

TERMS OF REFERENCE – PART A
Mauritius From Ridge to Ridge project

Technical assistance for (1) Assessment of invasive alien plant species management in Mauritius; and (2) Design and Formulation of a Biodiversity Stewardship Programme through the adoption of an incentive (monetary and non-monetary) tool box to support the Ridge to Reef approaches to management of forests and other natural ecosystems in Mauritius

LOT 1: Sustainable management of natural resources and resilience

EuropeAid/138778/DH/SER/multi

REQUEST NUMBER: SIEA-16059

1. BACKGROUND INFORMATION

Climate change adaptation ranks high on Government's Agenda and so does climate change mitigation - Mauritius was among the first 15 countries to ratify the Paris Agreement on 22 April 2016 and to submit the revised Nationally Determined Contribution (NDC) in 2021. This bears testimony to the country's commitment towards the Paris Agreement and towards the global efforts to address climate change – notwithstanding the fact that Mauritius contributed to a mere 0.015% of global greenhouse gases emissions in 2010. Mauritius adopted a series of key legislative policy measures since then to implement the NDC including the National Disaster Risk Reduction and Management Act (2016) and the Land Drainage Authority Act (2017). A Climate Change Act has been adopted in 2020. Key climate-related policy measures include the National Biodiversity Strategy and Action Plan (2017-2025), the Strategic Plan (2016-2020) for the Food Crop, Livestock and Forestry (2016) etc¹. Government also adopted a National Climate Change Adaptation Policy Framework which provides the basis for mainstreaming climate change and disaster risk reduction into core development policies, strategies and plans.

The restoration of forests is one of the **priority mitigation actions of the Nationally Determined Contribution (NDC) and its 2021 revised version**. Enhancing the carbon sequestration via the expansion of the forest is retained as one of the priority actions that will contribute to achieving the Greenhouse Gas (GHG) reduction target of 40% by 2030, as set in the 2021 revised NDC. Before human settlement, Mauritius was covered with dense pristine forests and had a unique biodiversity. After a bit more than 300 years of colonization by man, with over-exploitation of its resources, today less than 2% of the native forest remains, and they are found in the most inaccessible areas of the island, i.e. in the Black River Gorges National Park and on and around some mountain tops. See Fig. 1 at Annex 1.

By restoring the degraded native forests, the action also has the merit of simultaneously halting acute **biodiversity loss** caused by **loss of natural habitats** for several endemic plants and animals. Mauritius has been identified as a Centre of Plant Biodiversity (CPD site 102) by the

¹ Other policy measures include the Energy Efficiency Act (2011), the Building Control Act (2012) funded by the GCCA, the Master Plan for Energy Efficiency/Demand Side Management and Action Plan (2016-2030), the Marshall Plan Against Poverty (2016), the Climate Change Charter for Local Authorities (2015), the Masterplan for Development of the Water Resources in the Republic of Mauritius and the Long Term Energy Strategy (2009-2025).

International Union for Conservation of Nature (IUCN) due to its global biodiversity significance, and forms part of one of the 25 internationally recognised biodiversity hotspots.

Since colonisation by European settlers in the 17th century, more than 100 endemic plants and animals have become extinct – the dodo is one of them. Presently native forest cover accounts for only 2% of the forest cover in Mauritius. According to the International Union for Conservation of Nature (IUCN), Mauritius is ranked as having the third most endangered native terrestrial flora in the world. It is estimated that 94% of its endemic flora is threatened, 77 of its indigenous species are already classified as extinct and 155 of its flowering plant species are listed as critically endangered. A further 93 species are endangered and 241 are classified as vulnerable. Birds such as the Mauritius Fody (*Foudia rubra*), the Olive white-eye (*Zosterops chloronothos*), the Kestrel (*Falco punctatus*), the Pink Pigeon (*Nesoenas mayeri*), and plants such as Bois Corail (*Chassalia* spp.), Bois Dentelle (*Elaeocarpus bojeri*) are among the most endangered species in the world. This is another reason why the restoration of the native forest is a priority objective of the overall national policy, as reflected in the National Biodiversity Strategy and Action Plan (2017-2025), in line with the 2020 AICHI targets of the Convention of Biological Diversity to which Mauritius fully adheres. The project will also support Mauritius to achieve several SDG goals².

Native forests help to strengthen the country's ecological infrastructure. They also provide a resource for the growing green tourism market and a leisure resource for Mauritians, and beholds a significant potential for the economic empowerment of poor rural communities, in particular women, through job creation. Mauritian researchers, back to as early as the 1940's, warned about native forest loss via clearing (ebony logging etc), and the threat posed by invasive alien species. Subsequently reserves were created to conserve these forests but the invasion by alien species continued to be the main driver in biodiversity loss.

A diverse suite of invasive alien plants is threatening all the remaining fragments of native forests. With poor controls on the spread of these alien plants on both state and private land, many have undergone population explosions. By example, the Chinese guava (*Psidium cattleianum*, Myrtaceae), a native of Brazil, can now reach densities of up to about seven million stems per km² in Mauritius (Ramlugun, 2003) and is now a pervasive invader in all natural areas across the entire island. There are at least 17 plant species that have been identified as particularly aggressive invaders. Among the main invasive woody species are four forest trees (*Acacia nilotica*, *Ligustrum robustum* var. *walkeri*, *Litsea monopetala*, *Tabebuia pallida*), four fruit trees and spice plants (*Flacourtia indica*, *Psidium cattleianum*, *Schinus terebinthifolius*, *Syzygium jambos*), six ornamentals (*Ardisia crenata*, *Hiptage benghalensis*, *Homolanthus populifolius*, *Lantana camara*, *Livistona chinensis*, *Ravenala madagascariensis*), one fodder plant (*Leucaena leucocephala*) and two accidental introductions (*Clidemia hirta*, *Rubus alceifolius*). The effect of competition for light, water and minerals with native plants is massive, leading to major reduction in reproductive output. Invasive alien plants also increase native plants mortality and reduces growth rate, contributing further to the gradual replacement of native communities by alien plants which in turn constitute poor habitats for most native animals. Areas which are composed chiefly of exotic plants with little or fragmented native canopy are no longer cyclone resistant and, as observed during cyclone 'Hollanda' in February of 1994, become defoliated and uprooted leading to localized severe erosion.

² Goal 1 (poverty reduction), Goal 2 (zero hunger), Goal 3 (good health and wellbeing), Goal 5 (gender equality), Goal 6 (Clean water and sanitation), Goal 13 (climate action), Goal 14 (life below water) and Goal 15 (life on land)

As a result of this, certain areas which were found to have a high percentage of native forest were cleared of invasive species principally *Psidium cattleianum* (Chinese guava). This gave rise to better managed forests commonly known as Conservation Management Areas (CMAs)³. Furthermore, there are specific zones within protected areas dedicated to conservation, research and restoration activities.

Mauritius has 11 formal state protected areas – one National Park, seven National Reserves, three Forest Reserves and one Bird Sanctuary. Further protected areas are found on the outlets. In terms of institutional set up, Mainland Nature Reserves and Forest Reserves are managed by the Forestry Services, while the National Parks and Conservation Service (NPCS) oversees the management of the National Parks, most offshore islets Nature Reserves, the Bird Sanctuaries. One of the offshore islets, Ile aux Aigrettes Nature Reserve, is leased for conservation management to the NGO Mauritian Wildlife Foundation (MWF).

1.1 ASSESSMENT OF INVASIVE PLANT SPECIES MANAGEMENT IN MAURITIUS

Chemical control plays an important role in initial weeding in most restoration sites in Mauritius because of the relative inefficiency and very labour intensive physical methods. Most herbicides suitable for woody-stemmed can be applied to a cut stump. However, the only broad spectrum systemic herbicides that target woody species that are readily available in Mauritius are RoundUp (Glyphosate), Garlon 4 (Triclopyr) and Tordon 101 (Picloram). Garlon 4 and Tordon have been the main products used in Mauritius for woody weed control and both have been effective.

Manual weeding, in which plants were physically uprooted, was used in the first restoration plots on the Mauritian mainland and on islets. Nowadays, manual methods are combined with chemical methods to treat invasive plants in most restoration sites in Mauritius. s. Garlon 4 has been successfully used on most woody weeds in Mauritius including Chinese guava, privet, ravenale, tecoma (*Tabebuia* spp.), Chinese latanier/latanier de Chine (*Livistona chinensis*), bois d’oiseau (*Litsea* spp.), herbe tourterelle (*Wikstroemia indica*), and cinnamon (*Cinnamomum verum*).

Over a decade, more than 800 hectares of forest land have been restored and maintained through the removal of invasive plants and planting of native plant species. Public and privately owned forest land including those protected as National Parks or Nature Reserves were targeted under the GEF/UNDP Protected Area Network five year project. Both manual and chemical control techniques were used for control of invasive plants for the restoration of the degraded sites.

However, weed management is essential for effective restoration in Mauritius, and is a highly effective conservation measure (Florens and Baider 2007; Mawlah 2007; Florens et al. 2010; Baider and Florens 2011; Bindewald 2011). This represents the largest component of native vegetation restoration in terms of cost and person hours. Physical control can play a role in initial weeding but it is expensive, can disturb the soil and is not practical for certain species beyond a certain size. On the otherhand, chemical control plays an important role in initial weeding in most restoration sites in Mauritius because of the relative inefficiency and

³ See further information on CMA at annex 2

ineffectiveness of using physical methods alone.

However, the decision to use herbicides should not be taken lightly. The health and safety of applicators and others using the site must be a primary concern. In addition, any potentially harmful effects of herbicide use on conservation targets, other native species and the wider environment must be considered so that one is confident that the use of the herbicide will do more environmental good than harm. Field trials on cut stump and herbicide applications conducted in the late 1990s (Florens and Mauremootoo, unpublished data) showed this technique to be effective and cheaper.

An initial assessment of the cost effectiveness of using different clearing techniques (notably by manual weeding using mechanical tools (tree poppers, eco-plugs, high altitude clearing etc) has been undertaken including the cost effectiveness of using herbicides with different levels of concentration. The general conclusion is that use of herbicides is lower than manual weeding (which is more labour-intensive). However, there has been very little or no monitoring of its impact on the flora but also on the fauna (aviaries etc). A few studies have shown that mortality of native seedlings when herbicide is used is not different from areas in which herbicide is not used (Lin Chung Mee 2005). However there have been some reported problems of dying off of manglier plants (*Sideroxylon* spp.) when herbicide has been applied at Mon Vert, Pétrin, Plaine Champagne and Plaine Raoul. No in-depth studies have been carried out but it appears that regenerating manglier plants are most affected with mature trees also affected. **This phenomenon should be investigated as mangliers are important structural trees in Mauritian forests and health and measures need to be taken to stop using herbicides in the Black River Gorges National Park pending the results of those investigations.** A study undertaken by Lin Chung Mee (2005) which addressed herbicide impacts did not find secondary poisoning

Most herbicides suitable for woody-stemmed can be applied to a cut stump. However, the only broad spectrum systemic herbicides that target woody species that are readily available in Mauritius are RoundUp (Glyphosate), Garlon 4 (Triclopyr) and Tordon 101 (Picloram). Garlon 4 and Tordon have been the main brand products used in Mauritius for woody weed control and both have been effective. Tordon, however, is not recommended because of its persistence in the environment, concerns about its volatility and hence applicator safety and verbal reports of greater non-target effects on indigenous plants.

