
**CONTRACT FOR THE OPEN ACCESS TO THE FLIS
INFRASTRUCTURE
2409**

USER

Name **Helmholtz-Zentrum Potsdam, Deutsches GeoForschungsZentrum
GFZ**

Registered office **Telegrafenberg, 14473 Potsdam**
VAT No. **DE138407750**

Represented by **Prof. Dr. Susanne Buitter and Dr. Stefan Schwartz**

AND**PROVIDER**

Name **Ústav výzkumu globální změny AV ČR, v. v. i. (Global Change
Research Institute, public research institute)**

Registered office **Bělidla 986/4a, 603 00 Brno**
ID No. **86652079** VAT No. **CZ86652079**

Registered in **Register of Public Research Institutes**

Represented by **Prof. RNDr. Ing. Michal V. Marek, DrSc., dr. h. c., Director**

Pursuant to Section 1746 (2) of the Civil Code, conclude a contract as follows:

PREAMBLE

1. The Provider has obtained funds from the Operational Programme of Research and Development for Innovations (hereinafter only as the "OP RDI"), Priority Axis 1 – European Centres of Excellence for Project Implementation CZ.1.05/1.1.00/02.0073, CzechGlobe – Centre for the Study of Global Climate Impact (hereinafter only as the "CG Project").
 2. Using the funds of the OP RDI, the Provider, among other things, has purchased elements of specialised infrastructure. One element is FLIS – Flying laboratory of imaging systems (hereinafter only as the "FLIS").
 3. The FLIS includes the following equipment: hyperspectral imaging spectroradiometers CASI 1500, SASI 600 and TASI 600, laser scanner Riegl Q780, air carrier Cessna C208B, and additional equipment required for data collection and processing (IMU/GNSS units, gyro-stabilization platform, navigation system, etc.).
 4. According to Chapter 5.3 of the technical description of the CzechGlobe Project, the specialised infrastructure may be used at three basic levels: a) Open access, b) Project cooperation, and c) Cooperation in contractual research.
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5. The Provider has published an Open Access Call for Submitting Projects on its website. The User has submitted the project entitled "HyPlant Data Acquisition 2024 – GFZ" (project) to the Provider. The Project forms an annex to this Contract.
6. Due to the nature of the Provider (a legal entity governed by public law whose main purpose is research) and the User (a legal entity governed by public law whose main purpose is research and dissemination of knowledge) and due to the research nature of the Project, the Provider has decided to make the FLIS available for the Project purposes.
7. CzechGlobe performs regular maintenance and repairs of the FLIS according to plans, conditions of the manufacturers of infrastructure elements, and as needed.

I. PURPOSE AND THE FACILITY OF THE CONTRACT

1. The purpose of the Contract is to use the FLIS for Open Access science and research needs.
2. The facility of this Contract is the Provider's obligation to provide access to the FLIS infrastructure, including its service. The facility of this Contract is the User's obligation to provide the Provider with cooperation (e.g. in obtaining the necessary permits, etc.) and to comply with the conditions for handling the access outputs specified in this Contract.
3. Under this Contract, flights of a total duration exceeding 5 hours may not be conducted.
4. Under this contract, total duration of campaign (data acquisition for project purposes) exceeding 5 days may not be conducted.

II. FINANCIAL ARRANGEMENTS ON THE ACCESS COSTS

1. No price or remuneration shall be paid in return for the access to the infrastructure. The User shall pay only the direct costs of the access to the infrastructure according to the actual scope of access on the basis of the calculation units specified in Annex No. 1 hereto.
2. The direct costs will be paid on the basis of an invoice.
3. VAT at statutory rate will be added to the direct costs.
4. Bank fees related to payments shall be paid by the User.
5. The invoice shall comply with the requirements of a tax document; the maturity will be 30 days from the date of issuing the invoice.

III. ACCESS TO THE INFRASTRUCTURE

1. The data will be collected between 15/05/2024 and 30/10/2024.
2. The outcomes shall be accessible to both Parties by 31/10/2024 at the latest.
3. The outcome means raw non-georeferenced data captured over the User's interest area defined in the Project.
4. The scope of the outcomes is determined in the Project.
5. The minimum accuracy of the outcomes necessary to fulfil the purpose of this Contract is specified in the Project.
6. The User shall receive the data in the form and quality in which they will be collected.
7. The user will provide a co-pilot for acquisition flights at its own expense.

IV. HANDLING THE OUTCOMES

1. The outcomes may only be used for scientific and teaching purposes. Under no circumstances may the outcomes be used for commercial use. Under no circumstances may the outcomes be used for the User's economic activity.
2. The outcomes may be further processed using any method.
3. The User shall not publish the outcomes in a form allowing further processing.
4. The User may transmit the outcomes to a third party within the scope of the licence referred to in paragraph 1 of this Article.
5. If the User publishes the outputs, the User shall indicate that the outcomes were made owing to the Provider.
6. Both the User and the Provider shall receive the outcomes.

