**Programma Nazionale di Ricerche in Antartide

PNRA: research projects to deepen knowledge in Antarctica –
2024 Call for proposals**

**research projects at the Concordia station**

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PART A

# Research Project Title (Max. 200 characters)

|  |
| --- |
|  |

# Brief description of the proposal (Max. 2,000 characters)

|  |
| --- |
|  |

# Duration (months - max 48)

|  |
| --- |
|  |

[ ]  1 biennium

*or*

[ ]  2 biennium (4 years divided into 2 two-year periods)

# Scientific issues (Indicate at least 1 item)

[ ]  Earth/Ice/Climate interactions; Antarctic Ocean, Lithosphere and Atmosphere

[ ]  Life in Antarctica; Evolution, adaptation, biodiversity and biocenosis

[ ]  Astronomy, astrophysics and space weather

[ ]  Anthropic impact and environmental contamination

[ ]  Biomedicine and psychology

[ ]  Technology in Antarctica

#  Keywords (3 to 6: free)

|  |  |
| --- | --- |
| 1. | 4. |
| 2. | **5.** |
| 3. | **6.** |

PART B

# Participating Institutions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Istitution Nr. | Name | Subject Type\*\*(Art.3, comma 1) | Department(s) name | Fiscal Code |
|  1\* |   |   |   |   |
|  2 |   |   |   |   |
|  3 |   |   |   |   |
|  4 |   |   |   |   |
|  5 |   |   |   |   |
|  6 |   |   |   |   |

the project proposals must be “individual” or "joint”

\* Leading institution (in case of joint proposals)

\*\* Indicate the type of the subject according to the note [[1]](#footnote-2):

# Leading Institution

|  |
| --- |
| Information on legal representative (or his delegate) of Leading Institution |
| *Surname, Name*  |  |
| *Qualification* |  |
| *Year of Birth* |  |
| *Italian fiscal code*  |  |
| *Organization*  |  |
| *Phone number* |  |
| *E‐mail address* |  |
| *Certified electronic mail* |  |

# Principal Investigator

|  |
| --- |
| Information on the Principal Investigator |
| *Surname, Name*  |  |
| *Qualification* |  |
| *Year of Birth* |  |
| *Italian fiscal code*  |  |
| *Organization* |  |
| *Phone number*  |  |
| *E‐mail address* |  |
| *Certified electronic mail* |  |
| *Role within the belonging institution* |  |

***No older than:***

[ ] 35 years old (at the deadline for the application)

[ ]  40 years old (at the deadline for the application)

[ ]  Neither

# List of research units

The project proposals must include the involvement maximum of 6 (six) research units

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Participating Institution | Research units | Italian fiscal code | Legal Entity (address, city, province) | Operations office of research units (address, city, province) | E‐mail address | Certified electronic mail |
| 1 |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |

## Research unit 1 - ……………………………………..\*

\* Participating Institution

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Role | Surname | Name | Italian fiscal code | Belonging Istitution | Qualification | E-mail | Time assigned to the project (man/months*)* |
| PI |  |  |  |  |  |  |  |
| Member |  |  |  |  |  |  |  |
| Member |  |  |  |  |  |  |  |
| … |  |  |  |  |  |  |  |
| … |  |  |  |  |  |  |  |
| … |  |  |  |  |  |  |  |
| … |  |  |  |  |  |  |  |

## Research unit 2 - ……………………………………..\*

\* Participating Institution

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Role | Surname | Name | Italian fiscal code | Belonging Istitution | Qualification | E-mail | Time assigned to the project (man/months*)* |
| Research Unit Leader |  |  |  |  |  |  |  |
| Member |  |  |  |  |  |  |  |
| Member |  |  |  |  |  |  |  |
| … |  |  |  |  |  |  |  |
| … |  |  |  |  |  |  |  |
| … |  |  |  |  |  |  |  |
| … |  |  |  |  |  |  |  |

