**中央研究院112年度「永續科學研究計畫」計畫申請書**

**2023 Academia Sinica Sustainability Science Research Program (SSRP) Proposal**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 申請主題  Theme and Field(s) | □ 因應2050淨零排放之減碳與新能源科技（Technology of carbon reduction and new energy to help Taiwan meet its goal of net zero emissions by 2050）  □ 極端災害之風險評估與因應研究（Risk assessment and response to extreme natural disasters）  □ 氣候變遷下健康風險評估研究（Risk assessment for human health under climate changes）  □ 永續社會治理與轉型研究（Transformation to and governance of a sustainable society）  □ 生態系統與農業永續（Ecosystems and sustainable agriculture） | | | | | | | |
| 計畫類別  SSRP Category | □ 1.整合型 Multi-component Team Research Project (MTRP)  □ 2.單一整合型 Team Research Project (TRP) | | | | | | | |
| 申請計畫名稱  Project Title | 中文： | | | | | | | |
| English: | | | | | | | |
| 計畫(總)主持人  Project PI | 姓名 |  | | | 職稱  Position | | 中:  En: | |
| Name |  | | | 申請單位  Affiliation | | 中:  En: | |
| □ Research Faculty of Academia Sinica  □ Adjunct Research Fellow of Academia Sinica (A co-director of AS faculty is needed) | | | | | | | |
| 計畫總經費  單位：新臺幣千元  Total Budget  Unit: thousand NTD | 第一年 Year 1: | | | 第二年 Year 2: | | | | 第三年 Year 3: |
|  | | |  | | | |  |
| 計畫聯絡人  Project  Contact Person |  | | Email: | | | | | |
| Tel /Mobile: | | | | | |
| 跨領域實踐研究  Project Fulfilling Characteristics of Transdisciplinary Research | □ Integration of both natural science and social science  □ Including the concept of co-design, co-production, and co-delivery in the research process  □ Including stakeholders in the research process (e.g., analysis, participation, communication)  □ Anticipated application of research outcomes (i.e., policies, practices, action, prototype) | | | | | | | |
| 計畫關鍵詞  Key Words | 中文：  English: | | | | | | | |
| 本計畫涉及  This project involves: | □ 生物材料及基因重組相關實驗biological and/or genetically engineered materials | | | | | □ 動物實驗 animal experiments | | □ 以人為研究對象者 human subjects |

計畫研究人員一覽表(請以中文填寫)

|  |  |  |
| --- | --- | --- |
| 計畫研究人員 | 姓名 | 職稱 / 單位 |
| 總計畫名稱： | | |
| 總主持人 |  |  |
| 共同主持人 |  |  |
|  |  |  |
| 計畫名稱（分支計畫 1 ）： | | |
| 分支主持人 |  |  |
| 共同主持人 |  |  |
|  |  |  |
| 計畫名稱（分支計畫 2 ）： | | |
| 分支主持人 |  |  |
| 共同主持人 |  |  |
|  |  |  |

*備註：請依需求自行擴充表格，「整合型計畫」：分支計畫數2~5件；「單一整合型計畫」：主持人與共同主持人合作進行單一計畫。*

List of Key Professional Personnel

|  |  |  |
| --- | --- | --- |
| Role of PIs | Name | Position / Affiliation |
| Project Title: | | |
| (Main) Project PI |  |  |
| (Main) Project Co-PI |  |  |
|  |  |  |
| Sub 1 Title: | | |
| Sub 1 PI |  |  |
| Sub 1 Co-PI |  |  |
|  |  |  |
| Sub 2 Title: | | |
| Sub 2 PI |  |  |
| Sub 2 Co-PI |  |  |
|  |  |  |

*Note: Extend this form as necessary. “Multi-component Team Research Project”[整合型計畫]: the number of subprojects ranging from two to five; ”* *Team Research Project”[單一整合型計畫]: The Project PI and Co-PIs collaboratively perform one single project.*