V. REPRESENTATIVES OF THE PARTIES

1. The Provider's representative is Jan Hanuš. This Provider's representative may act on behalf of the Provider in association with this Contract, but may not modify or terminate the Contract.
2. The User's representative is Martin Herold. This User's representative may act on behalf of the User in association with this Contract, but may not modify or terminate the Contract.

VI. CONTRACTUAL PENALTIES AND LIABILITY FOR DAMAGE

1. The Provider shall claim the User to pay a **contractual penalty** of **EUR 10,000** for each case of breach of this Contract by the User.
2. A separate invoice with a maturity of 30 days will be issued for the contractual penalty; the day of taxable supply shall be deemed to be the date of issue of the invoice.
3. The obligation to pay the contractual penalty shall not exclude the right to compensation for damage in the amount exceeding the contractual penalty. If the contractual penalty is reduced by the court, the right to compensation for damage shall remain in the amount in which the damage exceeds the amount determined by the court as reasonable without any further limitation.
4. In association with the possible amount of potential future damage, the User acknowledges that the damage in association with unauthorized handling of the outcomes may reach up to twice the acquisition price of the FLIS.
5. The aggregate liability of User shall in all cases be restricted to the amount paid by it under the Contract, however, it shall not in any event exceed fifty thousand euro (EUR 50,000). The parties shall not be liable for indirect or consequential damages or losses.
6. The limitations of liability defined herein shall not apply when the damage is caused wilfully or by gross negligence.

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VII. CONTRACT TERMINATION

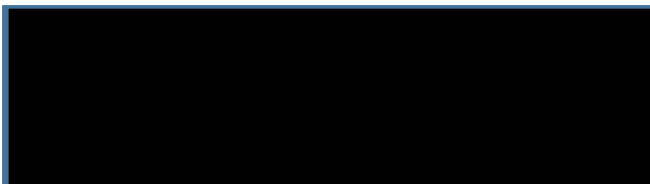
1. The Contract may be terminated by written agreement.

2. Unless the data are not collected by 31/10/2024 due to the unfavourable weather conditions, due to safety reasons, due to the aircraft/sensors failure, or failure to obtain the required permits, the Contract shall set aside in its entirety.
- 2.1. The Contract may be terminated by withdrawal from the Contract. The withdrawal shall be made in writing and efficiently served onto the other party. The Provider may withdraw from the Contract in cases stipulated by law and in the case of breach of the terms of this Contract.
- 2.2. The User may withdraw from the Contract in cases stipulated by law.

VIII. COMMON AND FINAL PROVISIONS

1. Neither Party may assign a claim or debt from this Contract or this Contract to a third party without the written consent of the other Party.
2. Should any of the provisions of this Contract prove to be unenforceable (non-existent), the effect of this defect on other provisions of the Contract shall be assessed by analogy with Section 576 of the Civil Code.
3. This Contract shall be governed by Czech law, with the exception of conflict of laws. All discussions about the Work and its performance shall take place in English.
4. This Contract may only be amended in writing, by means of a mutually signed numbered amendment to this Contract.
5. The following annexes form an integral part of this Contract:
 - a) Annex No. 1: Calculation Units for the Quantification of Direct Costs
 - b) Annex No. 2: HyPlant Data Acquisition 2024 – GFZ
6. This Contract has been drawn up in 4 copies, out of which each Party shall receive 2 copies.
7. The Parties agree unconditionally to the publication of the full wording of the Contract so that this Contract may be the subject of the information provided in accordance with Act No. 106/1999 Coll., on Free Access to Information, as amended, and Act No. 340/2015 Coll., on Special Conditions for the Effectiveness of Certain Contracts, Publication of these Contracts and on the Register of Contracts (Act on Register of Contracts), as amended
8. The Parties hereby declare that prior to its signature, they have read the Contract and agree with its content without reservation. The Contract is an expression of their true, actual, free and serious will, in witness whereof the authorised representatives of the Parties attach their own signatures.
9. This Contract becomes effective upon its publication in the Register of Contracts.

In Potsdam on 23. May 2024



Peter Grunenberg; Tino Neßlinger
Purchasing Department
Helmholtz-Zentrum Potsdam,
Deutsches GeoForschungsZentrum GFZ

In Brno on



Prof. RNDr. Ing. Michal V. Marek, DrSc., dr. h. c.
Director
Global Change Research Institute AS CR, public
research institute

ANNEX No. 1: CALCULATION UNITS FOR THE QUANTIFICATION OF DIRECT COSTS

| | Unit price | Estimated number of units per OA | Estimated price per OA (excl. VAT) |
|---|------------|----------------------------------|------------------------------------|
| Aircraft lease and operation | | | |
| FLIS lease | 0 EUR | 3 | 0 EUR |
| Direct operational costs | | | |
| Direct operational costs of the aircraft per 1 hour of flight | 1 750 EUR | 3 | 5 250 EUR |
| Direct operational costs of the aircraft crew per 1 day standby | 350 EUR | 3 | 1 050 EUR |
| | | | |
| | | | |
| Total estimated costs of Open Access | | | 6 300 EUR |

