**Terms of Reference**

Local consultants to Identify models for regenerative production of Cinnamon cassia and star anise in Vietnam

# Background

Regional Biotrade II is a four-year project (September 2020-August 2024) funded by the Government of Switzerland through the State Secretariat for Economic Affairs (SECO). The program follows on a previous phase which ran from September 2016 to September 2020. The goal of the project is conservation of biodiversity through sustainable trade of biodiversity products in a manner that integrates local exporters / producers into global value chains and increases income for the rural population women and men that depend on biodiversity resources for their livelihoods in the Mekong region.

The new phase of the program includes three country components covering the core target countries of Myanmar, Vietnam and Laos, and a regional component covering light-touch intervention in Cambodia and partnerships with regional and international companies and organizations. HELVETAS Swiss Intercooperation has overall management responsibility, and directly manages the Laos, Myanmar and Regional components, while Vietnamese NGO CRED manages implementation of the Vietnam component.

The project is partnership with UEBT (<https://uebt.org/about-uebt>), a non-profit association that promotes sourcing with respect, to support Biotrade companies in Vietnam to implement Biodiversity Action Plans in their production areas. These companies are producing Cinnamon cassia, star anise, and benzoin. We have identified some risks for biodiversity that the current cultivation and wild collection practices are posing. Among others:

1. Monoculture, high-density farming, and the practice of cutting down trees for harvesting is degrading soil, reducing genetic diversity, and plants natural resilience.
2. Pests are increasingly being problematic and the use of agrochemicals, also high toxicity, is increasing as well with consequent contamination and degradation of soil and water as well as
3. Expansion of cultivation and wild collection activities is often happening at the cost of natural and even protected areas that are converted or overexploited
4. Changing climatic conditions – higher temperatures and longer dry seasons – seem to impact on plant health but there is no clear understanding of this.
5. Wild collection does not necessarily ensure the long-term sustainability of the used species due to the lack of important data on species behavior (such as regeneration rates, factors promoting and restraining regeneration) and no specifics efforts are done in order to promote the species regeneration.

We are expecting the local experts or organizations to support companies and the producers to understand:

1. The causes behind the risks described above.
2. Which farming and wild-harvest based production models can be promoted that contribute to overcome the risks mentioned above and also have a positive impact on biodiversity regeneration.

# Objective of the consultancy

The objective of this ToR is to provide technical support to companies to identify models for regenerative production of Cinnamon cassia, and star anise in Vietnam.

# Deliverables

The experts will

1. Review some findings that UEBT local biodiversity staff has gathered from field visit.
2. Consult relevant literature.
3. Accompany UEBT local biodiversity staff in field visits to gather missing information to be able to respond to the questions above.
4. Write a short report in Vietnamese which the local UEBT biodiversity staff will translate into English where recommended production models are described in the way they could be implemented in the visited field, and pros and cons of each model are highlighted.
5. Support UEBT local biodiversity staff in presenting the models to the companies.
6. Support the companies in setting up pilots to test the models.
7. Monitor the pilot implementation in the first year and refine the models when needed.

# Main Tasks

**Cinnamon cassia**

In the case of Cinnamon cassia, the core of the expert work would be to support UEBT local biodiversity staff in

1. Understanding the root cause of pests in Cinnamon cassia cultivation
2. Understanding the main varieties used in the fields and the most suitable combinations.
3. Exploring best locations for Cinnamon cassia fields considering changing climatic conditions among others
4. Exploring possible harvesting techniques that avoid bare soil or actions to compensate in case of no harvest alternative viable.
5. Explaining the pros and cons of each of the model described below.
6. Cinnamon cassia is planted with other forest plants: it is planted under the canopy of natural forests, especially with timbers & bamboo. Cinnamon cassia is plant with density of 2000-3000/ha. When Cinnamon cassia is 3-4 years old, people “slowly kill” the high trees to give space for Cinnamon cassia.
7. Cinnamon cassia is planted with agriculture crops (mainly hilly rice, corn, casava..). This model uses land & agriculture crops to shade young Cinnamon cassia.
8. Cinnamon cassia is planted in family gardens with fruit trees. In this model, Cinnamon cassia grows fast because it is provided with enough nutrients and care.
9. Cinnamon cassia is planted in a more “diversified landscape” where local tree species are planted along streams and ponds to provide shelter for birds and other important species.
10. Understanding which of the models would suit the reality of the farmers working with UEBT companies most and increases the biodiversity on their farms but at the same time help to adapt the models to the contexts where those farmers work and keep their income stable.

