**RESEARCH PROPOSAL TEMPLATE**

For IGMS application: Please limit to 25 pages, excluding technical attachments and references, which can be in the Annex.

Please submit proposal in MS Word format using Arial font size 12. All submissions shall be in English.

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| 1. **Overview** |  |
| **Funding Programme** | Climate Impact Science Research Funding Initiative |
| **Funding Initiative** | Climate Impact Science Research Funding Initiative |
| **Funding Tranche** | RIE2025 |
| **Funding Agency** | National Environment Agency |
| **Proposal ID (as per IGMS)** | NEA-CISRP02-XXXX |
| **Title of Research Project** |  |
| **Host Institution** |  |
| **Project duration (months)** |  |
| **Keywords** |  |
| **Main Research Area** |  |
| **Research Objectives** |  |
| **Potential Application/ Exploitation of Research** |  |
| **Primary MSE domain** | [B] Climate Science & Adaptation |
| **Secondary MSE domain** | [B2] Climate Impact Science |

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| 1. **Scientific Abstract** (not more than 300 words)   [To be filled on IGMS] |
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| 1. **Lay Abstract** (not more than 300 words)   [To be filled on IGMS] |
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| 1. **Research Proposal**   This section shall include the existing problems, scientific challenges and the proposed methodology/approach to solving the challenges. |
| * Problem statement: Clearly state the problem statements(s) to be addressed and highlight the importance of addressing them. |
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| * Research Objectives: Articulate the research objectives and how it could solve the problem statement(s) mentioned. |
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| * Preliminary and past work done (if applicable): Describe prior work that is related and/or relevant to this proposal and preliminary findings that would support this proposal. Do include details of relevant previously awarded projects. |
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| * Alignment to national policies(s): Describe how the project would create new knowledge and advances in technology or solution to address national problem(s). State the specific target of national policies (e.g. Singapore Green Plan 2030, Singapore’s Zero Waste Master Plan) that is being addressed. |
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| * Strategic advantage: Highlight the international competitiveness of the project being proposed and its contribution to Singapore’s interests in terms of technology, capability development, economic benefits etc. Explain in the terms of how it helps national security or resiliency and/or to maintain/develop Singapore’s position as a global leader and list the stakeholders involved. |
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| * Landscape scan and innovativeness: Explain how the project exemplifies technological excellence, by providing information on   + - * Best available Technology/state-of-the-art through a landscape scan |
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| * + - * Innovative content and how this project attempts to exceed the Best Available Technology |
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| * Proposed Approach and Methodology: Provide details of the proposed approach and methodology. Highlight the novelty of the research and the potential of producing breakthrough work. |
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| * R&D to Capability/Commercialisation/Operational Pathway:   + - * State how the results from the project will be translated (e.g. through the commercialisation of new products, solutions and create spinoffs/Intellectual Property (IP)/ licensing, etc.). |
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| * + - * Analyse the relevance, importance, and feasibility of the project if implemented in the larger market/ecosystem, where relevant. |
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| * + - * Identify industry collaboration partners for piloting, test-bedding, adopting/ licensing or commercialising the solution/project outcomes/technologies. Collaborators identified should also cover other aspects of the whole value chain such as feedstock generator (upstream), product demands, and market off-takes (downstream). |
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| * Potential IP generation: List any expected Intellectual Property or Patents to be created from this project. |
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| * Qualitative impact: Where impact of solution/project outcomes/technology when impact cannot be quantified, please provide qualitative impact (intangible outcomes, new capabilities / competencies) which will be developed. Qualitative impact may include transfer of technical expertise to Singapore if an overseas institute is involved, contribution to industry and society, building up research infrastructure. |
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| * Organisation Expertise: Provide details of your organisation's expertise and experience including the track records and details of current and/or successful implementation of relevant or similar technologies. |
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| * Collaborations: Highlight the involvement of local and/or international collaborators and articulate the value such collaborations bring to the project. Include resources committed in “Section 5: Research Team” and “Section 10: Other Sources of Support”. Attach the respective Letter of Support or Agreements signed as supporting documents. |
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| * Data Requirements (if applicable): Please note that data to be collected in the project could be shared, unless they are commercial data or bounded by NDAs. This applies to all NRF-funded projects and is meant to maximise synergies across projects requiring similar data and minimise duplicative work.   + - * Funding Initiative specific requirements - Proposals are to utilise data and findings from the 3rd National Climate Change Study (V3) for Singapore. SINGV-based V3 data encompasses humidity, rainfall and temperature as well as regional climate projections that include the 8km-by-8km domain of Southeast Asia to the coarse-resolution (typically 100km-by-100km) Global Climate Model (GCM) data in order to provide a more accurate reliable assessment of climate impacts[[1]](#footnote-2).       * Specify and describe datasets[[2]](#footnote-3) required from Public Sector Agencies and highlight possible alternatives if the data requested is not available for sharing. Note requests for data are subjected to agencies’ approval. Refer to Annex C on the Potentially Useful Datasets from Urban Solutions and Sustainability (USS) Domain Metadata Catalogue. |
| |  |  |  |  | | --- | --- | --- | --- | | **Name of Dataset** | **What will the data be used for?**  *Please describe all intended usages of the data requested* | **What are the specifications/requirements of the data items?**  *Please be specific and provide as much details as possible (e.g. aggregated or individual records, relevant period of data, resolution, data need frequency (one-time/ad-hoc or regular e.g. quarterly, monthly)).* | **File Format**  *If applicable* | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |
| * + - * Highlight all the datasets to be measured/collected within this project. Include details on data parameters to be measured, data collection plans, potential challenges, and mitigation measures. |
| |  |  |  | | --- | --- | --- | | **Parameters to be measured** | **Data Collection Plan** | **Potential challenges & mitigation measures** | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |
| 1. **Research Team**   The Applicant shall include a detailed CV with updated information of all team members [Lead PI, Team PI(s) and/or Co-Principal-Investigator(s)] and collaborator(s) including academic qualification, professional experience and accomplishment within the provided template. |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Name | Email | Institution | Institution UEN[[3]](#footnote-4) | Role in Project | % Time Within Total Work Commitment | % Time Within This Project[[4]](#footnote-5) | SSIC[[5]](#footnote-6) (for industry collaborator) | |  |  |  |  |  | % | % |  | |  |  |  |  |  | % | % |  | |  |  |  |  |  | % | % |  | |  |  |  |  |  | % | % |  | |  |  |  |  |  | % | % |  | |  |  |  |  |  | % | % |  | |  |  |  |  |  | % | % |  | |  |  |  |  |  | % | % |  | |  |  |  |  |  | % | % |  | |  |  |  |  |  | % | % |  | |  |  |  |  |  | % | % |  | |

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| 1. **Research Milestones**   The Applicant shall propose research milestones to be achieved for the project in this section. Research milestones refers to the detailed activity milestones to be undertaken in this project. |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Description** | **Start Month[[6]](#footnote-7)** | **Duration (months)** | **Month** | | | | | | | | | | | | | | | | | | | | | **3** | **6** | **9** | **12** | **15** | **18** | **21** | **24** | **27** | **30** | **33** | **36** | **39** | **42** | **45** | **48** | **51** | **54** | **57** | **60** | | <Please colour the corresponding months for each milestones in yellow, to graphically show the duration of each milestones> | | | | | | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1. **Technical Milestones**   [To be filled on IGMS] |
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| 1. **Performance Indicators**   The applicant shall provide the details of the following indicators for this project: |
| | **Performance Indicators** | **Target** | | --- | --- | | Research Excellence | | | 1. Proportion of publications in the top 10% most highly cited worldwide   *This refers to the % of Singapore's publications in top 10% citation percentiles (worldwide, field weighted), excluding self-citations, in year of publications* | % | | 1. No. of publications in top 10% journals   *This measures the number of publications in the top 10% of S&T journals in the field as tracked in the NRF-endorsed citation tool e.g. Scopus.* |  | | Manpower | | | 1. No. of trained university PhD students   *This measures the number of PhD students who will graduate from their involvement in the project. Only projects above $1.0million will be required to train at least one PhD student.* |  | | I&E | | | 1. No. of Technologies Deployed including licenses   *This measures the number of integrated scientific translation methodology/tools developed to support agencies in adaptation planning.*  *For example, climate impact models on productivity and yield, novel tree health monitoring system, etc.* |  | | 1. No. of instances of policy influence   *This refers to how research outputs informed policy (regardless of outcomes of eventual policy) e.g., change in guidelines/informing of target setting/informing of planning, etc. This KPI will be considered during proposal evaluation to ensure the research translation to policy* |  | |
| |  |  |  |  | | --- | --- | --- | --- | | **Technology Readiness Level** | **Year 1**  **(Start TRL)** | **Year 2** | **Year 3**  **(Target TRL)** | | Progress of Technology Readiness Level (TRL). |  |  |  | |
| |  |  | | --- | --- | | **TRLs** | **Description** | | TRL 1 | Basic principles observed and reported | | TRL 2 | Technology concept and/or application formulated | | TRL 3 | Analytical and experimental critical function and/or characteristic proof of concept | | TRL 4 | Component and/or breadboard validation in laboratory environment | | TRL 5 | Component and/or breadboard validation in relevant environment | | TRL 6 | System/subsystem model or prototype demonstration in a relevant environment[[7]](#footnote-8) | | TRL 7 | System prototype demonstration in an operational environment | | TRL 8 | Actual system completed and qualified through test and demonstration | | TRL 9 | Actual system proven through successful mission operations | |