**計畫整體研究人力需求**

**Proposed Research Personnel for the Whole Project**

**整體研究人力需求-以計畫區分(Categories by Project)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 博士後研究  Postdoctoral Fellows | 研究助理  Research Assistants | 碩、博士生  Graduate  Students | 總/分支計畫人力小計  No. of Personnel |
| 總計畫  Main Project |  |  |  |  |
| 分支計畫1  Sub 1 |  |  |  |  |
| 分支計畫2  Sub 2 |  |  |  |  |
|  |  |  |  |  |
| 各項研究人力需求數小計  Subtotal of Each Category |  |  |  | **研究總人力數目**  Total Personnel: |

**整體研究人力需求-以年度區分(**Categories by Year**)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 博士後研究  Postdoctoral Fellows | 研究助理  Research Assistants | 碩、博士生  Graduate  Students | 總/分支計畫人力小計  No. of Personnel |
| 第一年  Year 1 |  |  |  |  |
| 第二年  Year 2 |  |  |  |  |
| 第三年  Year 3 |  |  |  |  |

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□總計畫**Main Project** □分支計畫**Subproject**

計畫名稱 (中文)：

Project Title (English):

分支計畫數The number of subprojects:

計畫主持人Main Project PI/Subproject PI:

計畫共同主持人Project Co-PI/Subproject Co-PI:

申請單位Affiliation:

計畫類別Project Category: □整合型MTRP □單一整合型TRP

* *For an Multi-component Team Research Project (MTRP)[整合型計畫], all subprojects must complete Sections* ***1~******6,*** *which shall subsequently be included in the proposal.*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1. Abstract (English and Chinese)** □**Main Project** □**Subproject**

Please address each of the following questions briefly and precisely:

* 1. What is the Sustainability Science Research problem to be addressed? Which part of the problem will be solved?
  2. What is your major idea? How innovative it is? How are you going to solve the problem you identified?
  3. How much impact to sustainable development you will make after the 3-year funding period, if the project is successful.

*In addition to an* ***Abstract*** *answering to the above points in a total of ≤* ***500 English words****, provide also a version in* ***Chinese*** *based on the above statements in less than* ***300 words****.*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2. Summary of Previous Research Accomplishments** □**Main Project** □**Subproject**

Summarize and highlight your previous research accomplishments in the last five years. Identify 3 recent publications most representative of your accomplishment that are relevant to the research work to be undertaken in this proposal (reprints to be submitted with the application material). Do not include manuscripts in preparation or submitted.

*The page limit for this section is* ***one*** *page for* ***each******project / subproject****.*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3. Research Plan** □**Main Project** □**Subproject**

Please address each of the following questions briefly and precisely:

|  |
| --- |
| 1. **The problem to be solved.** Define the identified Sustainability Science Research problem(s), focusing on its importance. Describe the state-of-the-art and identify the current bottleneck. 2. **The innovative ideas proposed.** Define the specific aims of the project. Specifically highlight the innovative approach(es) you propose, including its rationale, originality, and scientific merit. *(to be elaborated later in Section 3d.)* 3. **The potential impact of the work.** Describe how it may lead to a breakthrough and transform the field if the project is successful. Focus on its scientific and/or societal impact. For the SSRP, we will consider the possible impact to sustainable development, in particular to Taiwan society. Also, the list of the stakeholders on whom this project targets is required. 4. **Plans to test the ideas.** Describe the research approaches in each specific aim. Identify the milestones and the timeline of accomplishing them. Focus on the logic and scientific or technical challenges. Also describe international competitiveness of your project and the expertise of assembled team. Provide a succinct description of how your research team is organized; how the expertise of your co-PIs and collaborators is essential to this project and complements one another. |

