**NATIONAL SCIENCE FOUNDATION**

**INTERNATIONAL COLLABORATIVE RESEARCH PROGRAMME** APPLICATION – Part 1

**SECTION A**

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| --- | --- | --- |
| **1. Project Title**  *The title of the project should be brief, reflect concisely and accurately the proposed project and intelligible to a scientifically or technically literate reader. Applicants are advised to avoid titles which convey a distant or potential application of the proposed work, or a greater aspiration or goal than is to be expected from the proposed work.* | | |
|  | | |
| **2. Research disciplines**  *Please select only the most relevant research disciplines* | | |
| Agriculture and Food Sciences  Basic Science  Biotechnology & Bioethics  Engineering Sciences, Architecture & Information Communication Technology  Environment & Biodiversity  Health Sciences  Indigenous Knowledge | Library & Information Science  Oceanography & Marine Resources  Science Education  Social Sciences  Science & Technology Policy Studies  Any other significant area  Please specify:................................................... | |
| **3. Category of research** | | |
| Applied researchFundamental research | | |
| **4. Project Period** | | |
| |  |  | | --- | --- | | 1 Year | 2Years 6 months | | 1 Year 6 months | 3 Years | | 2 Years |  | | | |
| **5. Total Budget**  *For Principal Investigators who have not received any Research Grants before (NSF or other funding agency), the total budget should not exceed Rs. 1.5 Million excluding allocations for Research Personnel.*  *(Please refer guidelines)* | | |
| USD……………………………… LKR………………………….  Exchange rate used for calculation in the application ………………………..  Date obtained………………………….  (*Please obtain the exchange rate as at the date of submission from Central bank site. Same exchange rate should be used in all calculations)* | | |
| **6. Investigators of Sri Lanka**  *Annex CVs’ and list of publications of all Investigators during the last 10 years.*  *0* | | |
| **Principal Investigator**  *Principal Investigator should have a postgraduate research degree (PhD, MPhil) and publications in the relevant area. Applicants with MSc, MD or MS qualifications should have minimum of one year research component in the course and publications in the relevant area.* | | |
| Name and Designation:  Institution:  Area of expertise related to the proposed project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail :  STMIS Reg. No : |
| Planned visits abroad during the project period (This should be less than 03 months of duration): | | |
| If the PI is planning to take leave **(< 3 Months)** during the project period, state the responsible person for the project: | | |
| **Co-Investigator/s**  *Co-Investigators should have postgraduate qualifications and research experience supported with publications. Any other member of the research group who does not meet these criteria could be listed as Collaborators. Those who wish to read for postgraduate degrees under the proposed project are not eligible to be Co-Investigators* | | |
| **Co-Investigator – 1**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail :  STMIS Reg. No : |
| Planned visits abroad during the project period (This should be less than 03 months of duration): | | |
| **Co-Investigator – 2**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail :  STMIS Reg. No : |
| Planned visits abroad during the project period (This should be less than 03 months of duration): | | |
| **Co-Investigator – 3**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail :  STMIS Reg. No : |
| Planned visits abroad during the project period (This should be less than 03 months of duration): | | |
| **Collaborator/s**  *Letters of Consent should be provided – Annex III* | | |
| **Collaborator – 1**   1. Name and Designation:   Institution:    The contribution expected to be provided for the research project: | | Mailing address :  Telephone :  Fax :  E-mail :  STMIS Reg. No : |
| **Collaborator – 2**   1. Name and Designation:   Institution:  The contribution expected to be provided for the research project: | | Mailing address :  Telephone :  Fax :  E-mail :  STMIS Reg. No : |
| **7. Investigators of Oversease** | | |
| **Principal Investigator** | | |
| Name and Designation:  Institution:  Area of expertise related to the proposed project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Co-Investigator/s** | | |
| **Co-Investigator – 1**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Co-Investigator – 2**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Co-Investigator – 3**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Collaborator/s** | | |
| **Collaborator – 1**  (a) Name and Designation:  Institution:  The contribution expected to be provided for the research project: | | Mailing address :  Telephone :  Fax :  E-mail : |
| **Collaborator – 2**  (b) Name and Designation:  Institution:  The contribution expected to be provided for the research project: | | Mailing address :  Telephone :  Fax :  E-mail : |
| **7**. **Justification for Collaboration** (brief information about national and international scenario in the proposed area of research – up to 150 words) | | |
|  | | |
| **8. Institution/s where research is to be performed** | | |
| **Principal Institution** | | |
| **Other Institution/s** | | |
| **9. State whether the Institutions of the Principal Investigator from Sri Lanka and the collaborating Principal Investigator of China are already having a research collaboration with a signed Memorandum of Understanding (MoU)** | | |
| Yes No  If “Yes” attach a copy of MoU signed between the institutions. | | |

