**Mathematical Sciences for Climate Resilience Internship Program (MS4CR - IP)**

**MS4CR-IP Supervision Framework**

The African Institute for Mathematical Sciences (AIMS)

African Centre of Meteorological Application for Development (ACMAD)

**April 2022**

**BACKGROUND INFORMATION**

The purpose of this *Supervision Framework* is to establish the basis for collaboration between all key stakeholders involved in this *Work-Integrated Learning* (WIL) opportunity. The three key stakeholders that drive the implementation of each AIMS WIL project include the *Intern/Fellow*, *Host Institution* and the *Educational Institution*, hereinafter collectively referred to as the “*Parties*” and individually to as the “*Party*”. This framework brings together the Parties to better manage the expectations in matters of common interest, and specify modalities for implementation of the WIL project. Specific emphasis is placed on the respective objectives, functions, policies and procedures of each organization involved. By signing this Supervision Framework, the Parties confirm their common understanding of the terms and conditions, roles and responsibilities to successfully deliver this WIL project with impact.

**ARTICLE l**: **SIGNEES**

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| **HOST INSTITUTION** *(To be completed by a representative of the host institution)* | | | |
| Organisation Name | African Centre for Meteorological for Development (ACMAD) | | |
| Representative | **Name:** Dr. Andre KAMGA FOAMOUHOUE | **Position:** Director General of ACMAD | |
| Address | 55, Avenue des Ministeres PL6, P.O Box 13184, Niamey-Plateau, Niger | | |
| Contact Numbers | **Office:** +227 20 72 36 27 | | **Mobile:** |
| Email | [dgacmad@acmad.org](mailto:dgacmad@acmad.org) | | |
| Sector & Core Activities | **Sector**:   * Food security, * Water resources, * Health, * Environmental protection, * Civil security, * Renewable energies**.** | | **Core Activities:** ACMAD is collecting climate change assessment datasets including global and regional projections, developing tools and methods for climate change assessments at regional level. |

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| **INTERN | FELLOW** *(To be completed by the intern or fellow)* | | |
| Name and Surname | Ouedraogo Yacouba | |
| Date and Place of birth | 26/12/1992 | |
| Nationality | Burkinabe | |
| Mobile & Email | **Mobile:** +226 76 68 53 62 | **Email:**[**Yacouba.ouedraogo@aims-senegal.org**](mailto:Yacouba.ouedraogo@aims-senegal.org) |
| Address | 55, Avenue des Ministeres PL6, P.O Box 13184, Niamey-Plateau, Niger | |
| Project Title | Climate data analysis for resilient agriculture systems in Africa | |

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| **EDUCATIONAL INSTITUTION** *(To be completed by a representative of the educational institution)* | | | |
| Name | African Institute for Mathematical Sciences (AIMS) | | |
| Representative | **Name:** Charles Lebon Mberi Kimpolo | | **Position:** Director, AIMS Industry Initiative, AIMS Global Network |
| Address | **African Institute for Mathematical Sciences (AIMS)**  **AIMS Global Secretariat**  District Gasabo, Secteur Kacyiru,  Cellule Kamatamu, Rue KG590 ST Kigali, Rwanda | | |
| Contact Numbers | **Office:** +250 78831 5246 | **Office:** +250 780 302 682 | |
| Email | 1. [Charles.Kimpolo@nexteinstein.org](mailto:Charles.Kimpolo@nexteinstein.org) 2. [aims-ms4cr.internship@nexteinstein.org](mailto:aims-ms4cr.internship@nexteinstein.org) | | |
| Sector & Core Activities | **Sector:** Education | **Core Activities:** Postgraduate training, research and public engagement in Mathematical Sciences | |

**ARTICLE 2: PROGRAM DESCRIPTION & COORDINATION**

The African Institute for Mathematical Sciences (AIMS) launched the Mathematical Sciences for Climate Change Resilience (MS4CR) program in August 2017 with support from the International Development Research Centre (IDRC). The goal of the MS4CR program at AIMS is to increase the contribution of African mathematical scientists to find solutions to climate change-related challenges in Africa through training, research and internships.