PART C

**DESCRIPTION OF THE PROJECT**

State of the art(Max. 3,000 characters)

|  |
| --- |
|  |

Detailed description of the project: methodologies, objectives and results that the project aims to achieve and its interest for the advancement of knowledge, as well as methods of dissemination of the results achieved; eventual previous related initiatives and projects; the national and international scientific community interested in the use of observatory data; instrumentation, methodologies, standardizations, methods of collecting and processing raw data and their dissemination, timing for archiving and public access from the moment of collection;(Max. 25,000 characters, figures, tables and maps embedded in the text)

|  |
| --- |
|  |

Technical-logistic requirements - FIRST YEAR

FIRST TWO YEARS - FINANCED BY THE PNRA 2024

## EXPEDITION PERSONNEL

Specify the scientific personnel who must necessarily belong to a research institution. The duration of their contract must cover the entire period of the expedition.

|  |  |
| --- | --- |
| **Required personnel** (Indicate the names of the personnel according to the order of priority of participation. Specify whether veteran, novice or guest) |  |
| **Reserve personnel** (Indicate the names of the personnel according to the order of priority of participation. Specify whether veteran, novice or guest) |  |
| **Winterover personnel**(Indicate ‘yes’ or ‘no’) |  |

## FIELD ACTIVITIES

1. **Activities to be performed.** Briefly list and describe all the activities to be carried out for the project, specifying whether there are needs for activities and transports to or from different platforms (MZS DC foreign bases).

|  |
| --- |
| **Field activities** |
|  |
|  |
|  |
| Etc. |

1. **Logistical Support.** Specify the type of support required for the project, such as drilling in the ice, diving, mountain guide, use of laboratories, equipment use, IT support, etc.

|  |
| --- |
| **Logistical Support** |
|  |
|  |
|  |
| Etc. |

1. **Field Stay.** Specify the minimum essential stay and the required period (specific months and days) for each person. Indicate any overlap or replacement needs among personnel of the same project and with personnel of other project.

|  |
| --- |
| **Required Field Stay** |
| **Name and Surname** | **Period** (mm/dd/yy - mm/dd/yy) | **Stay** (days) | **Need for overlap** (indicate name and period mm/dd/yy - mm/dd/yy) | **Mandatory Period**(Yes/No) |
|  |  |  |  |  |

1. **Activity Sites.** Specify the sites of interest for the project's activities, indicating the nomenclature, geographical coordinates and the number of visits.

|  |  |  |
| --- | --- | --- |
| **Location and Geographical Coordinates in Decimal Format** | **Number and Estimated Duration of Each Visit** | **Required Support (mountain guide, etc.)** |
|  |  |  |
|  |  |  |
| Etc. |  |  |

1. **Synergies.** Specify the projects with which collaborations are already active (personnel from other projects expected to carry out activities for this project) or could activate useful synergies.

|  |
| --- |
| **Synergies with Other Projects** |
|  |

## MATERIALS

1. **Material Needs for Shipment to Antarctica.** Materials must be sent to ENEA/UTA in appropriate packaging and complete with documentation compliant with maritime (IMDG) and air (IATA) transport. Please refer to the "Materials Circular." Fill in the table; in case of multiple entries, include a new table below.

|  |
| --- |
| **Material 1** |
| **Type of material**  |  |
| **Estimated Total Weight (Kg)** |  |
| **Estimated Total Volume (m³)** |  |
| **Required Temperature for Transport (°C)**  |  |
| **Requirements Regarding Arrival Timelines in Antarctica** |  |

1. **Material Return Needs to Italy.** Fill in the following table, and in case of multiple entries, include a new table below.

|  |
| --- |
| **Material 1** |
| **Type of material**  |  |
| **Estimated Total Weight (Kg)** |  |
| **Estimated Total Volume (m³)**  |  |
| **Required Temperature for Transport (°C)**  |  |
| **Requirements Regarding Return Timelines to Italy** |  |

|  |
| --- |
| **Samples** |
| **Type of Material** |  |
| **Estimated Total Weight (Kg)**  |  |
| **Estimated Total Volume (m³)**  |  |
| **Required Temperature for Transport (°C)**  |  |
| **Requirements Regarding Return Timelines to Italy**  |  |

1. **Use of Chemical and/or Biological Substances.** Indicate in the following table the chemical and/or biological material to be used.

|  |  |  |
| --- | --- | --- |
| **Type of Material** | **Quantity per Analysis (kg or Lt)**  | **Total Number of Analyses** |
|  |  |  |

## “Drones, Photogrammetry, and 3D Modeling

Specify the type of support required for (a) flight activities with drones, (b) post-processing of acquired data, and (c) GNSS surveying. Fill in the fields below according to the needs.

