



EVROPSKÁ UNIE
Evropské strukturální a investiční fondy
Operační program Výzkum, vývoj a vzdělávání

PURCHASE CONTRACT FLUORESCENCE SPECTRORADIOMETER

SELLER

Name **JB HYPERSPECTRAL DEVICES GmbH**

Registered office Am Botanischen Garten 33 – 40225, Düsseldorf – Germany
Am Botanischen Garten 33 – 40225, Düsseldorf – Germany

Comp. No (IČO) HRB 89610 VAT No (DIČ) DE306789348

Incorporated in Registerbekanntmachungen court in Dusseldorf Register. Nr. 20210323165337

Represented by Tommaso Julitta

AND

BUYER

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

Registered office Bělidla 986/4a, Brno, 603 00 Brno

Comp. No (IČO) 86652079 DIČ CZ86652079

Incorporated in Register of public research institutes

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

According to section 2079 of Civil Code, the above parties conclude the following contract:

I. SUBJECT MATTER OF CONTRACT

1. The seller undertakes that it will hand over to the buyer the subject matter of purchase and perform servicing and maintenance of the subject matter of purchase. The seller undertakes

Fluorescence spectroradiometer

that it will enable the buyer to acquire the ownership rights for the subject matter of purchase and the buyer undertakes to take over the subject matter of purchase and pay the purchase price for it to the seller.

2. The seller also undertakes to hand over the documents concerning the subject matter of contract.
3. The subject matter of purchase is in the case of exercising the option right financed from the European Regional Development Fund, OP research development and education, namely from the project SustES - Adaptation strategies for sustainable ecosystem services and food security under adverse environmental conditions project, project registration number: CZ.02.1.01/0.0 /0.0/16_019/0000797.

II. SUBJECT MATTER OF PURCHASE

1. The subject matter of purchase is a spectroradiometer for estimating the fluorescence of vegetation (1 piece) and an option to purchase another piece with an option duration of 12 months.
2. The subject matter of purchase is specified in more details in Annex No 1 to this contract.
3. The part and accessories of the subject matter of purchase are specified in more detail in Annex No 1 of this contract.
4. The subject matter of purchase will be handed over in compliance with the following documents (ordered according to the degree in which they are binding):
 - a) This contract.
 - b) Written instructions from the buyer.
 - c) Technical standards concerning the materials and activities performed on the basis of this contract
5. Together with the subject matter of purchase, the seller will hand over to the buyer the documents necessary for the handover and use of the subject matter of purchase. These documents include mainly the following:
 - a) Certificates and declarations of conformity for materials and products used.
 - b) Detailed instructions or manuals for use of the subject matter of purchase.
 - c) Detailed instructions or manuals for maintenance of the subject matter of purchase.

The documents will be prepared in Czech or English language.

6. The seller undertakes to perform servicing of the subject matter of purchase for the time of duration of the guarantee period.
7. The seller further undertakes to provide online support for operating the subject of purchase and data processing, for a period of 12 months.
8. The seller undertakes to carry out training in maintenance and operation of the subject matter of purchase for at least eight hours of training. The seller undertakes to carry out training in the maintenance and operation of the subject matter of purchase no later than one month from the submission of the subject matter of purchase. The training will take place at the buyer's premises or online. The training will be conducted in Czech, Slovak or English.

III. HANDOVER OF THE SUBJECT MATTER OF PURCHASE

1. The complete and faultless subject matter of purchase will be handed over latest **within 3 months from the signature of this contract.**
2. Earlier fulfilment is allowed.

Fluorescence spectroradiometer

3. The subject matter of purchase will be handed over at the workplace of the buyer at **Bělidla 986/4a, 603 00 Brno, Czech Republic**, unless the parties agree otherwise.
4. If the seller supplies more items than agreed, the purchase contract is also concluded for the excessive amount and the price of the excessive amount is included in the total purchase price.
5. The seller undertakes to hand over the subject matter of purchase unused and without any legal or material defects.
6. The effect of the handover do not occur before the moment when the buyer is allowed to handle the subject matter of purchase at the place of handover.
7. The fulfilment cannot be refused, even if the conditions of section 1912 (1) of Civil Code are met (mutual fulfilment).

IV. PURCHASE PRICE

1. The purchase price for fulfilment of this contract was agreed to be: **EUR 56180.00 excl. VAT**.
2. The price is agreed as the highest permissible price including all the costs of the seller for fulfilment of this contract and price influences in the course of fulfilment of this contract.
3. VAT of the statutory rate will be added to the price excluding VAT.