As one of the key components of the MS4CR program, the MS4CR Internship Program (MS4CR-IP) aims to reinforce AIMS alumni acquired academic skills and competencies through practical hands-on experience on real-life research projects. This WIL opportunity strengthens their professional abilities, along with their communication skills. The host institution or research group must assign the intern or fellow, a project with well-defined objectives and specific tasks with clear timelines.

* 1. **Internship’s Pedagogical Goals**

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| *The Internship’s pedagogical goals must be both professional (technical abilities gained and tangible outcomes at the end of the experiential learning) and personal (behavioral skills developed and performance achieved at the end of the internship).*  ***Goals are to be specified by the supervisor along with the intern before the commencement of the internship.*** | | |
| **Professional Learning Objectives**  *Professional learning objectives can include objectives aimed at practicing or improving a skill, learning a new task, networking with professionals on the project, or solving a specific host organization problem with measurable results that would enable the intern to improve his or her work performance and productivity.* | | |
| **Professional Learning Objective** | *Steps that the intern will take to achieve this objective* | **Timeline** *(Target date for achieving the objective)* |
| **Objective1**: Strengthen statistical programming skills | * Understand climate data analysis with R and methods appropriate for climate data analysis for agriculture * Understanding the African climate * Research and review available R packages related to climate data analysis. * Learn how to automate tasks from scripts with R software | 25/09/2022 |
| **Objective 2**: Developing products for agricultural monitoring in West Africa | * Processing of climate data, in order to propose the best practices to farmers on land use, crop selection, and the best combinations of practices to achieve the best yield. * Produce and deliver authoritative climate information products through operational mechanisms, technical standards, communication * Design specifically tailored services to meet the needs of agriculture for customized decision-support products | 25/09/2022 |
| **Objective 3**: Contribute to documentation, reports, articles related to his and colleagues’ works | * Write documentation on work done related to objectives 2 * Contribute to other forms of reporting (articles, presentations, etc...) | 25/09/2022 |
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| **Personal Learning Objectives**  *Personal learning objectives include developing or improving interpersonal skills, teamwork skills, work habits, leadership skills, communication skills, or other social skills that allow the intern or fellow to work more effectively*.  ***The Supervisor should suggest improvements and/or add new objectives.*** | | |

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| **Learning Objective** | *Steps that the intern will take to achieve this objective* | **Timeline** *(Target date for achieving the objective)* |
| **Objective 1:** Development of Statistical Programming tools for climatic products | * Learn to automate scripts to produce periodic tasks * Learn how to deploy models or products on a website * Understand climate data modeling with R or/and Python | 25/09/2022 |
| **Objective 2:** Professional’s Learning | * Work in a multidisciplinary environment with experts in the field * Be able to analyze and interpret results on climate data * Improve my understanding of African climate issues * Improve my understanding of agriculture-climate modeling | 25/09/2022 |

* 1. **Project Work Plan**

The implementation of this research project will be guided by the following proposed work plan structured by the following activities, expected outcomes, and proposed timelines, with the assumption of the availability of the identified resources.

* + 1. **Activities & Timelines**

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| *The intern will handle the following assignments within the proposed timelines:*  ***Tasks are to be specified by the supervisor along with the intern.*** | |
| **List of tasks** | **Timeline** *(Target date for achieving tasks)* |
| **Task 1:** Agricultural bulletin board for West African countries,   * Identification of the start date of the agricultural season * Drought Monitoring * Identification of dry sequences * Automate all products | 25/09/2022 |
| **Task 2:**   * Technical notes * Instruments manuals * Catalogue of products | 25/09/2022 |
| **Task 3:** Automate all tasks | 25/09/2022 |

* + 1. **Available Tools & Materials**

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| *The following resources will be provided to the intern:* |
| 1. desktop computer |
| 1. Internet at the office location |
| 3. |
| 4. |
| 5. |

* + 1. **Expected Outcomes**

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| **Results:** *At the end of this internship, the following outcomes are expected to be achieved*: | |
| **List of outcomes** | **Timeline** *(Target date for achieving results)* |
| **Outcome 1:** Generate and apply climate information and products appropriate to the resilience of agricultural systems in Africa | 25/09/2022 |
| **Outcome 2:** Strengthened operational exchange of climate and environmental data and products between ACMAD, national meteorological services and users in the farming | 25/09/2022 |
| **Outcome 3:** development of innovative climate information and services for resilient agriculture. | 25/09/2022 |

* 1. **Project Quality Assurance**

The program will be performed under the supervision and direction of a joint coordinating team composed of the assigned members from both AIMS and the Host Institution. For quality assurance purposes, all inquiries regarding this project must be sent to the following contacts.

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| **Educational Institution** | **Host Institution** |
| 1. **Dr. Charles Lebon Mberi Kimpolo**   Director, AIMS Industry Initiative  Email: [Charles.Kimpolo@nexteinstein.org](mailto:Charles.Kimpolo@nexteinstein.org)  Cell: **+250 780 302 682.**   1. **Mrs. Seraphine Kayitaramirwa**   Project Coordinator of AIMS Industry Initiative  Email: [skayitaramirwa@nexteinstein.org](mailto:skayitaramirwa@nexteinstein.org)  Cell: **+250 788 619 387** | 1. Dr. Pierre Honoré KAMSU TAMO   Meteorologist |ACMAD|ClimSA  Email: <mailto:tamopierro@gmail.com>  Cell: +227 70 80 75 56     1. Mr Hubert KABENGELA NYAMABU   Email: [hubertkabengela@gmail.com](mailto:hubertkabengela@gmail.com)  Cell +227 91 83 11 99 |

**ARTICLE 3: INTERNSHIP CONDITIONS**

* 1. **Project Reports & Stipends**

1. The Intern or Fellow is required to submit bi-monthly project reports using the template provided by AIMS.
2. The payment of monthly stipends is subject to approved and submitted project reports.
3. Monthly payments will be deposited into the bank account provided by the Intern or Fellow.
4. The monthly stipend must cover all financial needs of the Intern or Fellow. Interns are required to have a health insurance that covers the internship period.
5. AIMS will not be held responsible for delays in payments caused by wrong bank details submitted by the Intern or Fellow.
6. The final monthly stipend will only be paid upon approval from the Host Institution’s supervisor, who will notify AIMS when all project deliverables are achieved.
7. All attempts or proposals to deviate from the original project work plan must be discussed between the Intern/Fellow and the Supervisor(s) and well documented. Further consultations with the AIMS team are required for better coordination and expectation management.
   1. **Additional Terms & Conditions**

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| **Duration of internship**: | 6 months *(without interruption)* |
| **Location of internship**:  *In case of multiple locations, specify each one and the corresponding dates* | 55, Avenue des Ministeres PL6, P.O Box 13184, Niamey-Plateau, Niger |
| **Working hours**:  *The working hours for the intern or fellow should be reasonable from the host institution, as defined by Labor Laws of the* ***Host Institution****. The intern or fellow should also abide by the host institution’s requirements and follow/emulate the work ethics and culture of the institution.* | 8:00 am to 4:00 pm |
| **Monthly Stipend**: *The intern will receive a monthly stipend* | **USD 600** |

**ARTICLE 4: PROJECT DELIVERY, REPORTING, MONITORING & EVALUATION**

* 1. **Project Delivery Commitment**

1. The Intern or Fellow agrees to a 6-month full-time commitment to deliver all objectives of the above research project.
2. The internship must not go beyond the initial timeline stated above. Any request to prolong the internship must be submitted in writing to AIMS for approval before the internship can be extended. In this instance, AIMS will not provide any financial assistance.
3. The Host Institution is responsible for supporting the Intern or Fellow with the required data for the research project as well as other administrative support whenever applicable.
4. AIMS will take necessary measures including the possibility for the Intern or Fellow to refund all used internship funds for any attempt to interrupt the completion of the research project.
5. The Intern or Fellow who is planning to attend local and international conferences, and seminars must notify in writing both the Host Institution and AIMS for approval two weeks before the event.
   1. **Internship Evaluation**

The Host Institution and the Intern must participate in the midpoint and final evaluations conducted by AIMS. Additional information about this evaluation process will be provided by AIMS.