**SECTION B**

*\* Names and affiliations* ***should not be mentioned*** *in section B.*

**Title of the project :**

**Duration :**

|  |
| --- |
| **1. Summary**  (a)Explain briefly the research problem, research approach and expected outputs.  *Not exceeding one A4 page, font type Times New Roman, size 11, single space.* |
|  |
| (b) Give 3 – 5 keywords for the proposed project: |
|  |

|  |  |
| --- | --- |
| 1. **Research Problem** | |
| 2.1 Research problem/s | |
|  | |
| 2.2 Analysis of the problem/s & rationale for the research question | |
|  | |
| 1. **Comprehensive literature review (local and international including recent literature) AND the complete list of references in the relevant area.**   *(Attach additional sheets if necessary)* | |
| 3.1 International | |
|  | |
| 3.2 Local | |
|  | |
| 1. **Originality & innovativeness of the proposed work** | |
|  | |
| 1. **Overall aim and specific objectives of the proposed work** | |
| 5.1 Overall aim | |
|  | |
| 5.2 Specific Objective/s | |
|  | |
| 1. **Methodology** | |
| 6.1 Describe the Methodology  (*Attach additional sheets if necessary)* | |
|  | |
| 6.2Experimental design where applicable  *Please complete relevant sections* | |
| 6.2.1 Data/sample collection | |
| 6.2.2 Study site | |
| 6.2.3 Describe the study group and controls | |
| 6.2.4 Validation and quality control of methods | |
| 6.2.5 Cost effectiveness of proposed methodology | |
| 6.3 Describe the method of data analysis | |
|  | |
| 6.4 Laboratory Equipment and Facilities | |
| 6.4.1 Facilities available at the Institution of the Investigators for the Research Project (*Major equipment and other Facilities available at the Institution*) | |
| 6.4.2 Laboratory Equipment Required  *A complete description of equipment required and a full justification must be given. Indicate the make, type, model number, supplier, quantity, etc. Also attach brochures.*   |  |  |  |  | | --- | --- | --- | --- | | **Type/Model/Supplier** | **Qty** | **Estimated Cost (USD)** | **Availability of the Equipment at the Faculty/Institution** | |  |  |  |  | | TOTAL |  |  |  | | |
| **Justifications for each equipment for the project:** | |
| 1. **Feasibility** | |
| 7.1 Competence of the Research Team | |
| 7.1.1 Principal Investigator  *Name and affiliation* ***should not be mentioned.***  Describe knowledge and research experience in the area related to the project work (*Please do not include publications)* | |
|  | |
| 7.1.2 Co-Investigator - 1  *Name and affiliation* ***should not be mentioned.***  Describe knowledge and research experience in the area related to the project work (*Please do not include publications)* | |
|  | |
| 7.1.3Co-Investigator - 2  *Name and affiliation* ***should not be mentioned.***  Describe knowledge and research experience in the area related to the project work (*Please do not include publications)* : | |
|  | |
| 7.1.4Co-Investigator - 3  *Name and affiliation* ***should not be mentioned.***  Describe knowledge and research experience in the area related to the project work (*Please do not include publications)* | |
|  | |
| 7.2Work plan  *Please attach the quarterly Gantt Chart to cover the proposed study, as per the format below.* | |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | No | Activities | Year 1 | | | | Year 2 | | | | Year 3 | | | | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  | | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  | | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  | | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  | | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |   Format Only | |
| 7.3 Indicators & milestones of progress  *Please list the milestones and indicators that will be used to measure the progress of the proposed Study* | |
|  | |
| 1. **Ethical consideration**   *(Ethical clearance should be submitted within one month of the deadline for submission of application)* | |
| Relevance to the project | Relevant Not relevant |
| If relevant, Ethical clearance obtained? | Yes No  *If Yes, attach copy to the application* |
| If No, applied for Ethical clearance? | Yes No |
| 1. **Indicate the human & environmental safety issues related to the project and how they**   **are being addressed** | |
|  | |
| 1. **Budget of the Research Component** | |
| 10.1Financial support | |
| Have you applied/planning to apply for funding from any other Sri Lankan source of funding for the proposed research?    Yes No  *If Yes, please give details* | |
| Is the proposed project currently being funded by any other source? Yes No | |
| If Yes to above question/s, please give details and justify the request for co-funding from the NSF. | |
| 10.2 Summary of the Budget for the Sri Lankan Research Component *(in USD and LKR.* *Please obtain the exchange rate as at the date of submission from Central bank site)* | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  | **1st Year** | | **2nd Year** | | **3rd Year** | | **Total** | | 1. **Personnel** | **USD** | **LKR** | **USD** | **LKR** | **USD** | **LKR** | | * **Research Scientist\*** |  |  |  |  |  |  |  | | * **Research Student\*\*** |  |  |  |  |  |  |  | | * **Technical Assistant** |  |  |  |  |  |  |  | | * **Labourer/Other** |  |  |  |  |  |  |  | | **Sub Total (Personnel)** |  |  |  |  |  |  |  | | 1. **Equipment** |  |  |  |  |  |  |  | | 1. **Consumables** |  |  |  |  |  |  |  | | 1. **Sample analysis (if outsourced)** |  |  |  |  |  |  |  | | 1. **Statistical analysis** |  |  |  |  |  |  |  | | 1. **Calibration of instruments** |  |  |  |  |  |  |  | | 1. **Postgraduate registration fees** |  |  |  |  |  |  |  | | 1. **Travel & Subsistence within Sri Lanka** |  |  |  |  |  |  |  | | 1. **Miscellaneous/** |  |  |  |  |  |  |  | | **GRAND TOTAL \*\*\*\*** |  |  |  |  |  |  |  | | |