1. **Flight with Rotary-Wing Drone.** It is possible to request flights with quadcopters to acquire different types of data depending on the mounted payload:

|  |  |
| --- | --- |
| **Type of Data** | **Description of Activity and Acquisition Site** (if possible, specify the area size to be captured) |
| **Thermal (640x512 px)** |  |
| **Visible (24/12 Mpx)** |  |
| **Lidar (240,000 pts)** |  |
| **GPR (500 MHz)** |  |
| **Photos (12/24/48 Mpx) e videos (4k)** |  |
| **Additional data acquisition with non-ENEA project payload (specify the type)**  |  |

1. **Post-processing.** It is possible to request data processing for a quick analysis of the captured data. Check the corresponding box.

|  |  |
| --- | --- |
| **Type of Processing** | **Notes** |
| X | Photogrammetry and point cloud  |  |
| X | Orthophoto and DEM  |  |
| X | Gigapixel photos |  |
| X | HPC support |  |

1. **Topographic surveying GNSS.** It is possible to request the survey of points with geographical coordinates in RTK.

|  |  |
| --- | --- |
| **Coordinates and/or Name of the Site of Interest** | **Description of the Site and Type of Acquisition** |
|  |  |

## ADDITIONAL INFORMATION:

Indicate additional information deemed useful for understanding the activities already described above. Do not indicate additional activities beyond the proposal approved by the MUR.

|  |
| --- |
| **Additional Information** |
|  |
|  |

Technical-logistic requirements – SECOND YEAR

FIRST TWO YEARS - FINANCED BY THE PNRA 2024

## EXPEDITION PERSONNEL

Specify the scientific personnel who must necessarily belong to a research institution. The duration of their contract must cover the entire period of the expedition.

|  |  |
| --- | --- |
| **Required personnel** (Indicate the names of the personnel according to the order of priority of participation. Specify whether veteran, novice or guest) |  |
| **Reserve personnel** (Indicate the names of the personnel according to the order of priority of participation. Specify whether veteran, novice or guest) |  |
| **Winterover personnel**(Indicate ‘yes’ or ‘no’) |  |

## FIELD ACTIVITIES

1. **Activities to be performed.** Briefly list and describe all the activities to be carried out for the project, specifying whether there are needs for activities and transports to or from different platforms (MZS DC foreign bases).

|  |
| --- |
| **Field activities** |
|  |
| 2- |
| 3- |
| Etc. |

1. **Logistical Support.** Specify the type of support required for the project, such as drilling in the ice, diving, mountain guide, use of laboratories, equipment use, IT support, etc.

|  |
| --- |
| **Logistical Support** |
| 1- |
| 2- |
| 3- |
| Etc. |

1. **Field Stay.** Specify the minimum essential stay and the required period (specific months and days) for each person. Indicate any overlap or replacement needs among personnel of the same project and with personnel of other project.

|  |
| --- |
| **Required Field Stay** |
| **Name and Surname** | **Period** (mm/dd/yy - mm/dd/yy) | **Stay** (days) | **Need for overlap** (indicate name and period mm/dd/yy - mm/dd/yy) | **Mandatory Period**(Yes/No) |
|  |  |  |  |  |

1. **Activity Sites.** Specify the sites of interest for the project's activities, indicating the nomenclature, geographical coordinates and the number of visits.

|  |  |  |
| --- | --- | --- |
| **Location and Geographical Coordinates in Decimal Format** | **Number and Estimated Duration of Each Visit** | **Required Support (mountain guide, etc.)** |
|  |  |  |
|  |  |  |
| Etc. |  |  |

