including through invitation of AE representatives at Virtual Country Roundtable.	Deliverable 4.1.1 d) Letter of Intent by Accredited Entity(ies) confirming willingness to identify as the nominated AE in Concept Note provided to the NDA. completed by month 16]
				Activity 4.1.1 e) Develop Project Concept Note integrating findings and recommendations of deliverables under Activities 4.1.1 a) – d).	<p>Deliverable 4.1.1 e) (i) ER TFM Concept Note developed and reviewed by NDA. completed by month 20]</p> <p>Deliverable 4.1.1 e) (ii) ER TFM Project Concept Note(s) finalised based on comments received, endorsed by NDA and submitted to GCF. (completed by month 24]</p>

Outcome 5.2: Partnerships established to foster development and dissemination of methods, frameworks, and information systems for enhanced climate finance programming at subnational, national, and regional levels	Capacity in Belize to build an enabling environment for ER TFM implementation is very limited and insufficient for the purpose of Belize programming GCF or other donor activities focused on ER TFM or pursuing development of an ER TFM sector.	Stakeholders (national government agencies, local government agencies, potential pilot site communities and academics/researchers based in the Belize and working in relevant fields) have sufficient awareness of the potential of ER TFM to provide input into development of ER TFM related Concept Note. And are involved in the ISFMI Network in order to facilitate knowledge exchange over long term. Resources available in Spanish and, where needed, local language(s)(i.e. Mayan languages, Kriol) to meet capacity and network participation needs of needs of community stakeholders from Belize where English is not a first language.	Output 5.2.1 Awareness among all relevant stakeholder groups as to a) what ER TFM is and b) the potential for ER TFM in Belize and ongoing partnerships to further knowledge exchange.	Activity 5.2.1 a) i) Build awareness and develop capacity of local stakeholders to engage with country programming on ER TFM through 1 virtual multi-stakeholder seminar for Belize with subject matter covering: a) the Australian experience of ER TFM; b) results from research and community activities in other regions; c) country level potential for ER TFM; d) country capacity, technological and policy/regulatory gaps and needs, e) international carbon markets and opportunities, and f) facilitated session to draw out lessons learned and take home messages from seminar.	Deliverable 5.2.1 a) i) Written report and recording of the virtual seminar reviewed and adopted by participants. (seminar undertaken by month 3, written report completed, reviewed and adopted by month 6)
				Activity 5.2.1 a) ii) Conduct one capacity building workshops in local communities in potential pilot site areas (see Activity 4.1.1a) to provide informed input into the Concept Note(s) development process and Free, Prior and Informed Consent to field work under Activities 4.1.1 a) -b) that will cover topics including those listed as subjects for Activity 5.2.1 a) i), as well as forming FPIC consultations.	Deliverable 5.2.1 a) ii a) One Workshop held with written and photo/video report of each country community workshop and consultation reviewed and adopted by participants. completed by month 5] Deliverable 5.2.1 a) ii b) Indication of FPIC for field work to be undertaken as part of the Readiness support project, as provided by community in manner aligned with that community's governance protocols. (i.e. for example, letter from local Community Trust/Traditional Authority). (completed by month 6)

				<p>Activity 5.2.1 b) Stakeholders in Belize have participated in capacity building activities of the ISFMI Network (Stakeholders for the purpose of this activity are taken to be research institutions, researchers, community organisations, community members, students, NGOs, government representatives, among others) and including women from each of these countries.</p>	<p>Deliverable 5.2.1 b) At least five stakeholders in Belize including at least two women have each participated in one or more activities of the ISFMI network, including the annual Savanna Fire Form and a meeting of the global virtual Women in Fire Network, as evidenced by meeting notes and other participation records of these activities.</p>
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4. THEORY OF CHANGE

51. Goal: The ultimate goal of activities is to provide a foundation for the future establishment of a Project to support the establishment of self-sustaining TFM projects that will: reduce emissions, support adaptation, and enhance biodiversity and resilience, while creating sustainable enterprise and employment opportunities for remote Indigenous and local communities.

52. Goal statement: IF concept notes are developed and partnerships are established, THEN full funding proposals can be developed and submitted to the GCF, BECAUSE countries will have awareness of and an evidence base for the potential of ER TFM for Belize and capacity to pursue programming to develop ER TFM sector²⁰, which will allow TFM pilot projects to be established, lead to improved fire regimes, reduce emissions, enhance resilience, protect biodiversity, prevent forest loss and degradation and create employment opportunities

53. Impact: The implementation of TFM would lead to improvement of fire regimes, enhanced biodiversity, enhanced resilience, adaptation support and emissions reductions. TFM projects, by resulting in these environmental impacts and by creating income stream for communities, lead to improved community health and wellbeing and employment opportunities. Implementation of TFM projects would support national goals of ecosystem resilience and restoration initiatives.

54. Outcomes: GCF outcomes contributed to be the Readiness Proposal are an increased number of quality concept notes developed and submitted; and partnerships established for enhanced climate finance programming. The development of a Project Concept note will provide the foundation for the development of a full GCF proposal to be developed and submitted. The establishment of pilot projects and MRV systems supported through a full project will support general scale up of TFM in the region, building from the experience gained.

55. Outputs: Concept note(s) developed and project pipeline strengthened; stakeholders have awareness of and capacity in ER TFM; expanded ISFMI Network including expanded Women in Fire Network.

56. Activities: Scientific assessments, legal, policy, regulatory and capacity gap assessments, and an MRV options paper and regional roundtable inform Concept Note development and further needs by providing an evidence base that will indicate the potential of ER TFM in Belize, and in addition identify the extent to which the policy, legislative and technical and capacity based enabling environment already well supports ER TFM and where gaps must be filled as part of a potential full project.

Partnership building activities in the short-term support knowledge exchange and capacity development among national stakeholders that will be sufficient to support informed input by national stakeholders to the development of a concept note and to guide options on MRV systems suitable to Belize's needs. Expanding the ISFMI Network, including focus on the specific role of women in fire management through expanding the Women in Fire Network within the ISFMI network and so put forward the perspectives and interests of women and girls within the development of the Concept Note, and will support local and regional capacity development through knowledge and information exchange on ER TRM into the long term, ensuring sustainable the building of local expertise and experience supported by international expertise, resources, and experience.

57. Inputs: The following sources of data and information will inform the development of the Project Concept Note: local fire management knowledge/experience; Belize policy and legislative frameworks, Wildland Fire Management Policy and Strategy for Belize; the National Cohesive Forest Fire Communication Strategy 2017-2020; the Agriculture Fires Act; Forest Fire Protection Act; the ISFMI Global Feasibility Study; ISFMI Belize sub-regional analysis, academic papers; Australian and Belize fire management knowledge/experience; Satellite data and expertise; Australian methodologies; Australian MRV systems and software; and lessons learned from Botswana pilot project development.

²⁰ While some general activities have taken place in Belize, and general data sets available, the type of very specific data sets required for proving the technical feasibility of emissions reduction TFM and the subsequent development of methods has not yet been done for Belize. These require dedicated field work in pilot sites, as per the proposed readiness activities. See for instance: Russell-Smith, J. et al. (2021) Opportunities and challenges for savanna burning emissions abatement in southern Africa. In Journal of Environmental Management.

58. Alignment with Regional and National Priorities: This Readiness project proposal has been developed with reference to Belize government policies and strategies in the field of climate change, biodiversity, desertification, social and economic development and other relevant policy areas, as further detailed in Annex I, to ensure alignment with national and regional demand and priorities. The Proposal has also been designed with reference to GCF Country Programmes and other past, current and proposed donor activities in order to build on and complement other efforts in the field of community based natural resource management and fire management in the region.

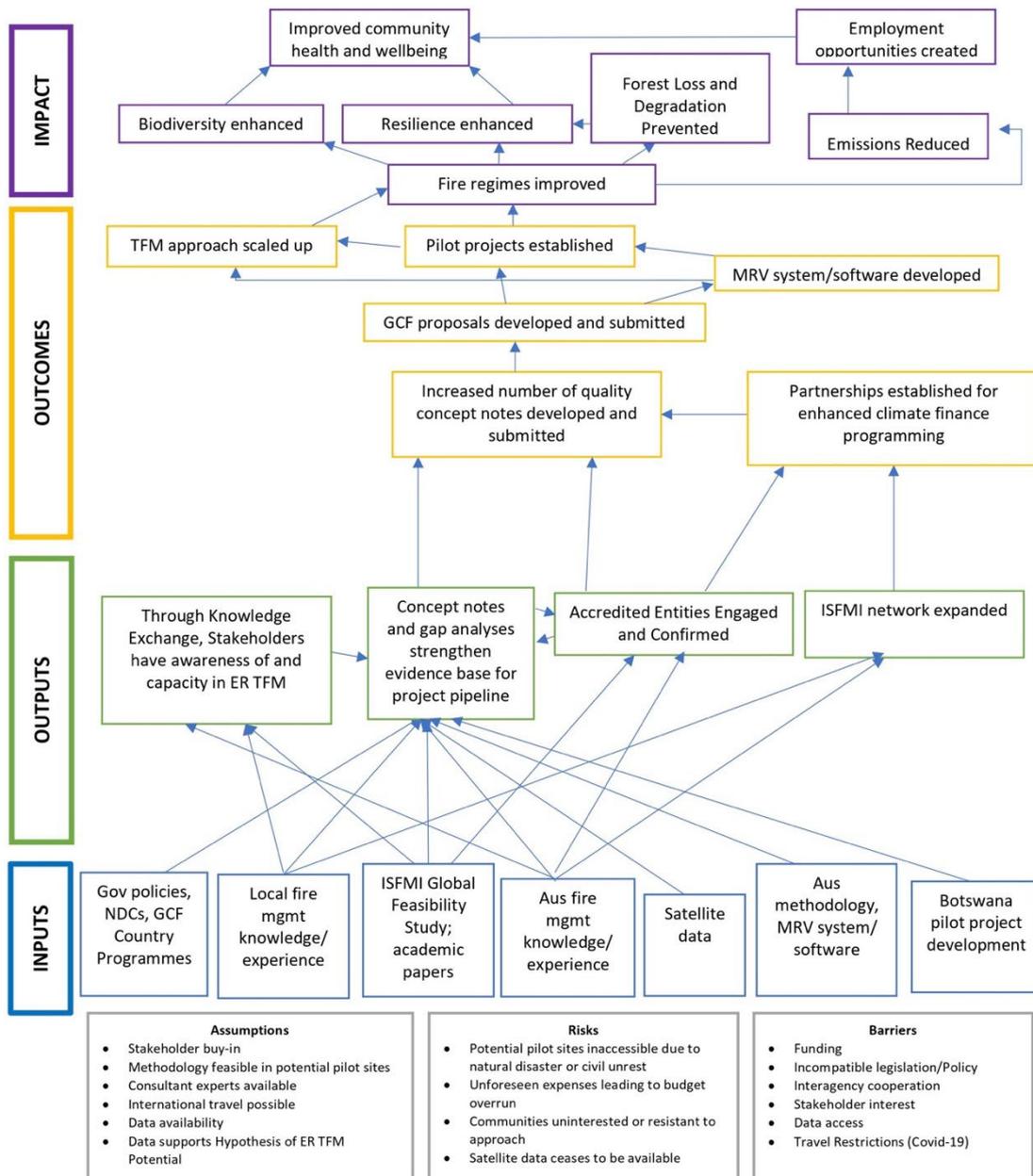
- a) **Assumptions** include: that there will be adequate stakeholder buy in including political support; that the methodology will be feasible in potential pilot sites; that there will be the necessary specialized experts available; that international travel will be possible and that there will be necessary data available to support baseline analysis to inform the Project concept note and that data supports the hypothesis of ER TFM potential
- b) **Risks** include that: potential pilot sites become inaccessible due to natural disaster or civil unrest; that unforeseen expenses lead to budget overrun; that communities are uninterested or resistant to TFM as a fire management approach, and that satellite data ceases to be available.
- c) **Barriers** include funding availability, incompatible legislation or policy, the success of interagency cooperation; levels of stakeholder interest; data access, and Covid 19 related restrictions.

The relationship between goals, impact, outcomes, outputs, activities, and inputs is illustrated in the Theory of Change Diagram below.

Theory of Change

GOAL: Establishment of self-sustaining TFM projects that are: reducing emissions, enhancing biodiversity and resilience, preventing forest degradation and creating employment opportunities for remote Indigenous and local communities.

Goal statement: If concept notes are developed and partnerships are established, then full funding proposals can be developed and submitted to the GCF, because countries will have awareness of and an evidence base for the potential of ER TFM for their country and capacity to pursue programming to develop ER TFM sector, which will allow TFM pilot projects to be established, which will lead to improved fire regimes, which will reduce emissions, enhance resilience, protect biodiversity, prevent forest loss and degradation and create employment opportunities.



5. BUDGET, PROCUREMENT, IMPLEMENTATION AND DISBURSEMENT PLAN

5.1 Budget plan

Please complete the Budget Plan in Excel using the template available in the [Library](#) page of the GCF website.

5.2 Procurement plan

Please complete the Procurement Plan in Excel using the template available in the [Library](#) page of the GCF website. For goods, services, and consultancies to be procured, please list the items, descriptions in relation to the activities in section 2, estimated cost, procurement method, relevant threshold, and the estimated dates. Please include the procurement plan for at least the first tranche of disbursement requested below and provide a full procurement plan for the entire duration of the implementation period if available at this stage.

5.3 Implementation Plan

Please complete the Implementation Plan in Excel using the template available in the [Library](#) page of the GCF website.

5.4 Disbursement schedule

The proposed schedule for requesting disbursements from the GCF is annually, according to the following schedule.

Please choose one option among the two below and delete the one that does not apply to you. Please fill in information under brackets:

Readiness Proposal that falls within a Framework Agreement with the GCF

Disbursements will be made in accordance to *[Clause xx] "Disbursement of Grants"* and *[Clause xx] "Use of Grant Proceeds by the Delivery Partner"* of the Framework Readiness and Preparatory Support Grant Agreement entered into between GCF and *[Delivery partner name]* on *Click or tap to enter a date*.

- The first disbursement *amounting* USD (250,000) will be transferred upon approval of the readiness request and effectiveness of the Grant Agreement;
- The second disbursement *amounting* USD (130,000) will be transferred upon submission of an interim progress report [and audited financial report]²¹, in form and substance acceptable to the Fund, [including an audited expenditure statement]; and
- The fourth disbursement *amounting* USD (19,313) will be made upon submission of a completion report and financial report, in form and substance acceptable to the Fund, including an audited expenditure statement.

²¹ For second disbursement, audited financial report and audited expenditure statement are only required for readiness and preparatory support proposals expected to last over 12 months.

6. IMPLEMENTATION ARRANGEMENTS AND OTHER INFORMATION

6.1 Implementation arrangements

Please describe how implementation arrangements will be made and how funds will be managed by the NDA and/or the Delivery Partner.

59. The National Designated Authority will be responsible for submitting the Readiness Project Proposal and seeking GCF Readiness Support. The NDA will submit the proposal through the GCF submissions portal and will be the primary NDA focal point interacting with the GCF.

60. The Project Steering Committee (PSC) will guide and oversee project implementation. The Steering Committee will be made up of the ISFMI, a member of the Forest Department, and one representative from the NDA office in Belize. The Co-chairs will be the ISFMI, and the NDA. The ISFMI as the Delivery Partner responsible for project implementation will report to the PSC. The PSC will meet at least twice over the course of the 24-month project, via virtual or in person means as possible.

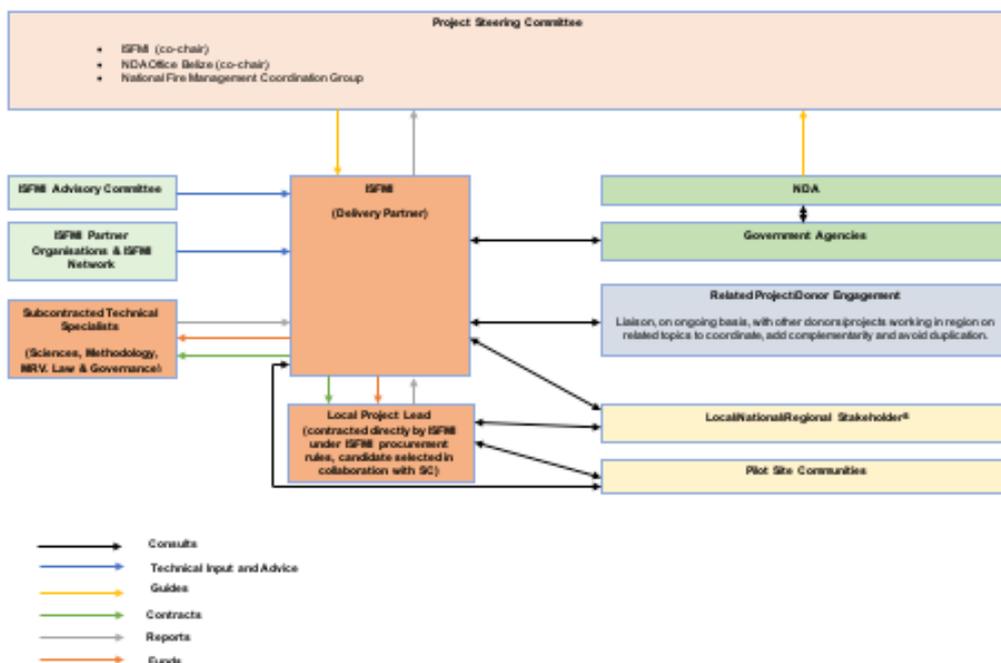
61. The NDA will further participate in the activities proposed. These activities will result in formulation of a final Project Concept Note that they would be invited to endorse prior to the submission of the Project Concept Note to the GCF.