ANNEX NO. 2: PROJECT OF “HYPLANT DATA ACQUISITION 2024 – GFZ”

Application Form for Flying Laboratory of Imaging Systems (FLIS)

Part 1 : General Information

| | |
|--|--|
| Project title (characterising the scope of application) | HyPlant Data Acquisition 2024 – GFZ |
| Project acronym (optional) | <i>GFZ_HYPLANT_2024</i> |
| Start date (expected) | 20.05.2024 |
| End date (expected) | 30.10.2024 |

Project leader

| | |
|--------------------------|---|
| Title | ██████████ |
| First name | ██████████ |
| Last name | ██████████ |
| Job title | Professor |
| Organisation name | GeoForschungs Zentrum Potsdam |
| Department | Section Remote Sensing and Geoinformatics |
| E-mail | ██████████ |
| Phone number | ██████████ |
| Address | Telegrafenberg |
| City | Potsdam |
| Postal code | 14473 |
| Country | Germany |
| WWW | ██ |

Contact person for all correspondence (if different)

| | |
|--------------------------|--|
| Title | |
| First name | |
| Last name | |
| Job title | |
| Organisation name | |
| Department | |
| E-mail | |
| Phone number | |
| Address | |
| City | |
| Postal code | |
| Country | |
| WWW | |

Collaborators (if different)

| | |
|--------------------------|--|
| Title | |
| First name | |
| Last name | |
| Job title | |
| Organisation name | |
| Department | |
| E-mail | |
| Phone number | |
| Address | |
| City | |
| Postal code | |
| Country | |
| WWW | |

Part 2: Instrument

1) What type of instrument would you like to use for data acquisition?

(In case of more types of instruments please copy the following paragraph)

Specify the instrument:

Cessna 208B
Laser scanner data Q780

2) What kind of assistance by technical staff of CzechGlobe or related services (e.g. additional corrections) is needed? Data are not georeferenced and pre-processed to level of at-sensor radiance (L1). (Please specify not only technical features but outline also the financial aspects).

Georeferenced point cloud

Part 3: Access to Data

If you need any CzechGlobe data acquired previously by FLIS, please specify (e.g. area, type of data). Basic information about already acquired data is available on <http://mapserver.czechglobe.cz/>.

None

Part 4: Project description (narrative)

4.1 Abstract of the project: *If the project is accepted, it will be published on the CzechGlobe website. Please make this summary understandable to a general and non-scientific audience. (max. 400 words)*

The research of the Remote Sensing and Geoinformatics Section at the GFZ aims to establish remote sensing as a core method of the geosciences and to exploit remote sensing data for the area-wide mapping of the state of the Earth's surface and the observation of landscape and vegetation development, the impacts of climate change, natural disasters and human use. The Section's research and method development encompasses the entire range of remote sensing, from the scientific development of satellite missions, the large-scale analysis of remote sensing time series to knowledge and technology transfer, and the explore and develop multi-scale integrates sensing concepts. In that context, the campaign will provide an important piece of data for a series on ongoing GFZ research activities related to ENMAP hyperspectral data cal/val, and the monitoring of crops and wetlands. In addition, LIDAR data are acquired to explore the integration between hyperspectral and structural information in forests, wetlands and agricultural areas.

4.2 Description of the project (aims, methodology, outcomes; max. 1000 words):

The "HyPlant Data Acquisition 2024 – GFZ" aims at the acquisition of high-performance imaging spectroscopy and LIDAR data over selected sites in Germany. Data will be processed to calculate high-quality reflectance and point cloud data that can be used for different purposes. These include: high-res DEMs around peatlands (for rewetting), forests and the combination of hyperspectral and point cloud/structural data for forest characterization around our Demmin test site, and the monitoring of different agricultural crops. A particular focus will be in the area of EnMAP cal/val. The campaign aims at providing reference data for the German hyperspectral satellite mission EnMAP, which was successfully launched into space in 2022, and builds on many years of expertise in hyperspectral remote sensing from sensor to application development. Expanding cal/val capacities is also improving our expertise towards the development of ESA's hyperspectral satellite mission CHIME, which will provide the basis for global scientific analyses and the development of operational products and services through its regular coverage of the entire Earth's surfaces.

4.3 Is the project connected with / (co-)financed from a grant (e.g. EU grant, public subsidy)?

Yes / No

4.3.1. Name of the grant and funding body: *not applicable*

4.4 Do you see a potential for financing this proposed research cooperation from any research or similar funding and would you be interested in this kind of project cooperation with CzechGlobe?

Yes / No

4.4.1 If yes, please specify:

4.5 Is any part of the project covered by confidentiality?

Yes / No

4.5.1 If yes, please specify and give the reasons for confidentiality: