(as of 16 March 2023)

CITIES OF TOMORROW (CoT) R&D PROGRAMME
GRANT CALL 1
FOR VERTICAL 5: CITY IN NATURE

FREQUENTLY ASKED QUESTIONS (FAQS)

CALL TOPIC 2: THE ECTOMYCORRHIZAL-MICROBIAL-SOIL NUTRITION AXIS IN IMPROVING GROWTH OF DIPTEROCARPS IN URBAN AND FORESTED AREAS

Please note that the FAQs will be updated periodically. Please refer to the CoT V5 programme 1st Grant Call website and IGMS website for the latest version of the FAQs.

T2. CALL TOPIC 2

T2.1 Will NParks facilitate in the identification and collection of suitable soil samples? *(02 March 2023)*

NParks will facilitate the identification of suitable sites where Dipterocarps are growing, for soil sample collections by the project team. These sites may consist of primary forest, secondary vegetation, as well as urban green spaces.

T2.2 The second technical deliverable (i.e., developing methodologies and best practice guidelines) of the Call Topic is dependent on the first technical deliverable (i.e., establishing a non-species-palette of soil microbial and mycorrhizal compositions). Should applicants address both technical deliverables within a single proposal or in two separate proposals? *(02 March 2023)*

Applicants should address both technical deliverables in a single proposal.

The proposed research may be conducted in two phases, to firstly collect soil samples to analyse the various microbiome compositions associated with Dipterocarps, and subsequently, to understand and develop methodologies for priming the soil and optimising the microbial community to improve the growth of Dipterocarps (e.g., in urban conditions).

Please also refer to Question 1.4 of the Grant Call FAQs (General Administration) for a related query on how focused research proposals must be.

T2.3 Is the Call Topic specifically interested in primary forests and urban areas, where Dipterocarps are growing? Given that Dipterocarps are not prevalent in the secondary forests in Singapore, would secondary forests also be of interest for this Call Topic? *(02 March 2023)*

The Call Topic seeks to understand soil microbial communities and the associated biotic and abiotic factors affecting their growth, and how to optimise them to improve

the growth of Dipterocarps, especially in areas where Dipterocarps are present but not growing optimally. Given that NParks is introducing Dipterocarps into secondary forests as part of ongoing habitat restoration and enhancement efforts, secondary vegetation/forests are also of interest for the Call Topic.

Overall, primary forests, secondary vegetation, as well as urban green spaces are of interest for this Call Topic.

Please also refer to Question T2.1 for a related query on identifying suitable sites for soil sample collection.

T2.4 Does NParks currently use any biofertilisers for Dipterocarp species? *(02 March 2023)*

No, NParks currently does not use biofertilisers for Dipterocarp species.

T2.5 Is the Call Topic interested in native and/or introduced Dipterocarp species? Are there specific species that are of interest for the Call Topic? *(02 March 2023)*

The Call Topic is primarily interested in native Dipterocarps. While the Call Topic does not prescribe any specific species of interest, we welcome proposals that seek to inform the introduction of Dipterocarp species that are able to thrive in urban landscapes.

T2.6 Can applicants discuss details of the proposed research with NParks (e.g., selection of sites for soil sample collection, experimental designs, etc.) during the proposal submission period? *(02 March 2023)*

Applicants should not involve NParks in the preparation of their research proposals during the proposal submission period. The project team should put together a proposal that covers site selection and experimental design, which can then be further discussed and refined with NParks following the evaluation stage, during proposal scrubbing.

Please also refer to Question 3.4 of the Grant Call FAQs (General Administration) for a related query on involving government agency staff in a submitted proposal.

T2.7 What are the metrics used to determine the health of Dipterocarps and at which stage of their development is this determined? Do the metrics differ between forested and urban areas? *(16 March 2023)*

There are various metrices for assessing tree health, which are commonly based on rate of survivability or growth of saplings. The project team is encouraged to propose relevant metrics for tree health assessment for the study and this will be assessed as part of the proposal evaluation process.

The proposed metrics may differ between the forested and urban areas.

T2.8 What are the dominant Dipterocarp species found in forested and urban areas? *(16 March 2023)*

The dominant Dipterocarp species found in both forested and urban areas include *Shorea* spp. and *Dipterocarpus* spp.

T2.9 One of the impact outcomes under the Call Topic is to "increase the number of Dipterocarp species established in urban areas by 15%". How can this be achieved through the research and are there any candidate Dipterocarp species that NParks would like to introduce in the urban areas? *(16 March 2023)*

The Call Topic does not intend to prescribe any candidate species. The research should establish a non-species-specific palette of soil microbial and mycorrhizal compositions for general application to Dipterocarps within forested and urban environment. The intention is to improve the growth of existing species within urban areas, as well as facilitate the introduction of new species into the urban environment.

Please also refer to Question T2.5 for a related query on specific species of interest for the Call Topic.