62. The International Savanna Fire Management Initiative Pty. Ltd. (ISFMI) will be responsible for the implementation of the activities under this readiness and preparatory support proposal and will carry out all fiduciary and financial management, procurement of goods and services and monitoring and reporting under this proposal in compliance with its policies and procedures and with the Bilateral Grant Agreement to be signed with GCF or its fiduciary agent. The Local Project Lead, and all other consultants and suppliers of professional services, goods and other services will be procured by the ISFMI, subsequent to its procurement policy.

63. During the Readiness Project Concept Note Development the ISFMI will consult with eligible Accredited Entities such as the Protected Areas Conservation Trust and IUCN to engage in discussions towards implementation arrangements for a possible full proposal, as identified in the Proposal’s Logical Framework

Activities will be designed and implemented in a way that ensures gender inclusion, as further detailed in Section 6.5 below.

The Implementation Map and section 6.2 below further describes the entities involved, their relationships and roles in project governance and implementation.



6.2 Implementation and execution roles and responsibilities

Please briefly describe how the activities will be implemented and outputs delivered by project staff and consultants.

64. In summary:

ISFMI (Delivery Partner)

- ISFMI acts as co-chair and coordinator of Project Steering Committee, alongside representative of the Forest Department and the Belize NDA.
- Reports to Project Steering Committee.
- As Delivery Partner, receives and expends project funds.
- Manages Project Implementation in collaboration with the Forest Department, including:
 - Selects and supervises sub-contracted technical specialists.
 - Develops and implements Monitoring and Evaluation and Risk Management Framework.
 - Environmental and Social Safeguards Coordination.
 - Oversees stakeholder and pilot site community engagement in alignment with GCF. Indigenous Peoples Policy and according to principal of Free, Prior and Informed Consent (FPIC).
 - Concept Note Development.
 - MRV Consultation Co-ordination.
 - Community Engagement.
 - With the support of the Local Project Lead, consults with local stakeholders and government agencies.
 - Consults with any related local, national and regional projects to ensure complementarity and avoid duplication.
 - Seeks and considers expert technical, scientific and other interdisciplinary advice as appropriate, from the ISFM Advisory Committee, ISFMI Partner Organisations, the ISFMI Network and local experts.
- Skills and Experience: the ISFMI team is comprised of range of specialists in Programme management, Fire Management, Indigenous Peoples policy, Safeguards, international climate change and biodiversity science and policy.
- Budget administration, financial reporting, auditing and corporate compliance.

65. Local Project Lead (Contracted by ISFMI)

- The Local Project Lead, in order to support project implementation activities, supports coordination of country level activity and to that end, consults with:
 - Consults with pilot site communities.
 - Consults with national stakeholders.
 - Consults with government agencies and the NDA.
- The Local Project Lead will be based in Belize and will be expected to travel as required between the capital and the local communities participating
- The technical and specialist services are to be directly contracted by the ISFMI Pty Ltd and report to the ISFMI according to the Terms of Contract.

66. *Technical and Specialist Services (Subcontractors of ISFMI)*

- According to terms of services contracts, provide expert input into:
 - Science baseline research and fire emissions methodology.
 - MRV Expert Input.
 - Fire Management operations and fire business development advice.
 - Legal and Governance.
- Skills and Experience: Demonstrated expertise and experience in specialized area for which assistance is sought.
- The technical and specialist services are to be directly contracted by the ISFMI Pty Ltd and report to the ISFMI according to the Terms of Contract.

67. Note: All technical and specialist services (subcontractors of/consultants ISFMI) will be procured by the ISFMI through the rules outlined in the ISFMI Procurement Policy, as provided to the GCF as part of the Financial Management Capacity Assessment for the ISFMI, and as described in the procurement plan.

The table below sets out the detailed TORs for each position, namely the responsibilities, commitment, and experience, expertise and skills required for each role.

Consultant/Firm	Responsibilities	Nature of Commitment	Expertise, Experience, Skills Required (nb: If Professional firm/Services, team allocated to task as a whole must possess requisite expertise, skills, experience)
Project Manager	<ul style="list-style-type: none"> • Leads ISFMI role as co-chair and coordinator of Project Steering Committee, alongside representative of ISFMI Board and each participating NDA. • Reports to Project Steering Committee. • Oversees management of Project Implementation, including: <ul style="list-style-type: none"> ○ Selects and supervises sub-contracted technical specialists. ○ Develops and implements Monitoring and Evaluation and Risk Management Framework. ○ Consults with any related local, national and regional projects to ensure complementarity and avoid duplication. ○ Ensures implementation consistent with Environmental and Social Safeguards. ○ Seeks and takes into account expert technical, scientific and other interdisciplinary advice as appropriate, from the ISFM Advisory Committee, ISFMI Partner Organisations, the ISFMI 	34 W/Days	<ul style="list-style-type: none"> • Master of Laws or equivalent qualifications. • 15+ years experience in project and programme management and implementation, including donor reporting, monitoring and evaluation, budget, personnel and consultant management. • 15+ years experience in international environmental law and/or policy with knowledge of international climate, biodiversity and human rights (Indigenous Peoples) frameworks. • 15+ years experience of issues, challenges, options and frameworks relating to governance of Indigenous community led projects and FPIC. • Fluent in English.

	<ul style="list-style-type: none"> o Network and local experts. o Budget administration, financial reporting, auditing and corporate compliance. 		
TFM & Climate Change Project Management Specialist	<p>Output 4.1.1, Activity 4. 1.1 d) – e) Output 5.2.1 a) – b)</p> <p>(In addition this role entails coordinating and integrating all deliverables from other consultants and firms, and integrating in results of Concept note(s) and other deliverables) i.e. Output 4.1.1, Activity 4.1.1 a) – c) Activity 5.2.1 c)</p>	150 W/Day	<ul style="list-style-type: none"> • Master of Laws or equivalent qualifications. • 15+ years experience in project and programme management and implementation. • 15+ years experience in international environmental law and/or policy with knowledge of international climate, biodiversity and human rights (Indigenous Peoples) frameworks. • 15+ years experience of issues, challenges, options and frameworks relating to governance of Indigenous community led projects and FPIC. • Knowledge of legislative and policy frameworks and legislative/policy reform processes. • Knowledge of administrative, policy and governance arrangements relevant to the establishment of emissions reductions fire management projects, including associated with carbon rights, international biodiversity protections and environmental impact assessments. • Experience in supporting donor reporting, monitoring and evaluation, budget and consultant management. • Fluent in English.
MRV Specialist	Output 4.1.1, Activity 4.1.1 c)	25 W/Day	<ul style="list-style-type: none"> • Expert level knowledge of the use of satellite data in fire monitoring and emissions

			<p>reductions measurement.</p> <ul style="list-style-type: none"> • 10+ years experience in developing, leading or administering a satellite emissions service used in the administration of emissions reductions fire management projects within the Australian regulatory system. • In depth knowledge of NAFI, the north Australia Fire Service. • In depth knowledge and practical experience in the use of the Australian SAVBat tool. • Expert level knowledge and practical experience of the role of artificial intelligence and manual mapping as an adjunct to satellite data in fire mapping, including through leading teams undertaking such mapping. • Knowledge of the scope of existing satellite and other tools used for fire monitoring in the participating countries and the Southern African region, including understanding of existing gaps considering the needs of emissions reductions fire management projects. • Academic qualifications in a field broadly relevant to satellite-based fire monitoring.
<p>Scientific Expert Services</p>	<p>Output 4.1.1, Activity 4.1.1 a) i) Input into Activity 4.1.1 c), e) Output 5.2.1, Activity 5.2.1 a) i) and ii)</p>	<p>Fixed Price Contract.</p>	<ul style="list-style-type: none"> • At least one member must have senior academic (i.e. Professorial or assistant professorial level) qualifications in fire ecology. • 10+ years experience leading development of Australian fire emissions reductions management methodologies. • 15+ years experience working with Indigenous

			<p>communities in fire and land management.</p> <ul style="list-style-type: none"> • Senior expert level experience in biodiversity surveys and assessments. • Knowledge of policy associated with international carbon markets. • Experience carrying out preliminary fire emissions related field work in fire regions globally. • Senior expert level knowledge of the use of satellite data in the monitoring, verification and reporting of fire emissions reductions. • Senior expert level knowledge of emissions reductions fire management operational techniques and project management and implementation challenges experienced in Australia. • Knowledge of fire histories, management patterns and challenges globally and in region.
Expert Fire Project Management Business Services & Training Firm	Output 4.1.1, Activity 4.1.1 a) i) Input into Activity 4.1.1 c), e) Output 5.2.1, Activity 5.2.1a) i) and ii)	Fixed Price Contract.	<ul style="list-style-type: none"> • 15+ years experience working with Indigenous communities in fire and land management. • Experience training Indigenous communities in early dry season fire management. • Expert level in depth scientific knowledge of fire histories, management patterns and challenges globally and in region. • Expert level in depth scientific knowledge of Australian approaches to emissions reductions Traditional Fire Management. • Expert level knowledge of fire safety and fire operations

			<p>management, proven capacity to lead such operations and train community members in fire operations. 10 years plus practical experience in leading prescribed burning and operational fire management activities.</p> <ul style="list-style-type: none"> • Knowledge and experience in assisting communities to implement fire management projects, including operational planning.
International Environmental Law, Climate and Markets Specialist	Output 4.1.1, Activity 4.1.1 b)	25 W/Days	<ul style="list-style-type: none"> • Master of Laws or equivalent qualifications. • 15+ years experience in international environmental law and/or policy with knowledge of international climate, biodiversity and human rights (Indigenous Peoples) frameworks. • 15+ years experience of issues, challenges, options and frameworks relating to governance of Indigenous community led projects and FPIC. • Knowledge of legislative and policy frameworks and legislative/policy reform processes. • Knowledge of administrative, policy and governance arrangements relevant to the establishment of emissions reductions fire management projects, including associated with carbon rights, international biodiversity protections and environmental impact assessments.
Local Legal, Policy & Governance Specialist	Output 4.1.1, Activity 4.1.1 b)	50 W/Days	<ul style="list-style-type: none"> • Tertiary qualification in law. • Policy and governance experience or experience in Legal Practice.

			<ul style="list-style-type: none"> • Knowledge of administrative, policy and governance arrangements relevant to the establishment of emissions reductions fire management projects in the local jurisdiction, including associated with carbon rights, environmental impact assessments and permits for field work and fire management operations. • May be undertaking studies in an area relevant to the legal, policy and organizational enabling environment for ER TFM Projects at the Masters or PhD level. • Speaks English and working language of target country.
Local Project Lead	Output 4.1.1, Activity 4.1.1 a) – f) Output 5.2.1, Activity 5.2.1 a) i) and ii) Output 5.2.1 b), Activity 5.2.1 b)	105 W/Days	<ul style="list-style-type: none"> • Tertiary qualification in environment, science, environmental policy, law or other relevant area. • 5 + years policy and/or governance experience in organization such as in government, NGO or research institute. • Knowledge of administrative, policy and governance arrangements relevant to climate change, biodiversity and, preferably, legal, policy and organisational frameworks for the management of wildfire. • 5 - 10+ years of experience relevant to community based natural resource management at the national or local level. Knowledge of national policy and knowledge of national stakeholders. General knowledge of climate change and biodiversity science and policy through experience or training. Awareness of

			<p>Indigenous peoples policy.</p> <ul style="list-style-type: none"> Speaks English and any other working language of Belize. Experience in report writing, presentations, organizing and implementing meetings or consultations.
Audit Firm	Undertakes GCF required Audits	Two Audits	<ul style="list-style-type: none"> Meets GCF Requirements for Audit Firms.

6.3 Risks and mitigation measures

Please include a set of identified risks and mitigation actions for each. Please utilize the risk table below that identifies the probability of a given risk occurring and the entity that will manage the risk. Please refer to Part III Section 6.3 of the Readiness Guidebook for further information on how to complete this section.

Risk category	Specific risk(s) / Risk(s) description	Probability of occurrence (low, medium, high)	Impact level (low, medium, high)	Mitigation action(s)	Entity(ies) responsible to manage the risk(s)
Availability of Specialist Services	Specialized services unavailable at the time anticipated within project schedule.	Medium	Medium	Alternate specialists identified at project outset, and/or order of deliverables adjusted in consultation with NDA and GCF Secretariat.	ISFMI
Procurement Delays	Goods and services required for completion of activities become unavailable or provision is delayed.	Medium	Medium	Alternate sources of supply identified at point of contract/purchase as backup providers. Contracts include possibility to terminate and/or other appropriate remedy in case of delay to provision of goods/services.	ISFMI Suppliers Sub-contractors
Operational	Money Laundering, Corruption, Terrorist Financing, Prohibited Practices	Low	Medium	ISFMI and implementing partners to implement project in accordance with the organisational	ISFMI, Accounting Partners (Bank) Pollination, Foundation, Pollination Group Holdings, Subcontractors

Risk category	Specific risk(s) / Risk(s) description	Probability of occurrence (low, medium, high)	Impact level (low, medium, high)	Mitigation action(s)	Entity(ies) responsible to manage the risk(s)
				policies and protocols in place that guard against money laundering, corruption, terrorist financing and prohibited practices, including through ISFMI accounting standards and practices, as further described in the narrative of Section 6.3 of this proposal below.	
Disruptions caused by political upheaval or natural or health disasters.	Delays caused by lack of local infrastructure, and capacity for local and international travel, lack of availability of personnel.	Medium	Medium	Postponement of in field activities. Use of virtual delivery of meetings and exchanges as far as effective and possible (i.e., for regional consultative activities).	ISFMI Local Stakeholders Cooperating government agencies
Disruptions caused by Covid 19 Restrictions	Delays caused by travel and lockdown restrictions, ill health of personnel and disruptions to government and other services.	High	Medium	Where possible, activities to be held online, All personnel including subcontractors instructed to take precautions including masks and social distancing and to follow local ordinances to this effect. All personnel including subcontractors encouraged to get vaccinated where available. Using professional services firms relying on more than one person so others can	ISFMI Subcontractors Government agencies

Risk category	Specific risk(s) / Risk(s) description	Probability of occurrence (low, medium, high)	Impact level (low, medium, high)	Mitigation action(s)	Entity(ies) responsible to manage the risk(s)
				take over in case of ill health. Travel arrangements to include insurance or airline cover for Covid-19.	
Political	Lack of political support (i.e. following change of government, change of personnel etc.)	Low	Medium	Extensive efforts have and continue to be made to consult with the NDA and government agencies to ensure the approach and activities proposed are demand led, ensuring sufficient bipartisan political support. NDA has strong role in governance of the proposed project.	ISFMI NDA Government Agencies
Operational	Lack of captured synergies with non GCF activities.	Low	Low	In preparing the readiness proposal surveys have been made of other relevant activities in Belize and regionally, both past, present and anticipated It will be a specified task of the Project Manager to continue to liaise with those administering any other relevant activities to ensure synergies are built upon, and such liaison is built into the implementation plan. The NDA and governmental agencies will be encouraged to share information and contacts to support these efforts.	ISFMI Government

Risk category	Specific risk(s) / Risk(s) description	Probability of occurrence (low, medium, high)	Impact level (low, medium, high)	Mitigation action(s)	Entity(ies) responsible to manage the risk(s)
Political/Rights Safeguarding Risk (Absence of FPIC)	Communities within identified pilot site areas do not wish to participate in baseline analysis related community consultations	Medium	High	<p>Engaging with traditional authorities at an early stage, and providing sufficient information to support informed consent to activities to take place on community lands will be an important priority explicitly provided for in the Logical Framework, to ensure that any consent given is both prior, and informed.</p> <p>Alternate communities and site areas identified in case communities do not wish to proceed, with the absence of FPIC being a critical determinant of site suitability, as consistent with international principles and instruments concerning Indigenous peoples, as well as the GCF Indigenous people's policy. ISFMI Advisory Committee including several key international Indigenous and community rights representatives provides oversight of project.</p>	ISFMI Subcontractors/Local Project Lead
Operational Risk (Fire Safety)	During learning exchanges small, controlled demonstration burning may	Low	High	All demonstration burning is kept very small and operated under strict organizational	ISFMI

Risk category	Specific risk(s) / Risk(s) description	Probability of occurrence (low, medium, high)	Impact level (low, medium, high)	Mitigation action(s)	Entity(ies) responsible to manage the risk(s)
	lead to human and environmental safety risks.			protocols and under tightly controlled conditions and in accordance with the terms of local laws and regulations.	
Potential Pilot Sites Inaccessible	Potential natural disasters or social unrest prevent access of potential pilot sites	Low	High	Careful selection of potential pilot sites in collaboration with local stakeholders and government agencies	ISFMI Local Stakeholders Cooperating government agencies
Unforeseen expenses leading to budget overrun	Unforeseen cost increases due to global financial crisis or local economic stability	Low	High	Adequate and appropriate tracking of costs and resources as per ISFMI guidelines.	ISFMI
Satellite data ceases to be available	Unforeseen budgetary cuts or natural disasters limiting data availability	Low	High	Alternative data sources found and regional	ISFMI

68. The project will be subject to the application of environmental and social safeguards consistent with ISFMI and GCF required practices and policies, including the GCF Indigenous People's policy. The project will strengthen capabilities that will promote positive actions to address climate change, safeguard natural habitats, biodiversity and ecosystem services, support the rights and interests of Indigenous and local communities through the process of FPIC and the process of valuing community co-benefits as part of identifying appropriate voluntary standards accreditation options, support poverty reduction and increase economic opportunities among the community a whole, through the economic benefits of TFM, and including, in addition to working age adult men, women as fire management rangers and in other positions as has occurred in Australia, as well as the opportunity to liaise with other Indigenous women working in fire globally through the ISFMI women in fire network, and providing young people training opportunities and opportunities to learn about traditional cultural practices. These actions will respect the dignity, human rights, economies, and cultures of Indigenous and local and communities, as well promote gender equality and equity.

6.4 Monitoring

69. Identification of monitoring and evaluation indicators and a detailed monitoring and evaluation plan will be prepared by the ISFMI Project Manager as a first activity of the project, and presented to the NDAs for endorsement within the first two months of project inception. How gender disaggregated information will be collected as part of the monitoring and evaluation plan and development of associated indicators, in order to be able to assess the meaningful participation of women and girls in the proposed readiness activities.

70. Expert input will be sought into development of the M&E Plan, with indicators and tools specifically tailored to monitor adherence to environmental safeguarding, measuring FPIC, community development parameters, and the participation of gender and minority groups in project activities integrated into the Plan.

71. Assessment of project progress and results will be assessed according to the indicators and at intervals identified within the M&E plan, and reported on by the ISFMI to the NDAs, and the GCF Secretariat at required reporting intervals according to the disbursement schedules.

72. ISFMI will be responsible for financial monitoring and reporting in accordance with the terms of the Bilateral Grant Agreement to be signed with GCF or its fiduciary agent.

6.5 Other Relevant Information

Exit Strategy and Sustainability

73. The Readiness project proposed is the first step towards building the foundation of capacity, community engagement, a technical and regulatory enabling environment, that is necessary for Belize to ultimately independently implement traditional fire management.

74. The Readiness project will result in the development of a Project Concept Note that will be used by Belize to seek support from the GCF as a full project proposal. The ultimate aim of such a GCF Full Project will be to enable the country and Belize communities to build an independently sustainable community led emissions reductions traditional fire management sector, so supporting the development of community led enterprises that will generate annual income for remote communities while protecting biodiversity, mitigating climate change, and supporting climate change adaptation. Such enterprises will support and expand sustainable livelihoods opportunities for community members in remote settings, including specific opportunities and benefits for women and young people.

75. The development and growth of these sectors will be supported by an enabling environment made up of the following components:

- technical (scientific expertise in universities and government departments),
- technological (MRV System),
- regulatory (policy and legal clarity for project proponents) enabling environment,
- community engagement and capacity (sufficient to enable Full, Prior and Informed Consent (FPIC) and to implement community led fire projects)

76. Capacity building, stakeholder engagement and partnership activities will embed country stakeholders in a global community of practice that will support learning exchange and capacity development across countries and areas of expertise well into the future, including through in-depth technical exchange as part of field assessment activities ensuring there are local researchers able to take ER TFM research further at the conclusion of the Readiness support.

77. In these ways, the Readiness project proposed, when considered alongside the full proposal that is ultimately expected to result, embodies a natural exit strategy, being that Belize will eventually no longer require external capacity assistance, but at the same time will embed participants in an expanded international ISFMI network that allows them to continue to be supported as their sectors grow, as well as to share the capacity they have developed through growing their own emissions reductions traditional fire management sectors with other countries embarking on such a process, both in their region and globally.

78. As detailed elsewhere in this proposal, the methodology based traditional fire management approach builds on, complements, and adds to the sustainability of impact of other externally and government funded fire management activities that have and continue to be carried out in the region. The Project Concept Note(s) integrates lessons learned from the current Botswana pilot sites funded by the Government of Australia.

79. The methodology based traditional fire management approach builds on, complements, and adds to the sustainability of impact of other externally and government funded fire management activities that have and continue to be carried out in Belize, as detailed in Annex I.

Safeguarding and Sanctions Compliance

80. The project will strengthen capabilities that will promote positive actions to address climate change, safeguard natural habitats, biodiversity and ecosystem services, support the rights and interests of Indigenous and local communities, support poverty reduction and increase economic opportunities among

the community a whole, and including women and young people in addition to working age adult men. These actions will respect the dignity, human rights, economies, and cultures of Indigenous and local and communities, as well promote gender equality and equity.

Indigenous Peoples

81. The Free, Prior and Informed Consent of communities consulted with as part of the Project Concept Note(s) development will be central to project implementation, as will alignment with the GCF Indigenous Peoples Policy more generally.

Child Protection and Protection against Sexual Exploitation, Abuse and Harassment

82. The ISFMI has in place a policy for the protection of children, and the prevention of sexual exploitation, abuse and harassment, including measures for independent reporting, as well as measures for the protection of whistleblowers, that were provided to the GCF as part of the Financial Management Assessment Process. Note that the ISFMI Child Protection Policy and measures for the Protection against Sexual Exploitation, Abuse and Harassment (PSEAH), are in full compliance with the strong standards required by Australian Aid for Australian funded international Development Projects.

Money Laundering and the Financing of Terrorism

83. The ISFMI has in place measures that protect against fraud, money laundering and the financing of terrorism, as provided to the GCF at the time of the Financial Management Capacity Assessment. The Code of Conduct and procedures of the Pollination Group that have been adopted by ISFMI and procedures including the accounting standards followed by ISFMI and Group employees are designed as measures to mitigate the risks related to money laundering, counter-terrorism financing or prohibited practices. To strengthen this, the Group has recently introduced an Anti-Money Laundering Policy which specifies additional controls the Group has recently introduced to assist in combating money laundering & terrorist financing, these are; performance of an annual risk assessment audit by the Compliance Officer which assesses the effectiveness of the current controls, annual AML/CFT training for all employees, details of the customer due diligence processes and ongoing monitoring and reporting.
84. ANZ is the financial institution that provides banking services for the ISFMI has in place its own Anti-Money Laundering and Counter-Terrorism Financing Policy to ensure ANZ through its products and services meets regulatory requirements.
85. As a registered Australian charity, the Australian Accounting standards in conjunction with the Australian Charities and not for profit Commission (ACNC) (the Australian charities regulator), require ISFMI to perform an annual audit of accounts which is audited externally and filed with the ACNC. The financials are then publicly available on the ACNC website, which is a further control in place for not for profit entities.

Note that no current UNSC restrictive measures are in place in Belize has been confirmed.

Gender Mainstreaming

86. The role of women in fire management policy, operations and practice has been a subject the ISFMI has concerned itself with in particular through the Women in Fire Network, part of the ISFMI Network, that has developed over the past two years. This network has linked Indigenous community women and other women from a cross disciplinary background working or interested in fire related topics globally, with virtual meetings linking Indigenous women from Australia, the Americas, and Botswana. A strong contingent of women from the Tsodilo Hills community assisted in and were trained in fire management operations and planning as part of ISFMI field work in Botswana. A Whatsapp group chat has continued to connect these and Chobe based community women from Botswana with women government officials, including women heading Botswana government departments with fire related responsibilities and a zoom meeting has linked the whatsapp group chat participants with Australian women fire practitioners and women ISFMI staff to reflect upon the ISFMI achievements and plans in Botswana from the perspective of women and girls.
87. The ISFMI, under its grant arrangements with Australian Aid has been required and so become practiced in reporting on the role of women in project activities and plans, with the gender aware focus of the ISFMI meeting the requirements of an Australian government gender focused Aid Quality Review in 2020.
88. Under GCF programming, the ISFMI will continue to focus strongly on the role of women in fire, including with respect of, how the project strategy is articulated, how the ISFMI activities are implemented and consideration of the impact and goals of the project from the perspective and taking into account the interest of women and girls. More specifically, the Women in Fire Network is proposed to be expanded, monitoring and evaluation will include gender specific indicators and the collection of gender disaggregated information, and the development of the Concept Note(s) will explicitly consider gender dimensions in proposals for forward programming.

ANNEX I : COUNTRY CONTEXT

The profile of Belize follows and includes information on:

- Relevant other GCF Programming
- Alignment with Climate Change plans and strategies
- Emissions Profile: Role of Savanna Burning
- Alignment with Biodiversity plans and strategies
- Alignment with other relevant plans and strategies
- Other relevant government and donor funded activities
- Climate Change Context
- Emissions Profile
- Current Fire Patterns and Challenges
- Current Fire Management Regime
- Emissions Reductions possible from shift to Early Dry Season Fire Patterns
- Fire Management Responsibilities
- Rainfall Zones
- Main Vegetation Communities
- History of Traditional Fire Management
- Community Characteristics
- Land Tenure Considerations
- Previously Identified Potential Pilot Site Areas/Districts
- Existing Capacities

BELIZE	
NDA Host Department	Ministry of Finance, Economic Development and Investment
Relevant other GCF Programming	See Building Climate Resilient “Guardians of the Forest and Regenerative Agriculture’ Communities in Forest Buffer Zones Across Rural Belize
Climate Change plans and strategies	<ul style="list-style-type: none"> g) 2019 Belize Country Strategy Framework including a Country Programme for engagement with the Green Climate Fund – improved community resilience to climate change events as key for Belize Country Strategy h) 2011 Belize Intended Nationally Determined Contribution – Belize’s contribution will address issues of deforestation and afforestation, maintaining healthy ecosystems by sustainable management, and increasing the resilience of human communities, especially those whose livelihoods depend on the use of forest resources i) 2014 Belize National Climate Change Policy and Action Plan to Address Climate Change – Strengthening forest fire management and response capacity as critical counterpart in addressing some of the key drivers of deforestation j) 2015 National Forest Policy – Policy Statement 12 states that “the government shall recognize the importance of fires as an ecological process, encourage its proper use and management in the protection and enhancement of terrestrial ecosystems giving special consideration to human welfare and safety” k) 2015 National Protected Areas Systems Plan – The plan and its implementation must use and draw upon the scientific, technical and traditional knowledge of local and indigenous communities. The plan also states that management of protected areas shall respect, preserve and maintain the traditional knowledge, innovations and practices of indigenous peoples and local communities.
Emissions Profile	Fire emissions profile: In 2011, emissions from savanna and forest in Belize amounted to approximately 2.3 Million Metric Tonnes Carbon. Less than 3% of emissions from fire in Belize were derived from agricultural fires in that and subsequent years, with approximately 97 % of Belize’s fire emissions derived from fires in savanna and forests. (Source GFED2)
REDD+ Mechanisms	<p>This proposal is going to complement the work Belize has been doing under the REDD+ preparation project which is concluding this year through which Belize has established the main structure of the National Forest Monitoring System, REDD+ strategy, FRL and Safeguards.</p> <p>Also, Belize has updated their NDC and have set targets that must be MRV, thus this proposal is intended to enhance the capacity in understanding fire management and disturbances within grasslands, which will help us to improve Belize’s GHGi with Tier 2-3 data and improve projections in monitoring the reduction of emissions for Belize.</p>
Biodiversity plans and	Belize’s National Biodiversity Strategy and Action Plan 2016 – 2020: Notes that effective fire management is key to ensuring balanced and sustainable development. It further recognizes that fire is the highest threat for the Belizean Pine Forest, with increasing frequency of fires resulting in ecosystem degradation.
Other relevant plans and strategies	<ul style="list-style-type: none"> • The Forest Department is in the process of revising the Forest Policy and Wildlands Fire Policy for improvement management. • National Poverty Elimination Strategy and Action Plan (NPESAP) – Has sought to support improvement in the land management framework and in natural resource management framework specifically by ensuring that indigenous land practices are effectively integrated into the national land management framework

	<ul style="list-style-type: none"> Forest Fire Protection Act
Climate Change Context	<p>Belize is exceptionally vulnerable to natural disasters and climate change. It already faces wildfire, hurricanes, flooding, sea level rise, coastal erosion, coral bleaching, and droughts, with impacts likely to intensify given expected increases in weather volatility and sea temperature. Hence, planning for resilience-building, and engagement with development partners on environmental reforms, have been central to Belizean policymaking for many years, since well before Belize submitted its Nationally Determined Contribution (NDC) to the Paris Accord in 2015.</p>
Current Fire Patterns and Challenges	<p>Fire dependent Savanna ecosystems are embedded in a matrix of fire sensitive broadleaf and riverine forests or adjacent to fire-vulnerable coastal mangroves create a fire management challenge. A Darwin Initiative funded fire effects monitoring program at Paynes Creek National Park Indicates there are management strategies to use fire in savanna ecosystems during the transition seasons to reduce threats to riverine and broadleaf forests. The experience at Paynes Creek National Park suggests using fire in the grasslands in weather and fuel conditions will prevent fire from impacting fire-sensitive ecosystems. A wet season fire regime in the flammable savannas would solve this problem while realizing carbon storage capacity of the grasslands.</p>
Current Fire Management Regime	<p>Annual and Bi-Annual Fires in savannas. In broadleaf fire-sensitive forests, decadal fire events due to drought cycles and human ignitions. The year after hurricane wind throw can TEMPORARILY (up to two years after event) increase fuel loads and flammability-if coincident with drought.</p>
Fire Management Responsibilities	<p>Forest Department</p>
Fire Management Challenges	<p>Challenges and needs identified by local stakeholders include poverty mitigation through adoption of new techniques for charcoal production, developing capacity to reduce the occurrence of uncontrolled wildfires and their consequences while at the same time promoting the safe use of beneficial fires including in agricultural plots, enforce fire management policies and gaining support from all involved stakeholders; elaborating social educational programs for successful fire management.</p> <p>No national fire management operational plan. Few protected areas have a functional or meaningful fire management plans to build upon capacity and lessons-learnt and minimal sharing of equipment and resources. Funding is episodic diminishing opportunities for consistent effort.</p> <p>No formal professional positions dedicated to understanding fuels, fire behaviour or fire ecology.</p> <p>No existing training or qualification standards.</p> <p>Due to ineffective fuels and smoke management regional air quality is impacted with unknown effects on health and economy.</p>
Rainfall Zones	<p>Annual rainfall ranges from 60 inches (1524mm) in the north to 160 inches (4064mm) in the south. Except for the southern regions, the rainfall is variable from year to year.</p>
Main Vegetation Communities	<p>Pine woodlands, Pine forests, Broken Ridge, Savannas, Coastal Scrub, Mangrove and Broadleaf forests are those most impacted by fire</p>
History of Traditional Fire Management	<p>Long history of Anthropogenic uses of fire to support subsistence livelihoods and cultural practice. Belize has been shaped by human uses of fire, including for agriculture, subsistence and cultural purposes. Anthropogenic fire has shaped the Belizean landscape into mosaic landscapes and is a factor in the development of savanna woodland biodiversity.</p>

Land Tenure Considerations	Various, including protected areas and customary tenure.
Previously Identified Potential Pilot Site Areas/Districts	<p>Southern Belize Savanna Region (Paynes Creek National Park, Deep River Forest Reserve, Swasey Bladed Forest Reserve.</p> <p>Central Belize Savannas including those contained in the Maya Forest Corridor.</p> <p>Mountain Pine Ridge Grasslands and Savannas.</p> <p>Northern Belize Savannas (Programme for Belize Management i.e., Rancho Delores Savanna)</p>
Existing Capacities	<p>Existing capacities in the form of site specific programs to respond to fire management in savannas exist or are under development. The Southern Belize Fire working Group coordinated by Toledo Institute for Development and Environment has been working with Indigenous Communities, NGO's and Belize Forest Department in the Southern Belize Savanna Region providing training and coordination for fire management.</p> <p>The Forest Department concentrates their fire management efforts in the Mountain Pine Ridge by building capacity and organization. The Forest Department possesses some fire management capacity with a small cadre of trained staff. The Forest Department has recently increased their inventory of firefighting equipment – including protective gear, network of fire lookout towers for fire protection. The Forest Department has an existing geospatial monitoring unit with data on fire scars using existing online platforms. There is a need for capacity building for the creation of an early warning system that would incorporate other key Ministries and Departments. There have been collaborations with the National Meteorological Service of Belize (NMSB) where the NMSB has improved their fire weather forecasting for the country.</p> <p>In Northern Belize, Programme for Belize has a suppression-oriented fire management strategy. In Central Belize, there is a working group that incorporates fire management as part of their management strategy.</p> <p>There are ongoing efforts to coordinate and support the use of fire by long-term licenses holders for both firefighting and fire management including prescribed burning.</p>

ANNEX II

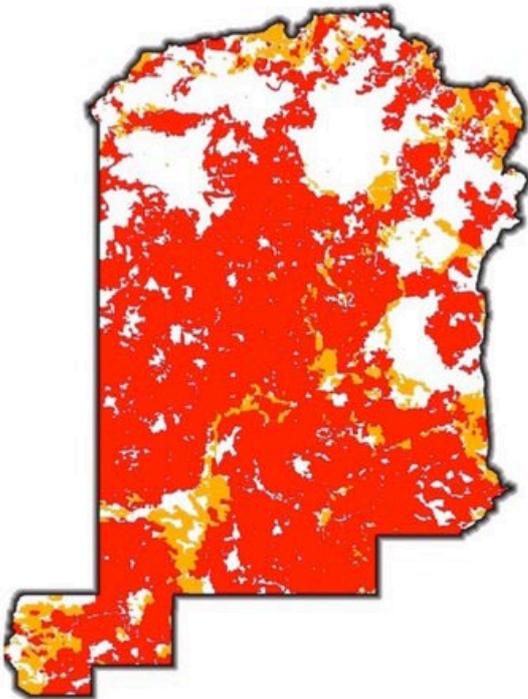
THE AUSTRALIAN EXPERIENCE

Traditional Fire Management in Australia

In Northern Australia, Aboriginal people have managed land for at least 65,000 years by using traditional Traditional Fire Management. From this experience Australia has developed leading technologies that manage wildfires, understand the role that fire plays in climate change, measure the impact of Traditional Fire Management and the carbon emissions from Traditional Fire Management as compared to the baseline.

