

# iCARE Innovation Fund

Satellite and AI-Driven Climate

Resilience Tool for Bhutan

Monthly Progress Report

Prepared by Geoneon

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# 1. Project Information

|  |  |
|--|--|
| <b>Project Title:</b>                                      | Satellite and AI-Driven Climate Resilience Tool for Bhutan   |
| <b>Project Code:</b>                                       | A-05177-.....  |
| <b>Partner Organisation:</b>                               | Department of Disaster Management  |
| <b>Reporting Period:</b>                                   | 1 <sup>st</sup> of March 2024-31 March 2024  |
| <b>Date of Submission:</b>                                 | 05/04/2024   |
| <b>Contact Name:</b>                                       | Roxane Bandini-Maeder  |
| <b>Contact Position:</b>                                   | CEO  |
| <b>Contact Email Address:</b>                              | roxane@geoneon.com   |
| <b>Contact Telephone Number:</b>                           | +61417052557   |
| <b>Status of project progress in this reporting period</b> | <input type="checkbox"/> Significant delay <input checked="" type="checkbox"/> Delay <input type="checkbox"/> On Track   |
| <b>Report sign Off</b>                                     | <input checked="" type="checkbox"/> I have reviewed all the information provided for each section including number of beneficiaries. The information provided for each section of the report is complete.<br><br>Name: Roxane Bandini-Maeder      Designation: CEO |

## 2. Key Achievements

### **1. Design and Distribution of Tool Functionality Brochure:**

Geoneon created a tool functionality Brochure to facilitate communication with stakeholders and provide them with an overall understanding of the project. The final version of the brochure has been completed and has been disseminated to the stakeholders.

Forest Resources Planning and Management Division recognised the need and had been conceptualising for an assessment tool such as the Wildfire Exposure Index Tool. The division is most welcoming of the project bringing is such a tool and would be able to participate fully.

### **2. Recruitment of Project Manager Consultant in Bhutan:**

The recruitment process for a Project Manager Consultant in Bhutan has been completed, including contract and onboarding.

### **3. Completion of Stakeholder Mapping and Identification Activity:**

Stakeholder mapping authentication have been completed and stakeholders have been on boarded by DLGDM. Department of Forest and Park Services and the DLGDM are the main stakeholders for the project. DLGDM has sent an official letter to invite stakeholders to be part of the project.

### **4. Progress in Tool Design:**

Communication with the Forest Resources Planning and Management Division to confirmed the necessity of the project implementation.

Test on large scale vegetation 10m for high and low vegetation successfully completed.

Test of Wildfire Severity Hazard upscale from 30cm to 10m resolution successfully completed.

### **5. Scale of the implementation:** while at the inception of the project, Geoneon were planning to focus on Thimphu Dzonga, we are now scaling it up at the country level for better coverage.

### 3. Implementation Progress

| Activity Title   | Last Month Progress   | Current Month Progress   | Activities, and Events, planned for the subsequent month   |
|--|---|--|--|
| Consultation between DLGDM and Geoneon to identify Key Stakeholders and engage with them via a letter of Engagement  | Initiated stakeholder identification and analysis, reviewing a list of agencies for engagement.   | Enlisted the Department of Forest and Park Services and DLGDM as the project's primary partners. Agencies and representative of each agencies completed. Confirmation by DLGDM Letter of Engagement by email.  | Non-Applicable - activity completed.   |
| Development of consultation plan, feedback form, execution of beneficiaries consultation workshops and report outlining findings and data analysis of gender diversity attendance. | Engaged with the DLGDM. Initiated Stakeholder Engagement Plan Document. Commenced planning for stakeholder engagement activities.   | Consultation Plan for the project lifetime – 70% finalised. Execution of stakeholder engagement planned.   | Finalisation of consultation plan<br>Execution of Beneficiary workshop completed.<br>Report of stakeholder engagement completed.<br>Feedback form completed. |
| Source existing data and analysis of data gaps and pipeline development.   | Finalised decisions on the tool's functionality, open-source capability, architecture, scales, and data input. Produced brochures detailing the tool's functionality. Engaged with a Subject Matter Expert in Forest Fire management. | Advance the design of the tool. Finalise and dissemination of the brochure. Test of vegetation mapping (low, high) upscale form 30cm to 10m successfully completed. Test of wildfire severity hazard model upscale from 30cm to 10m successfully completed | Continuous stakeholder engagement with primary stakeholders for co-design purposes through stakeholder engagement workshops.                                 |
| Material Creation and Design   | Not started   | Not started  | Non-Applicable   |
| Collecting feedback  | Not started   | Not started  | Non-Applicable   |

| Activity Title   | Last Month Progress | Current Month Progress | Activities, and Events, planned for the subsequent month |
|--|---------------------|------------------------|--|
| Development of consultation plan, feedback form, interviews, teaching material, execution of capacity enhancement workshops and report outlining findings and data analysis of gender diversity attendance | Not started         | Not started            | Non-Applicable   |
| Finalisation of tool   | Not started         | Not started            | Non-Applicable   |
| Recommendation report  | Not started         | Not started            | Non-Applicable   |