Garlon 4 has been successfully used on most woody weeds in Mauritius including Chinese guava, privet, ravenale, tecoma (*Tabebuia* spp.), Chinese latanier/latanier de Chine (*Livistona chinensis*), bois d'oiseau (*Litsea* spp.), herbe tourterelle (*Wikstroemia indica*), and cinnamon (*Cinnamomum verum*).

More specifically, for the National Park, since the observed negative impact on native manglier plants in 2018, the use of herbicides for weeding of invasive plants have been stopped and only manual weeding of invasive plants such as Strawberry Guava have been used. Due to labour shortage, the weeded area has considerably reduced with only 25-50 hectares weeded and maintained annually.

Donor-led projects and initiatives in controlling invasive species

- In 2016, Government embarked on a major Invasive Alien Species (IAS) Prevention, Control and Management project with GEF/UNDP. The objective of the project was to safeguard globally significant biodiversity in vulnerable ecosystems through the prevention, control, and management of invasive alien species (IAS) in the Republic of Mauritius by looking at policies and institutional frameworks, putting in place early detection and rapid response programmes to eradicate new incursions. It also included improved capacity to upscale proven methodologies for managing IAS on a landscape level and raising public awareness and enhancing understanding of the centrality of IAS programmes for protecting biodiversity, ecosystems, the economy, and livelihoods.⁴

To note that under the GEF/UNDP project a Good Practice Guide to Native Vegetation Restoration in Mauritius (GPG) was developed. The purpose of this Good Practice Guide⁵ provides an overview of the vegetation restoration process for use by site restoration practitioners in Mauritius.

Invasive plant species in forest and wetland ecosystems of Mauritius

List of invasive plant species targeted in the forest and wetland ecosystems in Mauritius area as follows:

Upland invasive alien plants:

- *Lygodium microphyllum*
- *Psidium cattleianum*
- *Clidemia hirta*
- *Ossaea marginata*
- *Litsea monopetala*
- *Ravenala madagascariensis*
- *Stachytarpheta jamaicensis*
- *Pinus elliottii*

Lowland invasive alien plants:

- *Panicum maximum*
- *Furcraea foetida*
- *Flacourtia indica*
- *Heteropogon contortus*
- *Litsea glutinosa*
- *Albizia lebbek*
- *Eugenia uniflora*
- *Barleria prionitis*
- *Eucalyptus tereticornis*

Wetland invasive alien plants:

- *Mikania micrantha*
- *Ipomoea alba*
- *Colocasia esculenta*

⁴ More information on the project at <https://www.undp.org/mauritius-seychelles/projects/mainstreaming-invasive-alien-species-prevention-control-and-management>

⁵ The Good Practice Guide is too voluminous to be included in the annexes. Should the invited consortia be interested in receiving a copy, same will be provided.

- Eichhornia crassipes
- Under the INTERREG, CIRAD has been entrusted with the implementation of the EPIBIO programme (epidemiologie et biocontrôle dans le sud-ouest de l’océan indien) and aims at having a better knowledge and understanding of different invasive species and research on the most appropriate control methods.⁶

1.2 BIODIVERSITY STEWARDSHIP PROGRAMME

Background

Protected Area Network Expansion Strategy (PANES)

The 10-years strategy PANES (2017-26) sets the trajectory for expanding the Protected Area Network, as well as improving the status of the current Protected Area Network (PAN) which is at present at only 4% of the land area of Mauritius. The purpose is to develop innovative programmes and mechanisms in order to expand the Protected Area Network (PAN) so as to include all key biodiversity areas as far as possible, including certain private lands.

The PANES recommends the development of a Biodiversity Stewardship Programme which targets making wise use of natural resources on land in which various land-use activities occur other than biodiversity conservation activities alone. The aim of stewardship is to ensure that species, habitats, ecosystems and critical ecological functions are restored, maintained and enhanced for present and future generations.