For example, the first project to use TFM to generate carbon credits was the Western Arnhem Land Fire Agreement (WALFA) that started in 2006. The images below for Western Arnhem Land illustrate the impact of the reintroduction of traditional Traditional Fire Management practice, with late dry season fire extent and impact on vegetation illustrated on the left, and the shift to earlier traditional burning on the right of the image below.

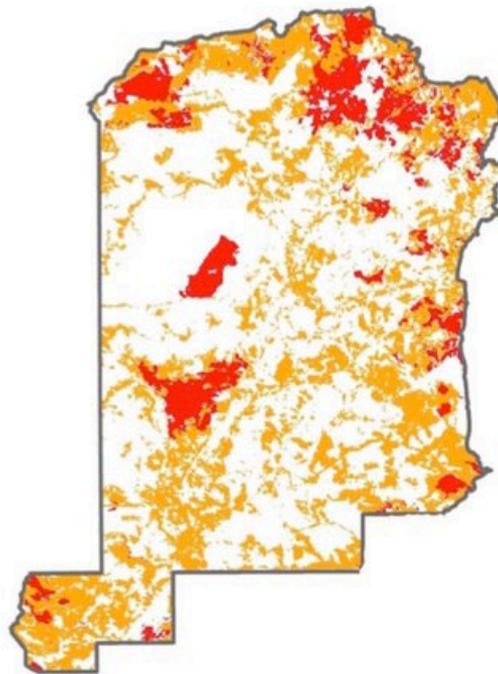
WALFA 2005



Late



WALFA 2009



Early



A decade later there are now 75 TFM projects that have been approved in Australia by the Government, with 25 either Indigenous community owned or having significant indigenous community involvement, reducing wildfire by 50%, generating nearly 10m tonnes of mitigation worth over \$90m annually. The following map illustrates the land extent of northern Australian land being currently managed under this scheme. The application of Traditional Fire Management has also generated substantial additional or co-benefits including creating market-based jobs in remote and vulnerable communities, improving biodiversity, reinvigorating culture and custom, improving food security and health. In particular, these projects have generated several opportunities for the employment of women, and of youth, in positions as rangers, managers and in project governance.

Further information about the Australian experience of emissions reductions Traditional Fire Management, its scientific and regulatory basis and economic value is available on the website of the ISFMI www.isfmi.org

Annex III

Names of Institutions	Mandate	Overlaps	Gaps
Forest Department	<ul style="list-style-type: none"> • Management of fires in forest reserves and terrestrial protected areas under FD's responsibility 		<ul style="list-style-type: none"> • Fire regulations are outdated and needs to be revised. There needs to be the commissioning of a legal revision and amendment of all Wildland Fire related laws and regulations in order to modernize, strengthen, and harmonize those legislation. <ul style="list-style-type: none"> ○ Jurisdiction for each institution is not clearly defined ○ Roles and responsibilities not clear cut ○ No definitive institution is named to address escaped fires in large tract of private lands and national land outside of the network of protected areas and forest areas adjacent to rural communities and 'indigenous communal lands' • Fire protection plans need to be developed • Implementation of the Wildland Fire Strategy • Implementation of the Fire Communication Strategy • Skills and experience level of personnel (results in challenge to mobilize key personnel during emergency situations) • Detection coverage • Strategy for placement of detection infrastructure in key priority areas • Guidelines for communication and reporting aimed at establishing common protocols. • Protocols for measuring and verifying emissions from wildland fires

National Fire Service	Manage structural fires in urban and rural setting Respond to brush fires		<ul style="list-style-type: none"> • Inadequate training and equipment to deal with fires in the rural/forest interface • Inadequate resources – personnel • Inadequate legislation
Agriculture Department	Grants burn permits to farmers and carry out inspection of fields and fire lines prior to issuing the permit		<ul style="list-style-type: none"> • Fire regulations are outdated and needs to be revised. There needs to be the commissioning of a legal revision and amendment of Agriculture Fires Act.
Conservation NGO's (Toledo Institute for Development & Environment; Ya'ax Che Conservation Trust)	With authorization via co-management agreement from the Government manages fires in the protected area they co-manage		<ul style="list-style-type: none"> • Legislative support for partners to assist with fire management • Training • Equipment • Coordination
Private Sector (Logging Companies)	Via the logging concession, concessionaires are delegated by the Government to respond to wildfires and plan and manages controlled fires (via burn permits) in the forest reserves they operate in		<ul style="list-style-type: none"> • Legislative support for partners to assist with fire management • Training • Equipment • Coordination

READINESS & PREPARATORY SUPPORT

BUDGET, PROCUREMENT & IMPLEMENTATION PLAN



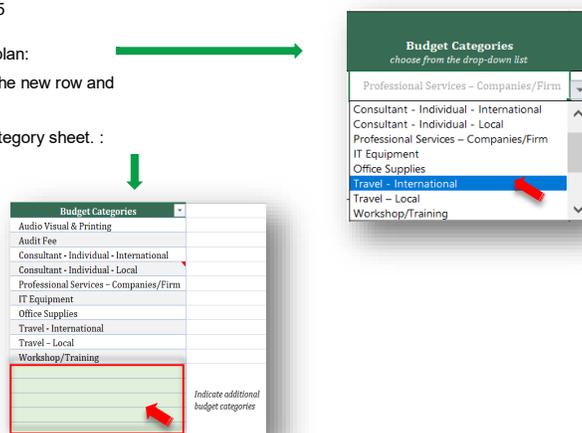
Readiness Grant Budget Preparation Guidelines

This file contains three specific planning tools to complete the supplementary information required when submitting a proposal for Readiness Programme support (including for NAP/adaptation planning):

- Budget plan and accompany Budget notes
- Procurement plan
- Implementation plan

The following considerations are important when completing the budget:

1. Before preparing the Readiness and budget, procurement, and implementation plans, please read the full guidance contained in the Readiness Programme Guidebook, specifically Part III Section 5
2. You can select the appropriate budget categories from the dropdown list in the budget plan:
3. To insert additional rows, right click on the row number below where you wish to insert the new row and choose INSERT.
4. Additional budget categories may be added by manually typing them on the Budget Category sheet. :
5. The Budget Notes sheet should be used to record explanations, further details or cost breakdowns for individual lines



Project Management Cost:

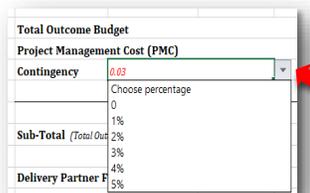
Project management costs (PMC) are the direct administrative costs incurred to execute a project. They should cover only incremental costs incurred due to the GCF contribution. In most cases, these costs are directly related to the support of a dedicated project management unit which manages the day to day execution related activities of the project.

General Principles for PMC costs:

1. The percentage of PMC financed by GCF should not be more than the percentage share of the overall budget financed by GCF
2. PMC budget thresholds: Up to 7.5 per cent of total activity budget.
 - > PMC exceeding 7.5 per cent for the readiness (including NAPs) proposals, and PPF proposals, up to \$ 3 million will require detailed documentation and justification supporting the entire PMC budget.
 - > The PMC should be shown as a separate component in the project budget. A detailed breakdown of PMC should be provided by budget category.
 - > Indicative list of eligible project management costs:
 - > **Project staffing and consultants:** Project manager, Project Assistant, Procurement personnel, Finance personnel & Support/admin. Personnel
 - > **Other direct costs:** Office equipment, Mission related travel cost of the PMU, Project management systems and information technology, Office supplies, Audit cost

Contingency :

1. Select the appropriate % of Contingency Budget from the dropdown list :
2. Contingency budget for unforeseen costs arising during the project implementation should not be included in the outcome budget separately.
3. Contingency budget must be used for any unforeseen programme (output level) cost that is unrelated to implementation/service fee.
4. Any use of contingency must be reported to and agreed by the GCF Secretariat in writing in advance provided with justifications that are acceptable to the GCF
5. If by the end of the grant implementation period, you have not spent Contingency, you may not increase the scope of the project or make any other expenditures using the Contingency.