|  | |
| * NSF Research Scientist should have a postgraduate degree (MSc/MPhil/PhD) and work full time with the Principal Investigator. NSF Research Scientist can be allocated only for Principal Investigators with adequate research experience as determined by the NSF.   \*\* Full-time Research Students registering for a Postgraduate Degree, can be allocated only for Principal Investigators with two years of postdoctoral research experience.  \*\*\*For full time Research Students, not registering for postgraduate degree funds will be provided only up to two years    \*\*\*\*\*If the cost of an individual equipment in the Research budget (Application Part 1) exceeds LKR 750,000/- that equipment should be included under the Equipment Grants Scheme (Application Part 2) | |
| **11. Budget justification** | |
| 11.1 Personnel  *Requests for personnel for the proposed project should not be made unless they are absolutely necessary. The Investigators should indicate and justify the type of personnel required.*  *Please refer the* ***Annexure A*** *provided along with this application for rates of payment.* | |
| 1. NSF Research Scientist\* 2. Full time for ………………….years OR ...................months 3. Description of work to be carried out by the NSF Research Scientist:- | |
| 1. Research Student\*\* 2. Full time for ……………………… years OR …..... months 3. Description of work to be carried out by the Research Student:- 4. Research Student will be registering for a postgraduate degree – Yes No   If Yes, PhD MPhil | |
| 1. Technical Assistant 2. Full time/part time for ……………………… years OR …..... months 3. Description of work to be carried out by the Technical Assistant:- | |
| 1. Labourers 2. No. of labourers required…………………………….. 3. Time period ……………………… days/months per labourer 4. Description of work to be performed:- | |
| 11.2 Consumables  *Attach the list and give a complete description of type (e.g. Chemicals, glassware etc), quantity*  *(Justify the quantity and type) and estimated cost (in USD and LKR.* *Please obtain the exchange rate as at the date of submission from Central bank site)*. *Avoid over- estimation and include only the necessary consumables for this project.* | |
|  | |
| 11.3 Sample analysis (if outsourced)  *Institution/department, type of analysis, no. of samples, estimated cost (in USD and LKR.* *Please obtain the exchange rate as at the date of submission from Central bank site)*. | |
| 1st Year | |
| 2nd Year | |
| 3rd Year | |
| 11.4 Statistical analysis | |
| Justification for requesting funds | |
| 1st Year | |
| 2nd Year | |
| 3rd Year | |
| 11.5 Calibration of instruments *(give description of items)* | |
| 1st Year | |
| 2nd Year | |
| 3rd Year | |
| 11.6 Postgraduate registration fees *(Refundable deposits will not be reimbursed) (in USD and LKR.* *Please obtain the exchange rate as at the date of submission from Central bank site)* | |
| 1st Year | |
| 2nd Year | |
| 3rd Year | |
| 11.7 Travel & Subsistence within Sri Lanka  *As far as possible the Investigator should combine field work under the project with his/her work in the Institution. What should be requested for is additional travelling that cannot be carried out in the course of the Investigator’s other duties.*  *Give a detailed breakdown for each year (in USD and LKR.* *Please obtain the exchange rate as at the date of submission from Central bank site) with justifications of the cost figures given in summary budget. Indicate no. of field visits, places to be visited and any other relevant details. (Refer the* ***Annexure A*** *provided along with this application for the rates of payment)* | |
| 1st Year   |  |  |  |  | | --- | --- | --- | --- | | Travel | | | | | Places to be visited | Distance (Km) | No. of visits | Total cost for transport | |  |  |  |  | |  |  |  |  |   Subsistence for above field visits (please give calculation): | |
| 2nd Year   |  |  |  |  | | --- | --- | --- | --- | | Travel | | | | | Places to be visited | Distance (Km) | No. of visits | Total cost for transport | |  |  |  |  | |  |  |  |  |   Subsistence for above field visits (please give calculation): | |
| 3rd Year     |  |  |  |  | | --- | --- | --- | --- | | Travel | | | | | Places to be visited | Distance (Km) | No. of visits | Total cost for transport | |  |  |  |  | |  |  |  |  |     Subsistence for above field visits (please give calculation): | |
| 11.8 Miscellaneous  *Give complete breakdown with estimated cost (in USD and LKR.* *Please obtain the exchange rate as at the date of submission from Central bank site)*. *The funds for miscellaneous, should not exceed 10% of the total cost of the project. Funds for contingencies/unforeseen expenses cannot be considered.* | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Items | Estimated Cost | | | | | 1st Year | 2nd Year | 3rd Year | Total | | |  |  |  |  |  | | |  |  |  |  |  | | |  |  |  |  |  | | | |
| 11.10 Facilities available at the Institution of the Investigator for the research project | |
| Major equipment and other facilities available at the institute | |

