



November 2024

SOCIO-ECONOMIC CONSULTANCY TERMS OF REFERENCE

“Global Tree Seed Bank: Unlocked - Mexico”

SUMMARY OF REQUIREMENT

Royal Botanic Gardens, Kew (RBG Kew) and Facultad de Estudios Superiores Iztacala, UNAM (FESI-UNAM) seek to appoint a Service Supplier to conduct a socio-economic consultancy as part of the Garfield Weston Foundation-funded project “Global Tree Seed Bank: Unlocked - Mexico” (2024-2026).

OBJECTIVE

The Service Supplier will conduct an eighteen-month consultancy to identify the seed supply chain (also known as the seed value chain) and assess nursery production for restoration purposes in Chiapas.

BACKGROUND

Rationale

Forests currently occupy 31% of the global land area. Roughly half of that area is relatively intact, and more than one-third is primary forest. There are just over 60,000 tree species recorded. Almost 60% of these are single-country endemics, and 45% are members of just ten plant families (FAO 2020). However, the world’s forests face multiple pressures; agriculture, logging, and livestock farming represent the major threats, and climate change is having an increasing impact. Each year 10 mha of forest is lost (FAO 2022) and 30% of the world’s trees are at risk of extinction (BGCI 2021).

The Programme

The “Global Tree Seed Bank: Unlocked” Programme will help protect trees from around the world by conserving their seeds. Through this project, we will conserve at least 500 of the most inaccessible and rarest tree species on earth and develop world-leading

techniques for conserving trees on the brink of extinction whose seeds cannot currently be banked.

The primary focus of this project will be on using collections to accelerate on-the-ground conservation activities. Working with local communities and our partners in Africa, South America, Europe/Caucasus, Australasia and Asia, we will restore diverse forest areas and increase the seed supply of native and threatened tree species recovery programmes. We will study the seeds of rare species and develop practical guidance to increase tree resilience to climate change.

The project in Mexico

Our 2020 publication *Native Trees of Mexico* (Tellez et al., 2020) identified two important centres for tree conservation in the states of Veracruz and Chiapas. The forests in these regions provide ecosystem services to local communities but are subject to fragmentation and conversion for agriculture and farming. The past phase of the GTSB Mexico project ended in 2023, has strengthened the collaborations with our Mexican partners, and has contributed to developing and sharing expertise in the conservation, propagation, and supply for reforestation of native trees from tropical montane cloud forests of Veracruz.

In this new phase of the project, the methodology and the activities carried out in Veracruz will be extended to Chiapas with newly identified partners to conserve, research, and propagate priority native tree species valuable for restoration and livelihoods. Our Mexico projects are delivered jointly with FESI-UNAM which hosts the most diverse wild seed bank for Mexico and collaborates with RBG Kew within an Access & Benefit-Sharing Agreement since 2002.

The aim of this project is to restore the natural capital of Mexican forests by integrating the conservation and use of tree diversity with ecosystem services and reforestation activities. We will achieve this by targeting, collecting, seed banking, studying, propagating, and strengthening networks to use seeds of native tree species important for the livelihoods of local communities and other ecosystem services in restoration activities. Multidisciplinary research will support the conservation and sustainable use of native trees that are currently under-represented in existing reforestation programmes.

We will raise awareness of the ecosystem services provided by native tree species and enhance the current partnership by involving private and public stakeholders. We will characterise the seed supply chain for reforestation in Chiapas and develop guidelines for best practices to achieve gender equality and social inclusion in the processes involved. The project is led by the Royal Botanic Gardens, Kew (RBG Kew), in collaboration with the Seed Bank of the Faculty of Higher Studies Iztacala of the

National Autonomous University of Mexico (FESI-UNAM), and in alliance with Pronatura Veracruz A.C. (PVER).

ANALYSIS CONTENT

As part of the objective to develop pathways to increase underrepresented biodiversity in reforestation programs in Chiapas, RBG Kew and FESI-UNAM seek to commission a comprehensive piece of research and analysis of the seed supply chain production for restoration purposes in Chiapas that thoroughly develops the following:

A. Assess the Current Seed Supply Chain:

- Map out and record existing seed sources, suppliers, and distribution channels, classifying them according to target ecosystems (For example: selvas húmedas - altas, medias y bajas - or bosques – mesófilo de montaña y pino-encino -).
- Evaluate the seed supply for reforestation programmes in terms of quality, quantity, and diversity of species (native or introduced species).
- Assess the participation of historically marginalized groups, including women and Indigenous peoples, in seed supply chains and reforestation programs in Chiapas.

B. Assess the Current Needs of Reforestation:

- Map out existing deforested areas in Chiapas, identifying in which areas are reforestation programs currently carried out per target ecosystem.

C. Assess the Current actors demanding native seeds for reforestation:

- Record the list of actors and initiatives working on reforestation programs in Chiapas per target ecosystem.
- Characterise the profile of the stakeholders requesting seeds for restoration and the specific types of demand they have.