Budget Categories
Audio Visual, Graphic Design & Printing
Audit Fee
Consultant - Individual - International
Consultant - Individual - Local
Professional Services – Companies/Firm
IT Equipment
Office Supplies
Travel - International
Travel – Local
Workshop/Training
Translation
Language Interpretation
Telecommunications (Telephone, Internet, Online Communications Service
Field Work Expenses

Indicate additional budget categories

Budget Note	
A	Example - One national consultant (climate change specialist) for 30 working days @ \$500 per day for activity 1.1.1, 1.1.2
A	Professional Fee of Expert Scientific Services Firm, (inclusive of travel costs) (See TOR, Section 6 proposal) for Activities 4.1.1 a i) and Input into Activity 4.1.1 c), e), 5.2.1 a) I and 5.2.2 a) ii, and participating in and supporting Activities 4.1.1 b) - e)
B	Time of MRV Expert (See TOR, Section 6, Proposal) spent on Activities 4.1.1 c) (25 Days)
C	Time of Local Legal, Policy and Governance Consultant (See TORs, Section 6, Proposal) - National Context to undertake Activity 4.1.1 b) (50 days).
D	Time of International Environmental Law, Climate and Markets Specialist (See TOR, Section 6, Proposal) on Activities 4.1.1 b) (25 days total)
E	Time of Local Project Lead (See TOR) spent on Activities 4.1.1 a) - f) for a total of 90 Days
F	Time of TFM & Climate Change Project Management Specialists on Concept Note Development Coordination and Drafting and other Activities 4.1.1 a) - f) (See TORs, Section 6 Proposal)) (130 days)
G	Telephone and internet connectivity for Local Project Lead to support activities under all outputs, primarily Activities 4.1.1 a) - f)
H	Laptop including Office Software and email account for use by Local Project Lead to deliver all project outcomes, primarily Activities 4.1.1 a) - f)
I	Private meeting room (3 hours) with refreshments (x3) for national stakeholders joining together for Activity 4.1.1 c)
J	International Travel via commercial economy flight of a) TFM & Climate Change Project Management Specialist Preparing the Concept Note under Activity 4.1.1 f) (1 Trip) to PMU.
K	Local Travel of Local Project Lead to field sites for coordinating field trip arrangements with local authorities and communities prior to visit under Activities 4.1.1 a) - b) (2 Trips)
L	For undertaking technical field assessment and community liaison in support of activities 4.1.1 a) and b) and 5.2.1 a) ii), 5 Week Field Visit in packaged field service arrangement for 9 participants, inclusive of 2 Vehicles, Fuel, Driver, Accommodation, Food, Permits. Equipment needed to undertake field equipment (i.e. GPS, camera, tapes, field guides), safety and field telecommunications equipment. Cost based on prior field experience of ISFMI undertaking field assessments, adjusted for Belize cost indices.
M	Time of TFM & Climate Change Project Management Specialists spent on undertaking Deliverable 5.2.1 a) and 5.2.1 b), (20 days)
N	Time of Local Project Lead spent undertaking Deliverable 5.2.1 a), namely (See TORs, Section 6, Proposal)(15 Days)
O	Private meeting room (3 hours) with refreshments for stakeholders joining together in person for Activity 5.2.1 a) i)
P	Interpretation Services between English and Spanish/other local languages as required for Virtual Workshop, Activity 5.2.1 a) ii)
Q	Fee (inclusive of travel costs) for Community and local scientist training and consultation preparation, facilitation and review by Expert Fire Project Management Business Services & Training Firm (See TOR) supporting Activity 5.2.1 a) ii) and 4.1.1a. i) and 4.1.1 a) ii and Input into Activity 4.1.1 c), e)
R	Travel of Local Project Lead from Capital to Community Sites and DSA at standard rates to Cover a stay of 6 days for Activity 5.2.1 a) ii)
S	1 x On Country workshop of 20 participants with community provided venue, lunch and refreshments for two days (Activity 5.2.1 a) ii) (per person cost of \$50 for a total cost of \$1000)
T	Interpretation Services between English and Spanish and local languages for community workshops and their preparation and follow up to support Activity 5.2.1 a) ii) (10 work days total, split between Spanish and Local language translators).
U	Typesetting and digital publication of workshop and meeting reports as per deliverables under 5.2.1 a) i) and ii)
V	Telecommunications access (dedicated dial in) to facilitate ISFMI Network Members participation in ISFMI Network Activities to support Activity 5.2.b)
PMC Budget Notes	
W	Cost of Project Manager spent Managing Project for 120 days across the project term, including project Monitoring and Evaluation
X	Audit Fee (As 24 Months Project Requiring 2 Audits) priced as per GCF advice on standard Rates to be allocated

5.2 Procurement Plan

For goods, services, and consultancies to be procured, please list the items, descriptions in relation to the activities in Section 3, estimated cost, procurement method, relevant threshold, and the estimated dates. Please include the procurement plan for at least the first tranche of disbursement requested below and provide a full procurement plan for the entire duration of the implementation period if available at this stage.

Item	Item Description	Estimated Cost (US\$)	Procurement Method	Thresholds (Min-Max monetary value for which indicated procurement method must be used)	Estimated Start Date	Projected Contracting Date
Goods and Non-Consulting Services						
<i>Example - Office Equipment</i>	<i># of laptop, # of printer</i>	<i>8,000.00</i>	<i>e.g. Open tender</i>	<i>\$5,000 - \$10,000</i>		
IT Equipment	1 Laptop with installed Office Software	2,000.00	Written Requests for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$0-\$5,000	Within three months of Project Commencement	Within three months of Project Commencement
Language Interpretation	12 w/Day Simultaneous interpretation (English to Spanish, English and Spanish to local languages)	6,000.00	Written Request for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$5000 - \$20,000	Within four months of Project Commencement	Within three months of Project Commencement
Audio-Visual, Graphic Design & Printing	Typesetting for Digital Publication of Meeting Inputs and Workshop Reports	400.00	Written Request for Quotations (Min 3 Vendor) or ISFMI Preferred Vendor*	\$0-\$5,000	Within three months of Project Commencement	Within three months of Project Commencement
Travel - International	Commercial economy flight via direct route	6,000.00	Written Requests for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$5000 - \$20,000	Within two months of Project Commencement	Within two months of Project Commencement
Workshop/Training	2 x Venue with Catering - Private Meeting Room with Refreshment for five participants over three hours, 1 Community Meeting of one day and 20 participants with community provided lunch, refreshment and venue	2,000.00	Written Requests for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$0-\$5,000	Within three months of Project Commencement	Within two months of Project Commencement
Telecommunications - Internet and Telephone	Telecommunications access (dedicated dial in) to facilitate ISFMI Network Members participation in ISFMI Network Activities to support Activity 5.2.b)	304.00	Written Requests for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$0-\$5,000		
Telecommunications - Internet and Telephone	Internet and Telephone Service for Local Project Lead for use for project purpose for project duration (24 months).	1,600.00	Written Request for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$0-\$5,000	Within two months of Project Commencement	Within two months of Project Commencement
Field Work Expenses	3 week field work visit in packaged field service arrangement for 3 participants, inclusive of 2 Vehicles, Fuel, Driver, Accommodation, Food, Permits. Equipment needed to undertake field equipment, safety and field telecommunications equipment. Estimate based on prior field experience of ISFMI adjusted for Belize costs.	90,000.00	Documented Formal Request for Proposal (Min 3 Vendors) or ISFMI Preferred Vendor*	\$50000 +	Within three months of Project Commencement	Within three months of Project Commencement
Travel - Local	Ground Transport (4WD with driver, Train, Bus, depending on local options)	4,000.00	Written Requests for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$0-\$5,000	Within three months of Project Commencement	Within three months of Project Commencement
Audit	1 Audit Firm for two Audits	8,000.00	Written Requests for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$5000 - \$20,000	Within twelve months of Project Commencement	Within nine months of Project Commencement
Sub-Total (US\$)		\$ 120,304.00				
Consultancy Services						
International Consultant	1 MRV Specialist	12,500.00	Written Requests for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$5000 - \$20,000	Within three months of Project Commencement	Within two months of Project Commencement
International Consultant	Project Manager	17,000.00	Written Requests for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$5000 - \$20,000	Within one months of Project Commencement	Within one month of Project Commencement
International Consultant	TFM & Climate Change Specialist	75,000.00	Documented Formal Request for Proposal (Min 3 Vendors) or ISFMI Preferred Vendor*	\$5000+	Within one months of Project Commencement	Within one month of Project Commencement
Professional Services Firm	1 Firm Scientific Expert Services	62,000.00	Documented Formal Request for Proposal (Min 3 Vendors) or ISFMI Preferred Vendor*	\$5000+	Within two months of Project Commencement	Within one month of Project Commencement
International Consultant	1 International Environmental Law, Climate and Markets Specialist	12,500.00	Written Requests for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$5000 - \$20,000	Within three months of Project Commencement	Within two months of Project Commencement
Local Consultant	Local Legal, Policy & Governance Specialist	10,000.00	Written Requests for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$5000 - \$20,000	Within three months of Project Commencement	Within two months of Project Commencement
Professional Services Firm	1 Expert Fire Project Management Business Services & Training Firm	31,000.00	Written Requests for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$20,000 - \$50,000	Within two months of Project Commencement	Within one month of Project Commencement
Local Consultant	Local Project Lead	21,000.00	Written Requests for Quotations (Min 3 Vendors) or ISFMI Preferred Vendor*	\$20,000 - \$50,000	Within two months of Project Commencement	Within one month of Project Commencement
Sub-Total (US\$)		\$ 241,000.00	*Procurement will be carried out as per the requirements of the ISFMI Procurement Policy, including with regard to processes for use of preferred vendors, as submitted to the GCF, and requiring, among other criteria, initial selection according to standard procurement policy cost band criteria and existing relationship of good standing.			