1. **Synergies.** Specify the projects with which collaborations are already active (personnel from other projects expected to carry out activities for this project) or could activate useful synergies.

|  |
| --- |
| **Synergies with Other Projects** |
|  |

## MATERIALS

1. **Material Needs for Shipment to Antarctica.** Materials must be sent to ENEA/UTA in appropriate packaging and complete with documentation compliant with maritime (IMDG) and air (IATA) transport. Please refer to the "Materials Circular." Fill in the table; in case of multiple entries, include a new table below.

|  |
| --- |
| **Material 1** |
| **Type of material**  |  |
| **Estimated Total Weight (Kg)** |  |
| **Estimated Total Volume (m³)** |  |
| **Required Temperature for Transport (°C)**  |  |
| **Requirements Regarding Arrival Timelines in Antarctica** |  |

1. **Material Return Needs to Italy.** Fill in the following table, and in case of multiple entries, include a new table below.

|  |
| --- |
| **Material 1** |
| **Type of material**  |  |
| **Estimated Total Weight (Kg)** |  |
| **Estimated Total Volume (m³)**  |  |
| **Required Temperature for Transport (°C)**  |  |
| **Requirements Regarding Return Timelines to Italy** |  |

|  |
| --- |
| **Samples** |
| **Type of Material** |  |
| **Estimated Total Weight (Kg)**  |  |
| **Estimated Total Volume (m³)**  |  |
| **Required Temperature for Transport (°C)**  |  |
| **Requirements Regarding Return Timelines to Italy**  |  |

1. **Use of Chemical and/or Biological Substances.** Indicate in the following table the chemical and/or biological material to be used.

|  |  |  |
| --- | --- | --- |
| **Type of Material** | **Quantity per Analysis (kg or Lt)**  | **Total Number of Analyses** |
|  |  |  |

##  “Drones, Photogrammetry, and 3D Modeling

Specify the type of support required for (a) flight activities with drones, (b) post-processing of acquired data, and (c) GNSS surveying. Fill in the fields below according to the needs.

1. **Flight with Rotary-Wing Drone.** It is possible to request flights with quadcopters to acquire different types of data depending on the mounted payload:

|  |  |
| --- | --- |
| **Type of Data** | **Description of Activity and Acquisition Site** (if possible, specify the area size to be captured) |
| **Thermal (640x512 px)** |  |
| **Visible (24/12 Mpx)** |  |
| **Lidar (240,000 pts)** |  |
| **GPR (500 MHz)** |  |
| **Photos (12/24/48 Mpx) e videos (4k)** |  |
| **Additional data acquisition with non-ENEA project payload (specify the type)**  |  |

1. **Post-processing.** It is possible to request data processing for a quick analysis of the captured data. Check the corresponding box.

|  |  |
| --- | --- |
| **Type of Processing** | **Notes** |
| X | Photogrammetry and point cloud  |  |
| X | Orthophoto and DEM  |  |
| X | Gigapixel photos |  |
| X | HPC support |  |

1. **Topographic surveying GNSS.** It is possible to request the survey of points with geographical coordinates in RTK.

|  |  |
| --- | --- |
| **Coordinates and/or Name of the Site of Interest** | **Description of the Site and Type of Acquisition** |
|  |  |

## ADDITIONAL INFORMATION:

Indicate additional information deemed useful for understanding the activities already described above. Do not indicate additional activities beyond the proposal approved by the MUR.

|  |
| --- |
| **Additional Information** |
| 1- |
|  |

Technical-logistic requirements - THIRD YEAR (fill in only if project consists of two two-year periods)

**SECOND TWO-YEAR PERIOD - NOT** FINANCED **BY PNRA 2024**

## EXPEDITION PERSONNEL

Specify the scientific personnel who must necessarily belong to a research institution. The duration of their contract must cover the entire period of the expedition.