* *For an Team Research Project [**單一整合型計畫], the total page limit for this section including references is* ***ten*** *pages.*
* *For an* *Multi-component Team Research Project [**整合型計畫], the page limit for the main project is* ***ten*** *pages, each additional subproject may add up to* ***five*** *pages, (e.g., for a proposal with four subprojects, the page limit is* ***thirty*** *pages.)*
* *A4 size, 1 inch or 2.54 cm margins for all sides, single spaced, font: Times New Roman or Calibri, 11 point. Smaller font size 9 or 10 is allowed only for Figure legend and Bibliography.*

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**4.   Changes/Progress made since last Application**

Please state if this application is an extension of any of your ongoing or completed grant support, or previous failed application(s) to any of the AS grant program. *You may simply provide a statement or two if this has already been elaborated in the Research Plan section.* *You can ignore this Section if non-applicable but failure to disclose the relevant information may disqualify your current application*.

**4.1 If this is an application to extend or renew your ongoing or completed grant support** (provide grant number and title) for related research topics and aims, summarize the major accomplishment thus far and how the current proposal may capitalize on these recent progress to make further advances in the next 3 years.

**4.2 If this is an application based on similar research aims proposed in previous round of failed application** (to any AS grant type), describe the major changes you have made in response to Reviewers' comments and/or after taking into considerations progress in the field (either your own or others) since the proposal was last submitted. Point-to-point rebuttal is not required.

*The page limit for this section is* ***one*** *page.*

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**5. Budget Plan and Justification**

**5.1 Total Budget Plan**

*For an Multi-component Team Research Project(MTRP), this 5.1 section must be filled by the main project PI. (整合型計畫[總主持人]需完成此總預算表填列)*

以計畫區分(by Project) \*單位：新臺幣千元 \*Unit: thousand NTD

|  |  |  |  |
| --- | --- | --- | --- |
| 計畫Main / Subprojects | Year 1 | Year 2 | Year 3 |
| (總計畫)共同費用: Main Project Shared Expenses |  |  |  |
| 分支計畫1 (Sub 1) |  |  |  |
| 分支計畫2 (Sub 2) |  |  |  |
|  |  |  |  |
| 年度合計總費用 Yearly Total |  |  |  |

以補助項目區分(by Categories)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **年度Year** | | | **1** | **2** | **3** |
| 業務費Operating Expenses (A) | 臨時人員酬金Personnel Salary | |  |  |  |
| 教育訓練費Training | International |  |  |  |
| Domestic |  |  |  |
| Mainland China |  |  |  |
| 旅費Travel | International |  |  |  |
| Domestic |  |  |  |
| Mainland China |  |  |  |
| 研究相關耗材事務費用Consumables | |  |  |  |
| **業務費總額Total (A)** | |  |  |  |
| 機械(儀器)  設備費Equipment (B) | 機械設備Equipment | |  |  |  |
| 資訊相關Computer-related Item | |  |  |  |
| 雜項設備 Miscellaneous | |  |  |  |
| **設備費總額 Total (B)** | |  |  |  |
| **獎補助費Graduate Student Stipend (C)** | | |  |  |  |
| **總金額Total (T) = (A)+(B)+(C)** | | |  |  |  |

\*單位：新臺幣千元 \*Unit: thousand NTD; 3rd year funding is subject to satisfactory performance

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**5.2 Proposed Research Personnel, Budget Plan and Justification** □Main Project □Subproject

**Proposed Research Personnel for the Main / Sub Project**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 博士後研究  Postdoctoral Fellows | 研究助理  Research Assistants | 碩、博士生  Graduate  Students | 計畫人力小計  No. of Personnel |
| 計畫人力  Project |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **年度Year** | | | **1** | **2** | **3** |
| 業務費Operating Expenses (A) | 臨時人員酬金Personnel Salary | |  |  |  |
| 教育訓練費Training | International |  |  |  |
| Domestic |  |  |  |
| Mainland China |  |  |  |
| 旅費Travel | International |  |  |  |
| Domestic |  |  |  |
| Mainland China |  |  |  |
| 研究相關耗材事務費用Consumables | |  |  |  |
| **業務費總額Total (A)** | |  |  |  |
| 機械(儀器)  設備費Equipment (B) | 機械設備Equipment | |  |  |  |
| 資訊相關Computer-related Item | |  |  |  |
| 雜項設備 Miscellaneous | |  |  |  |
| **設備費總額 Total (B)** | |  |  |  |
| **獎補助費Graduate Student Stipend (C)** | | |  |  |  |
| **總金額Total (T) = (A)+(B)+(C)** | | |  |  |  |