D. Identify Gaps and Bottlenecks:

- Identify key challenges and inefficiencies in the seed supply chain.
- Analyse factors affecting seed quality and availability.
- Identify the social and gender norms that present opportunities or barriers for gender equality and social inclusion (GESI) in the seed supply chain and reforestation programs in Chiapas¹.

¹ Read the UK PACT learning paper that provide guidance, tools and case studies to help overcome common barriers that organisations face integrating GESI into climate actions projects:

<https://www.ukpact.co.uk/news/uk-pact-grcf-gesi-learning-paper-2024>

E. Analyse data, including evidence-based indicators, to improve decision-making processes:

- Utilize data analysis software and techniques, such as predictive modelling and trend analysis, to interpret complex datasets, identify patterns, and generate actionable insights that can guide strategic decisions.
- Calculate and analyse economic metrics to compare the seed supply chain in Chiapas with those of other regions, providing valuable insights into its relative efficiency and effectiveness.
- Create graphs that clearly represent key metrics and trends within the seed supply chain.

F. Strategies for Improvement:

- Propose solutions to enhance seed supply chain efficiency including economic metrics and gender equality and social inclusion.

METHODOLOGY

The Service Supplier is asked to submit a detailed methodology of how they would deliver the above-mentioned project. Activities would be expected to include (but not be limited to): desk and field research and stakeholder consultations/participatory processes in Mexico. The methodology should be accompanied by a detailed budget for the cost of proposed activities and the CVs of the expert(s) that are being proposed to conduct the work.

TIMELINE AND INPUTS

- The project duration is estimated at 18months from kick-off and will run over the course of two financial years: January 2025 to December 2025 (Year 1), and January 2026 to June 2026 (Year 2). This duration is subject to changes to the scope and depth of the analysis defined by RBG Kew.
- The proposed timetable for Year 1 delivery (January 2025 to December 2025) will focus on points A to D under the section "Analysis of the Seed Supply Chain" (page 3 of this call) and is outlined as follows. Final dates and specific report content will be agreed upon with the Service Supplier during the project kick-off session:
 - ✓ 6 January: Contract signature and project kick-off
 - ✓ 7-17 January: virtual meeting for project kick-off.
 - ✓ (pending confirmation of day and time) June: Delivery and presentation of first report (Report 1) to the project team.
 - ✓ (pending confirmation of day and time) December: Delivery and presentation of second report (Report 2) to the project team.

- The proposed timetable for Year 2 delivery (January 2026 to June 2026) will focus on points E to F under the section "Analysis of the Seed Supply Chain" (page 4 of this call) and is outlined as follows. Final dates and specific report content will be agreed upon with the Service Supplier during the project kick-off session and in a follow-up meeting after the second report in the last quarter of Year 1:
 - ✓ (pending confirmation of day and time) June: Delivery and presentation of final report, photos with consent forms and databases to the project team.
- Meetings to review progress and provide feedback to deliverables will be held in accordance with the availability RBG Kew and FESI-UNAM teams.

ANALYSIS REQUIREMENTS

1. Three deliverables consisting of reports (Report 1, Report 2, and the Final Report), each with a minimum length of 5 pages. These reports should have a clear structure, ideally following the format of a published scientific manuscript. Each report will also include corresponding annexes in Spanish and an English summary of at least 1 page.
1. The delivery of the final report will be accompanied by three presentations: two in-depth presentations and one final presentation to the project team.
2. The format for the delivery of the seed supply chain analysis can be done by a combination of virtual and in-person research and engagements. Partners and communities will need to be involved in the development of the analysis to ensure the delivery of participatory and consultative research following the principles of gender equality and social inclusion (GESI).
3. The Service Supplier is expected to provide the original databases used to compile and analyse the data for the consultancy.
4. The Service Supplier will be expected to maintain records of conversations with stakeholders engaged and include as an annex to the report a comprehensive list of stakeholders and a bibliography of sources consulted, in addition to referencing these wherever quoted in the analysis itself. Numerical evidence and estimates are required where possible. Maps are required and graphics/infographics are strongly encouraged.

BUDGET

- The maximum budget for the services outlined in these Terms of Reference will not exceed the equivalent of £13,000 (GBP) in Mexican pesos (MXN), with £6,500 allocated for Year 1 and £6,500 for Year 2.

Please note: The selection of the consultant for these services will prioritize optimal resource utilization, and the lowest-cost option may not necessarily be selected.

- The Service Supplier will receive three consolidated payments upon approval of the deliverables by FESI-UNAM and RBG Kew.
- The contract will be managed through UNAM using their financial and administrative processes. If necessary, the Service Supplier may request advance funds to carry out the required activities, with reimbursement to follow (e.g., visits to nurseries or the organization of workshop with seed suppliers).
- The overall budget for this work must be inclusive of all applicable taxes, overhead costs and travel cost for any field visits. The Service Supplier is expected to show Value for Money and not reach the budget ceiling if the costs can be lower.