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| **Evaluations** | **Timeline** |
| The mid-term internship evaluation form must be completed by the supervisor, one week after the end of the mid-term. | 24/06/2022 |
| The final internship evaluation form must be completed by the supervisor, two weeks after the end of the project. | 15/09/2022 |

**ARTICLE 5: INTERNATIONAL MOBILITY SUPPORT**

1. The default mode of the internship of the MS4CR-IP is in-person, but depending on various factors that may arise from time to time; the internship can also be conducted remotely. The Host Institution is responsible for determining which appropriate mode of the internship the research project will be conducted.
2. In case the Host Institution's country is different from the Intern or Fellow’s country of residence, AIMS will use its internal Travel Policy to coordinate the mobility logistics required for the Intern or Fellow to relocate to the Host Institution’s country. This mobility support will cover all costs related to round-trip flight tickets, Visa, COVID-19 tests where required, and other required supporting documentation.

**ARTICLE 6: TERMINATION OF INTERNSHIP**

1. In case the Host Institution is not satisfied with the performance of the Intern or Fellow, their internal Human Resource policies must be used to start the process to terminate the internship project.
2. AIMS can request the termination of the internship project if the Intern or Fellow does not comply with the guidelines, terms and conditions of the MS4CR Internship Program.
3. In exceptional cases including illnesses or any other inability to continue the internship, where the Intern or Fellow is unable to complete the internship within the agreed-upon period, the Host Institution will use internal Human Resource policies to make all required decisions in consultation with AIMS.

**ARTICLE 7: GENDER & INCLUSION**

The Parties agree to work together to promote global values towards gender and inclusion. In particular, the Parties commit to:

1. Collaborate and create a working environment and professional development that promotes respect for diversity and equal opportunities.
2. Fight against any kind of discrimination in access to Work-Integrated Learning opportunities, recruitment and professional development based on gender, age, disability and religious belief.
3. Provide a working environment that respects differences in cultures and promotes equality and diversity in the training, development and working conditions of Interns or Fellows and staff of the Host Institution.

The Parties agree to acknowledge and respond to specific needs that female Interns or Fellows might encounter, whenever applicable. On a case-by-case basis, the required interventions to respond to these needs must be guided by the internal Human Resource policies of the Host Institution in consultation with AIMS.

**ARTICLE 8: ACKNOWLEDGEMENT**

The Intern or Fellow must recognize the support of the International Development Research Centre (IDRC) and Global Affairs Canada (GAC) by including in all publications and any public reference to the project the following acknowledgment: “*This work was carried out with the aid of a grant from the International Development Research Centre, Ottawa, Canada,*[www.idrc.ca](http://www.idrc.ca/)*, and with financial support from the Government of Canada, provided through Global Affairs Canada (GAC),*[www.international.gc.ca](http://www.international.gc.ca/)*.”*

**ARTICLE 9: SIGNATURE**

Signature preceded with the handwritten mention "Read & Approved"

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| **Intern or Fellow’s Commitment**  ☑ *I*………Yacouba Ouedraogo*.............................................................. do agree that I have carefully read and well understood all the terms and conditions of this Supervision Agreement. I hereby confirm my six (6) months full-time commitment to deliver all objectives of the above research project. I fully understand that AIMS strongly discourages selected Interns or Fellows to sign this Supervision Framework if they have other plans that may interrupt the successful completion of this research project. Hence, failure to respect this clause may result in severe consequences including the possibility for me, as an Intern or Fellow to refund all used internship funds.*  ☑ **Read & Approved**  *Date: ...19/04/2022............... Signature: ................**...............................* |
| **Host Institution’s Representative**  **[Full name and Position]**  ☑ **Read & Approved**  *Date: .................. Signature: ...............................................................* |
| **AIMS Representative:**  Dr. Charles Lebon Mberi Kimpolo, Director of AIMS Industry Initiative, AIMS Global Network  ☑ **Read & Approved**  *Date: .................. Signature: ...............................................................* |