\*單位：新臺幣千元 \*Unit: thousand NTD; 3rd year funding is subject to satisfactory performance

* *Briefly justify the total budget requested and how it will be distributed among the main project / subproject for this MTRP(整合型)/ TRP(單一整合型) research project.*
* *For the main project of MTRP, this itemized budget plan is only for shared expenses.*
* *The Project PI should consolidate all budget plans for the main project and subprojects into one "Total Budget Plan" in 5.1, and fill in the attached "Budget Balance Spreadsheet" in Excel.*
* *The Budget Plan (using Table above) and the descriptive justifications to be provided should not exceed* ***one*** *page.*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**6.** **Personal Track Record** (for every Project PI, Subproject PI and Co-PIs)

□**Main Project** □**Subproject**

□Main PI □Co-PI □Subproject PI □Subproject Co-PI

[Multiple Selection Acceptable]

**6.1** **Biographical Sketch**, or **Curriculum Vitae**

Each PI and co-PI should provide a CV or a resume. There is no particular format, except the section of basic information, but the CV should include education, experience, research interests, major research achievements, professional distinctions (e.g. service, honors, speaking invitations), a list of representative publications within the past five years, etc.

個人簡歷 應含聯絡資訊、所屬單位與職稱、學經歷、研究領域、獎項及榮譽、代表性著作目錄。

|  |  |
| --- | --- |
| **中文姓名：** | **NAME**: |
| **AFFILIATION (** INSTITUTE/RESEARCH CENTER /DIVISION/DEPARTMENT**)** |  |
| **Current POSITION** |  |
| **Email:** | **Address(**中文**):** |
| **Expertise:** | |

**6.****2** **Output from Recently Completed** (2020-2021) **and Current AS Grant Support**

List only publications that carry statement specifically acknowledging the relevant AS grant support. (Include Abstract as appeared in the cited publication).

*This section including list of publications should not exceed* ***four*** *pages for each PI and co-PIs.*

**6.3** **Current and Pending Grant Support**

List any current (ongoing) and pending projects/proposals funded by Academia Sinica and external agencies. AS allows submission of similar proposals to more than one funding sources but any overlapping similarity and/or requested cost-sharing items must be fully disclosed and justified to avoid duplicated funding. Any incomplete or inaccurate information will adversely affect the consideration of this proposal.

主持人/共同主持人Project PI/Project Co-PI:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | (1) Funding Agency and Project Type補助單位及計畫類型: e.g.中研院/科技部 個人型/整合型  (2) Grant Title and number計畫名稱與編號 :  ● Status計畫狀態: □ Current執行中 □ Pending申請中  ● Research Role計畫擔任角色: □Project PI計畫(總)主持人 □Project Co-PI計畫共同主持人  □Subproject PI分支計畫主持人 □Subproject Co-PI分支計畫共同主持人  (3) Project Period執行期間: \_\_\_\_\_\_(YYYY/MM) to \_\_\_\_\_\_(YYYY/MM)   |  |  |  | | --- | --- | --- | | Year 年度 | Total Project Amount 總研究經費 | Individual Project Amount個人研究經費 | |  |  |  | |  |  |  | |  |  |  |   (4) Funding Amount in thousands of NTD補助總額 (仟元)  (5) Is there any relationship between this funded/pending grant project and the current application? 此計畫是否與本次申請計畫有相關？  □ No  □ Yes. (Please specify details請敘明其關聯性) |

*\*Extend this form as necessary to include all funding sources.*