## 4. Results Framework Indicators Progress

| <b>PDO 1 Indicator Description:</b> Government agencies and Citizens who have access to climate-resilient solutions tested or access to the results of the climate resilient solutions under the project (Number) |  |                   |                  |            |
|---|--|-------------------|------------------|------------|
|   | Baseline                                       | Actual (Previous) | Actual (Current) | End Target |
| Government Agencies   | 0  | N/A               | 0                | 5          |
| Male citizen  | 0  | N/A               | 0                | 1000       |
| Female citizen  | 0  | N/A               | 0                | 1000       |
| Date  |  | 29 Feb 2024       | 31 March 2024    |            |
| Comments  | This will be reflected at the end of project   |                   |                  |            |
| <b>PDO 2 Indicator Description:</b> Number of people trained online prior testing test  |  |                   |                  |            |
|   | Baseline                                       | Actual (Previous) | Actual (Current) | End Target |
| Participants  | 0  | N/A               | 0                | 4          |
| Male including in participants  | 0  | N/A               | 0                | 2          |
| Female including in participants  | 0  | N/A               | 0                | 2          |
| Date  |  | 29 Feb 2024       | 31 March 2024    |            |
| Comments  | This will be reflected at beginning of phase 2 |                   |                  |            |
| <b>PDO 3 Indicator Description:</b> Number of trained users, disaggregated by gender  |  |                   |                  |            |
|   | Baseline                                       | Actual (Previous) | Actual (Current) | End Target |
| Participants  | 0  | N/A               | 0                | 10         |
| Female including in participants  | 0  | N/A               | 0                | >30%       |
| Date  |  | 29 Feb 2024       | 31 March 2024    |            |
| Comments  | This will be reflected at beginning of phase 3 |                   |                  |            |
| <b>PDO 4 Indicator Description:</b> Number of knowledge products provided (by type of product, theme, country)  |  |                   |                  |            |
|   | Baseline                                       | Actual (Previous) | Actual (Current) | End Target |
| Products  | 0  | N/A               | 0                | 5          |
| Date  |  | 29 Feb 2024       | 31 March 2024    |            |

|  |   |   |  |                   |
|--|---|---|--|-------------------|
| Comments   | 5 which includes: open-source Geospatial Tool; Beneficiaries Engagement Workshops and Finding Reports; Training Material for the Open-Source Geospatial Tool; Capacity Enhancement workshop; and Recommendation Report. |   |  |                   |
| <b>PDO 5 Indicator Description:</b> Number of people provided with knowledge products (by recipient category, type of knowledge product, country, theme) |   |   |  |                   |
|  | <b>Baseline</b>   | <b>Actual (Previous)</b>                | <b>Actual (Current)</b>  | <b>End Target</b> |
| Participants of beneficiaries engagement workshop  | 0   | N/A                                     |  | 20                |
| Number of user manual user   | 0   | N/A                                     |  | 10                |
| Number of recommendation report reader   | 0   | N/A                                     |  | 10                |
| Date   |   | 29 Feb 2024                             | 31 March 2024  |                   |
| Comments   | This will be reflected during the capacity building phase during phase 3.   |   |  |                   |
| <b>PDO 6 Indicator Description:</b> Number of events supported (by type, year, theme, country)   |   |   |  |                   |
|  | <b>Baseline</b>   | <b>Actual (Previous)</b>                | <b>Actual (Current)</b>  | <b>End Target</b> |
| Facebook and LinkedIn Posts  | 0   | 1                                       | 2  | 6                 |
| Press release  | 0   | 1                                       | 1  | 2                 |
| Stakeholder engagement workshop  | 0   | N/A                                     | 0  | 2                 |
| Conferences  | 0   | N/A                                     | 0  | 1                 |
| Date   |   | 29 Feb 2024                             | 31 March 2024  |                   |
| Comments   | <a href="#">LinkedIn Post</a><br><a href="#">Press Release</a>  |   |  |                   |
| <b>PDO 7 Indicator Description:</b> Number of people participating in supported events (by participant category, sex, year, theme, country)              |   |   |  |                   |
|  | <b>Baseline</b>   | <b>Actual (Previous)</b>                | <b>Actual (Current)</b>  | <b>End Target</b> |
| Reactions of Facebook and LinkedIn Posts   | 0   | 52 reactions<br>5 comments<br>4 reposts | 54 reactions<br>5 comments<br>4 reposts<br>5 reactions<br>1 repost | 20                |