|  |  |
| --- | --- |
| **Required personnel** (Indicate the names of the personnel according to the order of priority of participation. Specify whether veteran, novice or guest) |  |
| **Reserve personnel** (Indicate the names of the personnel according to the order of priority of participation. Specify whether veteran, novice or guest) |  |
| **Winterover personnel**(Indicate ‘yes’ or ‘no’) |  |

## FIELD ACTIVITIES

1. **Activities to be performed.** Briefly list and describe all the activities to be carried out for the project, specifying whether there are needs for activities and transports to or from different platforms (MZS DC foreign bases).

|  |
| --- |
| **Field activities** |
|  |
|  |
|  |
| Etc. |

1. **Logistical Support.** Specify the type of support required for the project, such as drilling in the ice, diving, mountain guide, use of laboratories, equipment use, IT support, etc.

|  |
| --- |
| **Logistical Support** |
|  |
|  |
|  |
| Etc. |

1. **Field Stay.** Specify the minimum essential stay and the required period (specific months and days) for each person. Indicate any overlap or replacement needs among personnel of the same project and with personnel of other project.

|  |
| --- |
| **Required Field Stay** |
| **Name and Surname** | **Period** (mm/dd/yy - mm/dd/yy) | **Stay** (days) | **Need for overlap** (indicate name and period mm/dd/yy - mm/dd/yy) | **Mandatory Period**(Yes/No) |
|  |  |  |  |  |

1. **Activity Sites.** Specify the sites of interest for the project's activities, indicating the nomenclature, geographical coordinates and the number of visits.

|  |  |  |
| --- | --- | --- |
| **Location and Geographical Coordinates in Decimal Format** | **Number and Estimated Duration of Each Visit** | **Required Support (mountain guide, etc.)** |
|  |  |  |
|  |  |  |
| Etc. |  |  |

1. **Synergies.** Specify the projects with which collaborations are already active (personnel from other projects expected to carry out activities for this project) or could activate useful synergies.

|  |
| --- |
| **Synergies with Other Projects** |
|  |

## MATERIALS

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|  |
| --- |
| **Material 1** |
| **Type of material**  |  |
| **Estimated Total Weight (Kg)** |  |
| **Estimated Total Volume (m³)** |  |
| **Required Temperature for Transport (°C)**  |  |
| **Requirements Regarding Arrival Timelines in Antarctica** |  |

1. **Material Return Needs to Italy.** Fill in the following table, and in case of multiple entries, include a new table below.

|  |
| --- |
| **Material 1** |
| **Type of material**  |  |
| **Estimated Total Weight (Kg)** |  |
| **Estimated Total Volume (m³)**  |  |
| **Required Temperature for Transport (°C)**  |  |
| **Requirements Regarding Return Timelines to Italy** |  |

|  |
| --- |
| **Samples** |
| **Type of Material** |  |
| **Estimated Total Weight (Kg)**  |  |
| **Estimated Total Volume (m³)**  |  |
| **Required Temperature for Transport (°C)**  |  |
| **Requirements Regarding Return Timelines to Italy**  |  |

1. **Use of Chemical and/or Biological Substances.** Indicate in the following table the chemical and/or biological material to be used.

|  |  |  |
| --- | --- | --- |
| **Type of Material** | **Quantity per Analysis (kg or Lt)**  | **Total Number of Analyses** |
|  |  |  |

##  “Drones, Photogrammetry, and 3D Modeling

Specify the type of support required for (a) flight activities with drones, (b) post-processing of acquired data, and (c) GNSS surveying. Fill in the fields below according to the needs.