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| 1. **Does the proposed project have potential to generate output of commercial value? If so, briefly explain how you propose to protect and share Intellectual Property rights (Joint publications, patents etc.)?**   *(Indicate if applicable)* |
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| --- | --- | --- | --- | --- | --- | --- |
| ***Research Grants Record (ongoing and completed) of the Principal Investigator during the last 05 years (NSF and other funding sources)***  ***Annex I*** | | | | | | |
| Grant No | Duration of the Grant  *(Dates)* | Title of the Project | Source of support | Total allocation | Status  [Ongoing/Completed/  Terminated/Cancelled] | Postgraduate degrees/No. of Publications/ No. of Communications |
|  |  |  |  |  |  |  |

***Annex II***

|  |
| --- |
| ***For Industry/s Collaborating with this Project*** |

(To be filled by the Industry Partner)

|  |  |
| --- | --- |
| **Name of the Company/s**  Address  Contact researcher/person  (Please attach a CV) | |
| **Contribution towards the project** | |
| By kind | By cash |
|  |  |
| **Facilities that can be made available for the research project** | |
| **Office Laboratory/hrs per week**  Space:  Equipment:  (Type)  Other  (Please specify) | |
| Any other comments | |

……………………………….. …………………………………………….

Date Name and Signature of the Industry Partner

***Annex III***

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| ***Consent to be a Collaborator of a Research Project*** |

(To be signed by the Collaborator/s)

**Director General**

**National Science Foundation**

**Research Project on - ……………………………………………..**

This is to convey my/our willingness to work as a collaborator/s of the research project referred to above, supporting and contributing to the realization of the project objectives stated in the grant application.

I/we, am/are understand the support and assistance to be extended to the research team by providing necessary facilities and/or expert opinion and guidance to carry-out the project successfully.

Yours sincerely,

…………………………………….

(Signature)

Name of the Collaborator/s : ……………………………………………

|  |  |  |
| --- | --- | --- |
| **CHECK LIST** | |  |
|  | **Completed application form** |  |
|  |  |  |
|  | **Curriculum vitae of all Investigators** |  |
|  |  |  |
|  | **Research grants record (Annex I)** |  |
|  |  |  |
|  | **Information of Collaborator/s; if any (Annex III)** |  |
|  |  |  |
|  | **Concurrence of the institution/s which facilitates the research** |  |
|  |  |  |
|  | **Gantt chart** |  |
|  |  |  |