|  |  |             |                         |      |
|--|--|-------------|-------------------------|------|
|  |  |             | 9 reactions<br>1 repost |      |
| News agency of press release   | 0  | N/A         | 0                       | 1    |
| Participants of stakeholder engagement workshop  | 0  | N/A         | 0                       | 10   |
| Participants of conferences  | 0  | N/A         |                         | 20   |
| Date   |  | 29 Feb 2024 | 31 March 2024           |      |
| Comments   |  |             |                         |      |
| <b>Outcome 1 Indicator Description:</b> Enhanced stakeholder engagement and Needs Identification             |  |             |                         |      |
| Number of stakeholders engaged   | 0  | N/A         | 3                       | 10   |
| Hazards identification   | 0  | N/A         | 1                       | 3    |
| Indicators identification  | 0  | N/A         | 1                       | 2    |
| Critical infrastructure types identification   | 0  | N/A         | 3                       | 3    |
| Date   |  | 29 Feb 2024 | 31 March 2024           |      |
| Comments   | This will be better reflected at the end of phase 1. |             |                         |      |
| <b>Output 1.1 Indicator Description:</b> Number and diversity of stakeholders engaged                        |  |             |                         |      |
| Number of government officials engaged   | 0  | N/A         | 3                       | 10   |
| Female including in the government officials engaged   | 0  | N/A         | 0                       | >30% |
| Date   |  | 29 Feb 2024 | 31 March 2024           |      |
| Comments   | This will be reflected at the end of phase 1.        |             |                         |      |
| <b>Outcome 2 Indicator Description:</b> Number of geospatial tool which is functional and ready to be tested |  |             |                         |      |
| Functional tools   | 0  | N/A         | 0                       | 1    |
| Relevant hazards   | 0  | N/A         | 0                       | 3    |
| Relevant infrastructures   | 0  | N/A         | 0                       | 3    |
| Date   |  | 29 Feb 2024 | 31 March 2024           |      |
| Comments   | This will be reflected at the end of phase 2.        |             |                         |      |
| <b>Output 2.1 Indicator Description:</b> Number of people accessing the first open-source tool               |  |             |                         |      |
| Number of people accessing   | 0  | N/A         | 0                       | 4    |
| Date   |  | 29 Feb 2024 | 31 March 2024           |      |
| Comments   | It will be reflected at the beginning of Phase 3.    |             |                         |      |



|  |   |             |               |      |
|--|---|-------------|---------------|------|
| <b>Output 2.2 Indicator Description:</b> Number of people with training manual delivered   |   |             |               |      |
| Number of people delivered   | 0   | N/A         | 0             | 4    |
| Date   |   | 29 Feb 2024 | 31 March 2024 |      |
| Comments   | It will be reflected at the end of Phase 2.       |             |               |      |
| <b>Outcome 3 Indicator Description:</b> Capacity Building and tool testing   |   |             |               |      |
| Number of government agencies  | 0   | N/A         | 0             | 5    |
| Government officials including in agencies   | 0   | N/A         | 0             | 10   |
| Female including in government officials   | 0   | N/A         | 0             | >30% |
| Number of male citizens accessing the results  | 0   | N/A         | 0             | 1000 |
| Number of female citizens accessing the results  | 0   | N/A         | 0             | 1000 |
| Date   |   | 29 Feb 2024 | 31 March 2024 |      |
| Comments   | It will be reflected at the end of Phase 3.       |             |               |      |
| <b>Output 3.1 Indicator Description:</b> Number of people accessing the first open-source tool   |   |             |               |      |
| Number of people trained online prior testing test   | 0   | N/A         | 0             | 4    |
| Number of people testing the tool  | 0   | N/A         | 0             | 4    |
| Date   |   | 29 Feb 2024 | 31 March 2024 |      |
| Comments   | It will be reflected at the beginning of Phase 3. |             |               |      |
| <b>Output 3.2 Indicator Description:</b> A trained cohort of stakeholders capable of using and disseminating knowledge about the tool, promoting gender-balanced capacity building in the local context. |   |             |               |      |
| Number of trained users, disaggregated by gender   | 0   | N/A         | 0             | 10   |
| Female including trained users   | 0   | N/A         | 0             | >30% |
| Number of people delivered with knowledge product  | 0   | N/A         | 0             | 10   |
| Femail including in people delivered   | 0   | N/A         | 0             | >30% |
| Date   |   | 29 Feb 2024 | 31 March 2024 |      |
| Comments   | It will be reflected at the end of Phase 3.       |             |               |      |
| <b>Output 3.3 Indicator Description:</b> Tool refinement based on feedback   |   |             |               |      |
| Address relevant feedback  | 0   | N/A         | 0             | >70% |