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|  |  |
| --- | --- |
| **Type of Data** | **Description of Activity and Acquisition Site** (if possible, specify the area size to be captured) |
| **Thermal (640x512 px)** |  |
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| **GPR (500 MHz)** |  |
| **Photos (12/24/48 Mpx) e videos (4k)** |  |
| **Additional data acquisition with non-ENEA project payload (specify the type)**  |  |

1. **Post-processing.** It is possible to request data processing for a quick analysis of the captured data. Check the corresponding box.

|  |  |
| --- | --- |
| **Type of Processing** | **Notes** |
| X | Photogrammetry and point cloud  |  |
| X | Orthophoto and DEM  |  |
| X | Gigapixel photos |  |
| X | HPC support |  |

1. **Topographic surveying GNSS.** It is possible to request the survey of points with geographical coordinates in RTK.

|  |  |
| --- | --- |
| **Coordinates and/or Name of the Site of Interest** | **Description of the Site and Type of Acquisition** |
|  |  |

## ADDITIONAL INFORMATION:

Indicate additional information deemed useful for understanding the activities already described above. Do not indicate additional activities beyond the proposal approved by the MUR.

|  |
| --- |
| **Additional Information** |
| 1- |
| 2- |

Technical-logistic requirements - FOURTH YEAR (fill in only if project consists of two two-year periods)

***SECOND TWO-YEAR PERIOD – NOT*** FINANCED ***BY PNRA 2024***

## EXPEDITION PERSONNEL

Specify the scientific personnel who must necessarily belong to a research institution. The duration of their contract must cover the entire period of the expedition.

|  |  |
| --- | --- |
| **Required personnel** (Indicate the names of the personnel according to the order of priority of participation. Specify whether veteran, novice or guest) |  |
| **Reserve personnel** (Indicate the names of the personnel according to the order of priority of participation. Specify whether veteran, novice or guest) |  |
| **Winterover personnel**(Indicate ‘yes’ or ‘no’) |  |

## FIELD ACTIVITIES

1. **Activities to be performed.** Briefly list and describe all the activities to be carried out for the project, specifying whether there are needs for activities and transports to or from different platforms (MZS DC foreign bases).

|  |
| --- |
| **Field activities** |
| 1- |
| 2- |
| 3- |
| Etc. |

1. **Logistical Support.** Specify the type of support required for the project, such as drilling in the ice, diving, mountain guide, use of laboratories, equipment use, IT support, etc.

|  |
| --- |
| **Logistical Support** |
| 1- |
| 2- |
| 3- |
| Etc. |

1. **Field Stay.** Specify the minimum essential stay and the required period (specific months and days) for each person. Indicate any overlap or replacement needs among personnel of the same project and with personnel of other project.

|  |
| --- |
| **Required Field Stay** |
| **Name and Surname** | **Period** (mm/dd/yy - mm/dd/yy) | **Stay** (days) | **Need for overlap** (indicate name and period mm/dd/yy - mm/dd/yy) | **Mandatory Period**(Yes/No) |
|  |  |  |  |  |

1. **Activity Sites.** Specify the sites of interest for the project's activities, indicating the nomenclature, geographical coordinates and the number of visits.

|  |  |  |
| --- | --- | --- |
| **Location and Geographical Coordinates in Decimal Format** | **Number and Estimated Duration of Each Visit** | **Required Support (mountain guide, etc.)** |
|  |  |  |
|  |  |  |
| Etc. |  |  |

1. **Synergies.** Specify the projects with which collaborations are already active (personnel from other projects expected to carry out activities for this project) or could activate useful synergies.

|  |
| --- |
| **Synergies with Other Projects** |
|  |

## MATERIALS

1. **Material Needs for Shipment to Antarctica.** Materials must be sent to ENEA/UTA in appropriate packaging and complete with documentation compliant with maritime (IMDG) and air (IATA) transport. Please refer to the "Materials Circular." Fill in the table; in case of multiple entries, include a new table below.

|  |
| --- |
| **Material 1** |
| **Type of material**  |  |
| **Estimated Total Weight (Kg)** |  |
| **Estimated Total Volume (m³)** |  |
| **Required Temperature for Transport (°C)**  |  |
| **Requirements Regarding Arrival Timelines in Antarctica** |  |

1. **Material Return Needs to Italy.** Fill in the following table, and in case of multiple entries, include a new table below.

|  |
| --- |
| **Material 1** |
| **Type of material**  |  |
| **Estimated Total Weight (Kg)** |  |
| **Estimated Total Volume (m³)**  |  |
| **Required Temperature for Transport (°C)**  |  |
| **Requirements Regarding Return Timelines to Italy** |  |

|  |
| --- |
| **Samples** |
| **Type of Material** |  |
| **Estimated Total Weight (Kg)**  |  |
| **Estimated Total Volume (m³)**  |  |
| **Required Temperature for Transport (°C)**  |  |
| **Requirements Regarding Return Timelines to Italy**  |  |

1. **Use of Chemical and/or Biological Substances.** Indicate in the following table the chemical and/or biological material to be used.

|  |  |  |
| --- | --- | --- |
| **Type of Material** | **Quantity per Analysis (kg or Lt)**  | **Total Number of Analyses** |
|  |  |  |

##  “Drones, Photogrammetry, and 3D Modeling

Specify the type of support required for (a) flight activities with drones, (b) post-processing of acquired data, and (c) GNSS surveying. Fill in the fields below according to the needs.

1. **Flight with Rotary-Wing Drone.** It is possible to request flights with quadcopters to acquire different types of data depending on the mounted payload:

|  |  |
| --- | --- |
| **Type of Data** | **Description of Activity and Acquisition Site** (if possible, specify the area size to be captured) |
| **Thermal (640x512 px)** |  |
| **Visible (24/12 Mpx)** |  |
| **Lidar (240,000 pts)** |  |
| **GPR (500 MHz)** |  |
| **Photos (12/24/48 Mpx) e videos (4k)** |  |
| **Additional data acquisition with non-ENEA project payload (specify the type)**  |  |

1. **Post-processing.** It is possible to request data processing for a quick analysis of the captured data. Check the corresponding box.

|  |  |
| --- | --- |
| **Type of Processing** | **Notes** |
| X | Photogrammetry and point cloud  |  |
| X | Orthophoto and DEM  |  |
| X | Gigapixel photos |  |
| X | HPC support |  |

1. **Topographic surveying GNSS.** It is possible to request the survey of points with geographical coordinates in RTK.

|  |  |
| --- | --- |
| **Coordinates and/or Name of the Site of Interest** | **Description of the Site and Type of Acquisition** |
|  |  |

## ADDITIONAL INFORMATION:

Indicate additional information deemed useful for understanding the activities already described above. Do not indicate additional activities beyond the proposal approved by the MUR.

|  |
| --- |
| **Additional Information** |
|  |
|  |

PART D

Project development, with identification of the role of each research unit, including international involvement, with regards to related modalities of integration and collaboration(Max. 10,000 characters, figures and tables embedded in the text)

|  |
| --- |
|  |

Possible application potentialities and scientific and/or technological and/or economic impact(Max. 10,000 characters, figures and tables embedded in the text)

|  |
| --- |
|  |

***Financial aspects: costs*** *-* ***Description of the estimated costs for the realization of the proposed project and how this requested contribution will be used, including any financial contributions from third parties, Italian and/or foreign (Max. 2,500 characters)***

|  |
| --- |
|  |

# Total budget required

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Cost Item\* | Year 1 | Year 2 | Year 3 | Year 4 | Sum |
| Specially recruited Personnel (a) |   |   |  |  |   |
| Instrumentation/Facilities (b) |   |   |  |  |   |
| Travel allowances (c) |   |   |  |  |   |
| Consumables products (c) |   |   |  |  |   |
| Services and operating expenses (c) |   |   |  |  |   |
| General costs (d) (max 7%) |   |   |  |  |   |
| SUM\* |   |   |  |  |   |

\* Budget (euro):200,000.00 – 400,000.00

This call funds exclusively the first two years for a maximum recognizable amount of Euro 300,000.00.