Biodiversity stewardship recognises landowners as the custodians of their land, including the biodiversity and natural resources, and it is expected that the landowners would have a strong interest in, and/or show a strong practical commitment to biodiversity conservation. It is a mechanism that promotes the wise use and management of natural resources and the re-establishment of biodiversity and ecological function and resilience, through a form of binding agreements with landowners and lessees, as well as other Ministries governing environmental resources. In Mauritius the opportunity to put stewardship agreements in place exists both with private landowners/lessees who make use of state lands, as well as with governmental agencies. For instance, the Strategy makes provision for the National Parks and Conservation Service (NPCS) to implement the stewardship programme on private owned land through the designation of Private Reserves (under the Native Terrestrial Biodiversity and National Parks Act of 2015), or through contract agreements for lower level conservation areas and on high priority conservation areas adjoining potential Protected Areas. Similarly the Forestry Service (FS) can implement the Biodiversity Stewardship⁷ Programme on Leased State Forest Lands (under for instance shooting and fishing leases).

In fine, the purpose of the Stewardship Programme is to secure critical biodiversity through binding agreements with landowners or lessees. This may include remnant habitat or it may be one or more threatened endemic species that requires protection. The rationale behind this is to

⁶ More information on the CIRAD project at <https://www.cirad.fr/en/worldwide/platforms-in-partnership/biocontrôle-oi>

⁷ In the context of this document, “Stewardship” for Leased lands refers to agreements that will maximise the biodiversity conservation undertaken by the lessees. This does not imply that there will be any transfer of the ownership of the land.

secure what remnant biodiversity remains and to rehabilitate and restore critical biodiversity in an effort to create a resilient, connected, ecologically functioning Protected Area Network. The threat of further habitat degradation or loss can be most effectively addressed by investing in conservation efforts and resources.

Given the challenges that will be encountered in expanding the Protected Areas in Mauritius, it is important that efforts be focussed on achieving as much as possible in as short a time as possible. Private landowners, the private sector and the public need to gain an understanding of the PAN Expansion Strategy and the Biodiversity Stewardship Programme, and to develop a level of trust in it, on the basis that it will succeed in its objectives and provide benefits to landowners and land-users. Opportunities to secure biodiversity gains should be sought initially, with more complex arrangements being developed as the programme progresses.

Provision of Incentives

As the Biodiversity Stewardship Programme evolves, a suite of incentives to provide benefits to landowners who enter the programme should be established. In similar programmes around the world some of the most effective incentives have been shown to be the access that landowners get to expertise and technical assistance in developing and managing their land for biodiversity conservation.

There is a range of other incentives that can be considered and should be tailored to Mauritian conditions, to ensure that landowners receive tangible benefits for their conservation actions. These would include legal, financial (tax exemption, PES etc.), non financial (technical assistance, advisory etc.).

2. OBJECTIVE, PURPOSE & EXPECTED RESULTS

2.1 ASSESSMENT OF INVASIVE PLANT SPECIES MANAGEMENT IN MAURITIUS

2.1.1 Global objective

By optimising the contribution of land to climate change mitigation and adaptation, preservation of biodiversity and food security, the global objective is to assist the Republic of Mauritius in meeting its commitments taken at international instances, notably the Convention of Biological Diversity, the Paris Agreement and the Ramsar Convention.

2.1.2 Specific objective(s)

Assist Government of Mauritius in the preservation and restoration of its native forest through a cost-effective and eco-friendly/sustainable method of eradication of alien invasive species in line with Biosphere guidelines.

2.1.3 Requested services, including suggested methodology⁸

The experts will be required to assist more specifically in the following tasks:

⁸ Contractors should describe how the action will contribute to the all cross cutting issues mentioned above and notably to the gender equality and the empowerment of women. This will include the communication action messages, materials and management structures.