**Star Anise**

In the case of star anise, the core of the expert work would be to support UEBT local biodiversity staff in

1. Understanding the issues affecting star anise cultivation, root causes, and most suitable solution
2. Understanding the main varieties used in the fields and the most suitable combinations.
3. Exploring best locations for star anise fields considering changing climatic conditions among others
4. Understanding main farm management practices (e.g. seed selection and sourcing, sowing, soil, weed, and pest management, irrigation, harvest, etc.) and possible improvements.
5. Explaining the pros and cons of each of the model described below

a) monoculture under poor forests, recovering forests or open space with regenerative timber trees.

b) agroforestry (with tea, ginger, rice…) on production forests.

c) scattering in family gardens, around the house or intercropped with fruit trees

1. Understanding which of the models would suit the reality of the farmers working with UEBT companies most and increases the biodiversity on their farms but at the same time help to adapt the models to the contexts where those farmers work and keep their income stable.

# Working Methodology

The For the implementation of the tasks both field work and desk work is needed:

* **Field work:** analysis of different production areas, definition of observation sites per area, observation of Cinnamon cassia, star anise, benzoin and other vegetation (e.g. tree density per hectare, diameter class distribution, crown vitally, related vegetation: main species and description of densities & diameter per layer (understory, canopy, emerging trees) and photographic documentation; setting up & monitoring the model tests.
* **Desk work** – data digitalisation, analysis, conceptualization of biodiversity-friendly models and reporting

Experts from UEBT and Helvetas BioTrade project will provide (remote) advice on methodological design and accompany the field visits. They will propose a methodological design. The consultant will define a methodology and submit to them for feedback. The consultant will do the same for the report. All the actors will ensure close collaboration with local company and benzoin producers and consider their knowledge in the research.

# Time Frame and expected results

The assignment will be for the period from July 1, 2023 to June 30st, 2024. The total consulting time available under this ToR is place in a written agreement of Helvetas Swiss Intercooperation.

Expected results

* 5 Biodiversity Friendly Production Models defined, one per each of the following crops: Cinnamon cassia, Star Anise
* Pilots to test the 5 models set up with 4 companies

# Schedule

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|  | **Activity** | **Output** | **Location** | **Timeline** |
| 1 | Literature review on current Cinnamon cassia, and star anise practices | Identification of issues and  recommended practices | Desk | Cinnamon cassia, star anise |
| 2 | Field visits | Identification of common modern and traditional practices and issues & collection of data | Yen Bai, Lang Son (Cinnamon cassia and star anise) | Cinnamon cassia, star anise |
| 3 | Model conceptualization for Cinnamon cassia and star anise | Proposed farming models  theoretical | Desk | Cinnamon cassia, star anise |
| 4 | Presentation of the models of Cinnamon cassia andstar anise to companies | All companies agree with the model to test | On site (Hanoi) | Cinnamon cassia & star anise: July 15th – 31st |
| 5 | Select farmers to test the models | Farmers selected to start the pilot | Desk | Cinnamon cassia & star anise: August 1st – 15th |
| 6 | Defining criteria for biodiversity-friendly farm pilots and integrate the companies’ BAPs | Pilot design-based model | Yen Bai, Lang Son, Lao Cai, Bac Kan | Cinnamon cassia & star anise: August 16th – 31st |
| 7 | Select farmers to test the models | Farmers selected to start the pilot | Desk |
| 8 | Set up the tests | Pilots started | Cinnamon cassia: Yen Bai, Lao Cai, Bac Kan  Star anise: Lang Son | Cinnamon cassia & star anise: August 16th – 31st |
| 9 | Quarterly monitoring visits (performance and impact) | Monitoring report | Cinnamon cassia: Yen Bai, Lao Cai, Bac Kan  Star anise: Lang Son | Visit 1: November 2024  Visit 2: February 2024  Visit 3: May 2024 |
| 10 | Discussion of first year pilot results (all companies) | Possible improvements for the model  identified | On site (Hanoi) | June 2024 |
| 11 | Models re-definition | Farming model for Cinnamon cassia and star  anise finalised | Desk | June 2024 |
| 12 | Define next steps for the implementation, monitoring and spreading of the practices (to be included in the BAP) (all companies) | BAPs  redefined to include model and replication to all certified farmers | Desk & Online meetings | June 2024 |

# Logistics

The local experts will be responsible for all her/his own logistical arrangements. He/she together with UEBT experts will discuss and share with Regional Biotrade management team and Biotrade team/CRED in Vietnam about her/his working schedules and field visits in Vietnam.

# Reporting / Debriefing

The UEBT experts and the local experts will hold debriefing calls with the Regional Biotrade management team and Biotrade team/CRED in Vietnam.

The UEBT experts will provide a report after defining the three models and an assessment report with learnt lesson after completion of discussion of first year pilot results with all companies. These reports should contain a very brief review of activities but should primarily focus on learnt lesson and recommendations for additional follow-up support that should be provided to the companies in the future. The final report should be submitted to Helvetas not later than June 15th, 2024.

Hanoi, 29th June 2023

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| Deadline: | 13rd July 2023 |