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| 1. **Total Project Budget**   **[**To be filled on IGMS] |
| 1. **Other Funding Support**    1. Grants   **[**To be filled on IGMS] |
| * 1. Other sources of support   All funding in cash, in-kind services, and tangible contributions by the Applicant, industry collaborators or any other partners towards the proposed project. In-kind services include labour, materials, and other services such as loan of facilities and space. |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Institution | Type of support | Role in project | Type of resources/ support (able to select 1 or more choices) | Description of item support | Contribution (S$) | Start of support | End of support | |  |  |  | ☐Manpower  ☐Equipment / Software/  ☐Consumables  ☐Factory space /access to facilities  ☐Raw material / samples (e.g. waste) |  | $ |  | Click or tap to enter a date. | |  |  |  | ☐Manpower  ☐Equipment / Software/  ☐Consumables  ☐Factory space /access to facilities  ☐Raw material / samples (e.g. waste) |  | $ |  | Click or tap to enter a date. | |  |  |  | ☐Manpower  ☐Equipment / Software/  ☐Consumables  ☐Factory space /access to facilities  ☐Raw material / samples (e.g. waste) |  | $ |  | Click or tap to enter a date. | |  |  |  | ☐Manpower  ☐Equipment / Software/  ☐Consumables  ☐Factory space /access to facilities  ☐Raw material / samples (e.g. waste) |  | $ |  | Click or tap to enter a date. | |  |  |  | ☐Manpower  ☐Equipment / Software/  ☐Consumables  ☐Factory space /access to facilities  ☐Raw material / samples (e.g. waste) |  | $ |  | Click or tap to enter a date. | |  |  |  | ☐Manpower  ☐Equipment / Software/  ☐Consumables  ☐Factory space /access to facilities  ☐Raw material / samples (e.g. waste) |  | $ |  | Click or tap to enter a date. | |  |  |  | ☐Manpower  ☐Equipment / Software/  ☐Consumables  ☐Factory space /access to facilities  ☐Raw material / samples (e.g. waste) | Click or tap here to enter text. | $ |  | Click or tap to enter a date. | |

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| 1. **Declaration**    1. Declaration of involvement in panel/committees appointed by NEA   The applicant shall provide the details in the table should team members (i.e. Lead PI, Team PI(s) and/or Co-Investigator(s)), collaborators and/or advisers be involved in panels or committees (e.g. expert or technical panel, scientific committee, advisory role, etc.) appointed by NEA. |
| |  |  |  |  | | --- | --- | --- | --- | | Name | Panel/Committee (s) | Role | Point of Contact in NEA | |  |  |  |  | |  |  |  |  | |  |  |  |  | |
| * 1. Declaration of Ethics Approval   [To be filled on IGMS] | |
| * 1. Undertaking by Lead Principal Investigator (PI)   [To be filled on IGMS]   * 1. Undertaking by Office of Research (ORE)   [To be filled on IGMS]   * 1. Undertaking by the Director of Research (DOR) | |
| [To be filled on IGMS] | |
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**<<Title of Annexes>>**

This section could contain technical attachments as suggested below but not limited to the following:

* Schematics diagram of the process
* Photographs
* Technical brochures
* Laboratory test results

1. The Singapore-focused 2km by 2km data will only be available to Singapore agencies. [↑](#footnote-ref-2)
2. NEA is not obliged to secure the list of data within the proposal from data owner. PIs and Host Institutions to undertake mitigation measures to ensure successful completion of projects if awarded. [↑](#footnote-ref-3)
3. Unique Entity Number [↑](#footnote-ref-4)
4. “% time within this project” by team members [Lead PI, Team PI(s) and/or Co-Investigator(s)] and collaborator(s)] must add up to 100% [↑](#footnote-ref-5)
5. Singapore Standard Industrial Classification [↑](#footnote-ref-6)
6. “Start Month” refers to the month from the month of the commencement of the project. “Duration” refers to the number of months to complete the milestone. For example: If the project commenced in March, and the proposed task starts in the June for a month long, then the “Start Month” shall be set as 3, with “Duration” set as 1. [↑](#footnote-ref-7)
7. Refers to integrated scientific translation methodology/tools developed to support agencies in adaptation planning. For example, climate impact models on productivity and yield, novel tree health monitoring system, etc. [↑](#footnote-ref-8)