On assessment of control techniques

- a. Desk review of all control methods used in different forest types and other natural ecosystem for invasive plant species control undertaken in Mauritius;
- b. Assessment of different control techniques used in Mauritius for control of invasive plant species especially in sensitive forest /wetland ecosystems of Black River Gorges National Park (6400 ha) , Bras d'Eau National Park coastal forest, Ile d'Ambre National Park which harbour rare and endangered plant species and their cost effectiveness including for each forest types (dry/wet and heath forest);
- c. Undertake an analysis of all applicable legal and regulatory requirements relating to management and control of invasive plant species including herbicide use;
- d. Undertake an environmental assessment of the potential (positive or negative and direct or indirect) impact of herbicide use for control of invasive plant species in the forests, National Parks etc and toxicity on the threatened flora and fauna (non-target vegetation), water quality, soil quality and human health;
- e. Undertake an assessment of research and monitoring capacity in Mauritius based on a cost/benefit analysis. The experts will recommend the methodology for the research that will be required as well as specific areas. The research will be undertaken by local researchers who will be guided by the experts in collaboration with the respective academic institutions involved and NPCS;
- f. Proposed measures to improve effectiveness of control methods for invasive plant management in Mauritius including IPM methods;
- g. Comparative cost analysis of the different techniques used for control of invasive plants for different forest types in Mauritius;
- h. Develop and implement training programme for the different techniques that potentially can be used for control of invasive plant species in Mauritius;
- i. Coordinate with the Ministry and all relevant stakeholders involved in the control of invasive plants for native forest restoration mechanism in Mauritius regarding AIS;
- j. Recommend on effective awareness and information campaigns involving communities participation;
- k. Explore and develop links between NPCS and relevant international institutions for exchange of know-how, publications etc;
- l. Develop appropriate mitigation measures to minimise or reduce any adverse effects of herbicide use on natural resources. Proposed alternative cost effective ways or methods for control and eradication of invasive plant species that have less impact on environment;
- m. Based on the above assessment, to review the Good Practice Guide for the Plant Restoration developed under the UNDP/GEF Protected Area Network project (2012-18).

2.1.4 Outputs

- Report on Invasive plant species management in Mauritius including effectiveness of control techniques.
- Environmental assessment report on impact of different control methods especially chemical control of invasive plant species for restoration of our forests and protected areas
- Report on alternative methods including IPM for management and control of invasive plant species
- Update of Good Practice Guide
- Training of trainers manual

2.2 FORMULATION BIODIVERSITY STEWARDSHIP PROGRAMME

2.2.1 Global objective

By optimising the contribution of land to climate change mitigation and adaptation, preservation of biodiversity and food security, the action has an as global objective to assist the Republic of Mauritius in meeting its commitments taken at international instances, notably the Convention of Biological Diversity, the Paris Agreement and the Ramsar Convention.

2.2.2 Specific objective(s)

Assist Government of Mauritius in the development of a Biodiversity Stewardship Programme for the promotion of Reef to Ridge approach to manage forests and other natural ecosystems with the goal of increasing the land under protected areas network. This will involve preservation and restoration of its native forest through a cost-effective and eco-friendly/sustainable methods of eradication of alien invasive species in line with Biosphere guidelines.

2.2.3 Requested services, including suggested methodology⁹

The experts will be required to assist more specifically in the following tasks:

1. Design and formulate a Biodiversity Stewardship Programme for implementation in the Republic of Mauritius aligned with the objectives set out in the Protected Area Network Expansion Strategy (2017-26) of Mauritius;
2. Review legal, regulatory and policy frameworks in relation to the establishment of a Biodiversity Stewardship Programme;
3. Assess and review of financial instruments used nationally and internationally for biodiversity stewardship by forest land users and natural ecosystems managers;
4. Provide best practices and make recommendations for financial mechanisms including that can be used to provide incentives to private forest-land owners, state/public forest land leased for fishing and shooting purposes, farmland adjoining the Black River Gorges National Park. towards a Biodiversity Stewardship Programme;
5. Therefore develop an incentive tool box (monetary and non-monetary incentive) for the development of Biodiversity Stewardship Programme in Mauritius;
6. Assess feasibility (economic and social) of different incentives and the overall Biodiversity Stewardship Programme propose
7. Engage with all stakeholders through organisation of a stakeholder workshop including private actors and NGOs in development of a Biodiversity Programme.