|   |   |             |               |   |
|---|---|-------------|---------------|---|
| Date  |   | 29 Feb 2024 | 31 March 2024 |   |
| Comments  | It will be reflected at the end of Phase 3. |             |               |   |
|   |   |             |               |   |
| <b>Output 3.4 Indicator Description:</b> Number of strategic recommendations made |   |             |               |   |
| Strategic recommendations   | 0   | N/A         | 0             | 5 |
| Date  |   | 29 Feb 2024 | 31 March 2024 |   |
| Comments  | It will be reflected at the end of Phase 3. |             |               |   |

## 5. Challenges, Lessons Learned and Way Forward

### Challenges

**Communication with our on-site team:** Due to time zone differences and geographical disparities, there are uncertainties in communication between Geoneon and the on-site team. Challenges arise in coordinating meeting times and providing feedback, as well as effectively utilising collaboration software.

Engaging with women representative in stakeholder engagement: we can anticipate that male will be the main representative in the stakeholder group. That is due to most of government officials are male and the nature of our project. As it is focus on geospatial technology there is a lack of women specialised in the area.

### Lessons Learned

This experience has provided valuable insights into our project management and planning processes. We have learned the importance of:

**Establish a clear writing plan between the onsite and offsite teams:** implement regular communication meetings to discuss project plans, deliverables, and deadlines. Additionally, provide support and training on online writing software to ensure proficient application by all team members.

Engaging early with academic and students to reach more women in technology and spatial sciences.


### Way Forward

Building on the insights gained, our strategy for the forthcoming period will focus on enhancing stakeholder engagement, communication, and project visibility through several key initiatives:

1. **On-Site Project Manager Cooperation:** We will enhance management and training for the on-site team to ensure transparent communication and effective project progress.
2. **Stakeholder List:** A finalized stakeholder list will be developed, and the onboarding process will be initiated. This action aims to ensure a balanced representation of stakeholders and maintain clear communication channels for each stakeholder to understand the project background, roles, and communication pathways.
3. **Stakeholder Engagement Plan:** We will collaborate with the on-site project manager to initiate communication with stakeholders and develop an informative stakeholder engagement plan, outlining the scope, format, content, and timeline of engagement activities. This approach will ensure that our engagement efforts are targeted and aligned with the local environment.

## Annexures:

Annex 1 :  Geoneon\_ADPC\_iCARE\_Bhutan-1.pdf

Annex 2 :  Stakeholder\_Map.pdf

# Glossary

|                                |       |  |
|--------------------------------|-------|--|
| <b>Project Title</b>           | means | Exact and full name of the project as defined in the Sub Grant Agreement   |
| <b>Project Code</b>            | means | A five-digit code assigned by ADPC   |
| <b>Partner Organization</b>    | means | The lead agency(ies) responsible for the implementation of the project   |
| <b>Key Achievements</b>        | means | The actual outcome or impact of your work, such as reaching a PDO, or outcome or output defined in the final and agreed Results Framework.   |
| <b>Implementation Progress</b> | means | Implementation progress means the steps or actions taken to achieve the PDO or outcomes or outputs. In this case it would be the list of activities defined in the final and approved work plan  |
| <b>Challenges</b>              | means | The most significant and persistent areas of risk that affect the project's ability to achieve its objectives. Challenges could be related to managing the Sub Grant, sustaining development gains, coordinating with stakeholders, and implementing core management functions. Please also discuss the solutions to mitigate these risks.   |
| <b>Lessons Learned</b>         | means | Lessons learned are contextual or operational information that may affect planning and future performance. They highlight the insights gained from the activity's implementation practices and progress, such as staff feedback, stakeholder interviews, data analysis, and success stories. They also include any changes required by or support requested from ADPC or partners. |



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