PART E

**Curriculum Vitae of Principal Investigator (Max 2 pages)**

*[Please follow the template below as much as possible (it may however be amended if necessary).]*

**PERSONAL INFORMATION**

Family name, First name:

Researcher unique identifier(s) (such as ORCID, Research ID, etc. ...):

Year of birth:

Nationality:

URL for web site:

* **EDUCATION**

year PhD

 Name of Faculty/ Department, Name of University/ Institution, Country

 Name of PhD Supervisor

year Master/Graduation

 Name of Faculty/ Department, Name of University/ Institution, Country

* **CURRENT POSITION(S)**

year –year Current Position

 Name of Faculty/ Department, Name of University/ Institution/ Country

year – year Current Position

 Name of Faculty/ Department, Name of University/ Institution/ Country

* **PREVIOUS POSITIONS**

year – year Position held

 Name of Faculty/ Department, Name of University/ Institution/ Country

year– year Position held

 Name of Faculty/ Department, Name of University/ Institution/ Country

* **FELLOWSHIPS AND AWARDS**

year – year Scholarship, Name of Faculty/ Department/Centre, Name of University/ Institution/ Country

year Award, Name of Institution/Country

year–year Scholarship, Name of Faculty/ Department/Centre, Name of University/ Institution/ Country

* **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS (if applicable)**

year–year Number of Postdocs/ PhD/ Master Students

Name of Faculty/ Department/ Centre, Name of University/ Institution/ Country

* **TEACHING ACTIVITIES (if applicable)**

year–year Teaching position – Topic, Name of University/ Institution/ Country

year– year Teaching position – Topic, Name of University/ Institution/ Country

**ORGANISATION OF SCIENTIFIC MEETINGS (if applicable)**

year Please specify your role and the name of event / Country

year Please specify type of event / number of participants / Country

* **INSTITUTIONAL RESPONSIBILITIES (if applicable)**

year – year Faculty member, Name of University/ Institution/ Country

year– year Graduate Student Advisor, Name of University/ Institution/ Country

year– year Member of the Faculty Committee, Name of University/ Institution/ Country

year – year Organizer of the Internal Seminar, Name of University/ Institution/ Country

year – year Member of a Committee; role, Name of University/ Institution/ Country

* **REVIEWING ACTIVITIES (if applicable)**

year – Scientific Advisory Board, Name of University/ Institution/ Country

year – Review Board, Name of University/ Institution/ Country

year – Review panel member, Name of University/ Institution/ Country

year – Editorial Board, Name of University/ Institution/ Country

year – Scientific Advisory Board, Name of University/ Institution/ Country

year – Reviewer, Name of University/ Institution/ Country

year – Scientific Evaluation, Name of University/ Institution/ Country

year – Evaluator, Name of University/ Institution/ Country

* **MEMBERSHIPS OF SCIENTIFIC SOCIETIES (if applicable)**

year – Member, Research Network “*Name of Research Network*”

year – Associated Member, Name of Faculty/ Department/Centre, Name of University/ Institution/ Country

year – Founding Member, Name of Faculty/ Department/Centre, Name of University/ Institution/ Country

* **MAJOR COLLABORATIONS (if applicable)**

Name of collaborators, Topic, Name of Faculty/ Department/Centre, Name of University/ Institution/ Country

* **CAREER BREAKS (if applicable)**

Exact years Please indicate the reason and the duration in months.

* **TRACK-RECORD of the PI** (Max 20 publications, Max 2 pages)

***Appendix: All current grants and on-going and submitted grant applications of the PI (Funding ID)***

*Mandatory information (does not count towards page limits)*

**Current grants (Please indicate "No funding" when applicable):**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Project Title* | *Funding source* | *Amount**(Euros)* | *Period* | *Role of the PI* | *Relation to current* *proposal* |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

**Project’s Responsibilities (***in the last 10 years***) (Please indicate "None" when applicable):**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Project Title* | *Funding source* | *Amount**(Euros)* | *Period* | *Role of the PI* |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Place, date and digital signature**

**Attachments**

1. DSAN Legale Rappresentante proponente e/o capofila
2. DSAN Partner Legale Rappresentante e delega al capofila
3. Delega potere di firma proponente e/o capofila (eventuale)
1. A) Public and private Italian Universities and Italian university institutions, in any way named, including higher degree School with special regulations; B) National Public Institutions supervised by the State; C) Other research Institutions having requirements set by the Commission Regulation (EC) No 800/2008 of 6 August 2008. [↑](#footnote-ref-2)