⁹ Contractors should describe how the action will contribute to the all cross cutting issues mentioned above and notably to the gender equality and the empowerment of women. This will include the communication action messages, materials and management structures.

2.2.4 Outputs

- I. Report on Biodiversity Stewardship Programme
- II. Incentive Tool Box Report for a Biodiversity Stewardship Programme
- III. Review and Analysis Report on different options/incentives and Biodiversity Stewardship Programme used regionally and internationally

3 LANGUAGE OF THE SPECIFIC CONTRACT

English.

4 Management team member presence required or not for briefing and/or debriefing

The backstopping services of the contractor will ensure quality assurance of all deliverables foreseen under this contract

5. LOGISTICS AND TIMING

	Proposed Date	Activity	Team Leader	Expert 2
			Man-days to be filled by bidder in their proposal	
	Estimated starting date of the mission: 10 July 2023			
Phase 1 Desk Work	DESK WORK and MEETINGS	-Review of documentation/literature - preparation of meetings and trips		

Mobilisation and briefings	MOBILISATION IN MAURITIUS	<p><u>Start-up and planning of the mission</u></p> <ul style="list-style-type: none"> -Kick-off briefing with EU Delegation, NPCS, Ministry of Agro, Ministry of Finance - Discussion of outputs. - review of existing/further documentation on site - consolidation of methodology and scope - preparation of draft inception report - submission of inception report to DUE, who will share with the above 3 ministries/departements, which defines the proposed methodology for the assignment and the specific scheduling of activities, meetings and consultations, and literature to be consulted (max. 6 pages) - finalisation of Inception report 		
Assignment		<p>Undertake assignments as described under ‘Requested Services’ above</p> <p>Organisation of (i) one stakeholders workshop on the Biodiversity Stewardship programme in Mauritius, ; and (ii) one Validation Workshop with stakeholders in Republic of Mauritius to present the draft Final report (estimated number of participants: 50 per workshop and logistics i.e. half day with 1 coffee break). Costs of workshop will be borne from the Programme Estimate under a separate budget line of the Ridge to Reef project.</p> <p>A trip to Rodrigues to discuss with stakeholders there is foreseen and should be factored in by the bidder in the budget and in the financial offer.</p>		

Final report		Draft and finalise report on basis of stakeholders' workshop and training formulated and delivered		
	Provision for travel days		4 International	
	<u>TOTAL Working days</u>	<u>128 (including travel days)</u>	128 (to be split between the two experts by the bidders)	

In terms of tentative calendar (to be filled by the bidder):

	Month 1				Month 2				Month 3				etc
Work Plan													
Consultations/ Meetings													
Assignment													
Draft Final Report													
Final Report													

TERMS OF REFERENCE – PART B

BACKGROUND INFORMATION

1. Benefitting Zone

Mauritius

2. Contracting authority

The European Union, represented by the European Commission, B-1049 Brussels, Belgium.

3. Contract language

English

LOCATION AND DURATION

4. Location

- **Expert 2 in Environmental Economics or Natural Resource Economics :**
 - Normal place of posting of the specific assignment: National Parks and Conservation offices, Reduit, Mauritius
 - Mission(s) outside the normal place of posting and duration(s): Yes 1 regional return trip to Rodrigues island by plane
- **Team Lead - Expert in Alien Invasive Species:**
 - Normal place of posting of the specific assignment: National Parks and Conservation offices, Reduit, Mauritius
 - Mission(s) outside the normal place of posting and duration(s): Yes 1 regional return trip to Rodrigues island by plane

5. Start date and period of implementation

The indicative start date is 09/07/2023 and the period of implementation of the contract will be 90 Day(s) from this date (indicative end date: 07/10/2023).

REQUIREMENTS

6. Expertise

For this assignment, one individual expert must be proposed for each position.

The expertise required for the implementation of the specific contract is detailed below.

- **Expert 2 in Environmental Economics or Natural Resource Economics :**
 - General description of the position: The expert has the responsibility of contributing to

the report of the team Leader. contribute to the specific technical activities and assure the quality, timing and comprehensiveness of the assignment's deliverables.

- Expert category: Cat. I (>12 years of experience)
- Qualifications and skills required: At least a Master's degree in Environmental Economics or related subject
- General professional experience: Minimum 12 years of general professional experience with demonstrated experience working in the environmental economics field.
- Specific professional experience: • Minimum of 5 years' specific experience in devising environmental schemes or financial incentives in forest, natural ecosystem or protected areas management • Proven experience working in the related domain in tropical countries • Good knowledge of the CBD • Good communication and report writing skills in English
- Language skills: Good communication and report writing skills in English, both oral and written
- Minimum number of working days: **40** days
- **Team Lead - Expert in Alien Invasive Species:**
 - General description of the position: Lead on the development and implementation of strategies for flora restoration on mainland and other protected islets and contribute to other relevant strategies; Participate in meetings, workshops, and presentations in support of NPC's and EU's conservation priorities; Ensure reporting to EU Delegation and the NPC's, coordinating the team, contributing to the specific technical activities and assuring the quality, timing and comprehensiveness of the assignment's deliverables.
 - Expert category: Cat. I (>12 years of experience)
 - Qualifications and skills required: At least a Master's degree in natural resources management, biological sciences or any related subject
 - General professional experience: Minimum 12 years of general professional experience with demonstrated experience working in the invasive plant species management field.
 - Specific professional experience: Minimum of 5 years' specific experience in assessing invasive species control techniques and managing invasive plant species for natural resources management • Minimum of 5 years' specific experience delivering training in invasive plant species management including risk assessment • Proven experience working in the related domain in tropical countries • Knowledge and experience in ecosystem restoration in natural resources management including for biodiversity protection • Demonstrable experience in developing, implementing, and evaluating delivery/work plans; • Experience in the design, planning, implementation, and management of forest conservation and restoration projects; • A knowledge of and, ideally, experience of implementing, the Open Standards for the Practice of Conservation is desirable; • People management, coaching and capacity building/development skills; • GIS skills; • Strong skills in project planning, financing, management, implementation, and evaluation; • Excellent report writing skills;

- Language skills: Good communication and report writing skills in English, both oral and written
- Minimum number of working days: **88** days
- Additional information: The following will be considered as plus points:
 - Experience in delivering training
 - Experience working in the related domain in tropical countries
 - Good knowledge of the CBD
 - A knowledge of and, ideally, experience of implementing, the Open Standards for the Practice of Conservation;
 - People management, coaching and capacity building/development skills;
 - GIS skills;
 - Strong skills in project planning, financing, management, implementation, and evaluation

7. Incidental expenditure

No incidental expenditure provided for in this contract.

8. Lump sums

No lump sums provided for in this contract.

9. Expenditure verification

No expenditure verification report is required.

10. Other items defined by Contracting Authority

1 - Incidentals - 2 return tickets to Rodrigues at 500 EUR each. This amount must be included unchanged in the budget breakdown.

Minimum quantity (if applicable): 2

2 - Incidentals - total 4 tickets at 1500 EUR per ticket. This amount must be included unchanged in the budget breakdown.

Minimum quantity (if applicable): 4

REPORTS AND DELIVERABLES

11. Reports and deliverables requirements

Title	Content	Language	Submission timing or deadline
Inception report	Planning of assignment	English	Within 1 Week(s) After the project start
Draft final report	Draft report	English	Within 3 Week(s) Before the project end
Final report	Final report	English	Within 1 Week(s) Before the project end