V. PAYMENT TERMS

1. The price for the delivery of the subject matter of purchase and service performed will be paid based on one invoice, unless specified otherwise by the buyer. An annex of the invoice will be a copy of the handover of the subject matter of purchase.
 2. The seller is entitled to require an advance payment of up to **30 %** of the purchase price based on an issued advance invoice which can be delivered to the buyer latest within **30 days** after this contract is concluded or the exercise of the right of option.
 3. All the invoices shall include the particulars of a tax document and in case of exercising the option right shall contain the name and registration number of the project in the form of: SustES - Adaptation strategies for sustainable ecosystem services and food security under adverse environmental conditions project, project registration number: CZ.02.1.01/0.0 /0.0/16_019/0000797.
 4. If the seller becomes an unreliable VAT payer pursuant to section 160a of VAT act, the seller is obliged to inform the buyer about this fact in writing immediately, latest the next workday after the decision about this fact comes into legal force. In the same way, the seller is obliged to inform the buyer that proceedings have been commenced against it pursuant to section 106a of VAT act.
 5. The buyer will pay VAT to the account of the relevant tax administrator in the following cases:
 - a) If the seller publishes information that it is an unreliable VAT payer as of the day of taxable supplies or
 - b) If the seller becomes an unreliable VAT payer before the price is paid or
 - c) In case of any doubts of the buyer whether the seller is an unreliable VAT payer or not.
 6. The due date of all the invoices is 25 days from the day on which the invoice is issued.
 7. The buyer is entitled to return an invoice with defects within the due date period. The seller is obliged to submit a new invoice or a corrected invoice with a new due date specified.
 8. The seller is obliged to deliver the invoice to the address of the registered office of the buyer latest within 5 working days from the day on which the confirmation of the subject matter of purchase handover.
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9. An invoice is paid on the day when the corresponding amount is written off the buyer's account

VI. GUARANTEE OF QUALITY AND COMPLAINTS

1. The seller provides a guarantee for quality of the subject matter of purchase. For the whole duration of the guarantee period, the subject matter of purchase:
 - a) will be fit for use for the purpose stipulated in this contract.
 - b) will be fit for use for the usual purpose.
 - c) will keep its usual properties.
2. The seller provides a **guarantee for quality** for a period from **24 months**.
3. The guarantee period starts to run on the day when the subject matter handover is confirmed. The guarantee period is extended by the time starting from the day when a complaint is made and ending on the day when the defect is rectified.
4. The buyer is not in delay with claiming a defect if the right for the defect which the subject matter of purchase has at the moment of its handover is claimed in writing within 30 days from the day on which the buyer learns about the defect.
5. The Seller is not in delay with rectification of a defect if the seller starts to perform activities aiming at the defect rectification without any unnecessary delay after the defect is claimed; continues this activity duly and **latest within 40 workdays from the moment when the defect is claimed** it rectifies the defect or replaces the subject matter of purchase with a defect-free one.

VII. INTERESTS ON OVERDUE PAYMENTS AND CONTRACTUAL PENALTIES

1. The party which is in delay with payment of a debt can be asked by the other party, if it fulfils duly its contractual and statutory obligations, to pay an interest on overdue payment, with the exception of the cases when the party which is in delay is not responsible for the delay. The parties agree on an **interest on overdue payment** at the amount of **0.025 % from the due amount per day**.
2. The buyer will charge a **contractual penalty of EUR 100 per day** in the following cases:
 - a) Delay of the seller with handover of the subject matter of purchase.
 - b) Delay with rectification of a defect on the subject matter of purchase at the moment of its handover.
 - c) Delay with rectification of a guarantee defect.
 - d) Delay of the seller in accepting the order in relation to the exercise of the option right.
3. The buyer will charge a contractual penalty of CZK 50,000 in case the seller does not inform the buyer that the seller has become an unreliable VAT payer or that proceedings have been commenced against the seller pursuant to section 106a of VAT act.
4. A separate invoice will be issued for the contractual penalty with the due date of 30 days. The day of taxable supplies is considered to be the day on which the invoice is issued.
5. The parties agree that the obligation to pay a contractual penalty does not affect the right for damage compensation at the amount at which it exceeds the contractual penalty. If a contractual penalty is decreased by the court, the right for damage compensation remains at the amount at which the damage exceeds the amount determined by the court as adequate, without any other limitations.

VIII. OPTION RIGHT

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1. The buyer is entitled to exercise the option to deliver another piece of identical subject matter of purchase, under identical conditions of delivery of the first piece of subject matter of purchase.
2. The buyer is obliged to notify the seller of information on the exercise of the option right by sending an order for the second piece of the subject matter of purchase to the e-mail specified in Article X paragraph 2 of this contract, or in writing to the address of the seller's registered office, conditions set out in this contract. The seller is obliged to confirm this order within 5 working days of receiving the order by e-mail specified in Article X, paragraph 1 of this contract, and from this day the period for delivery of the subject matter of purchase specified in this contract begins.
3. The buyer is entitled to use this option right within 12 months of signing this contract, at the price specified in Article IV. paragraph 1 of this contract.

IX. CONTRACT TERMINATION

1. The contract can be terminated by a written agreement.
2. The buyer can withdraw from the contract in case of its significant breach by the seller. A significant breach of the contract is considered to be among others:
 - a) Delay of the seller with handover of the subject matter of purchase by more than 30 days.
 - b) Commencement of bankruptcy proceedings in which the seller is in the position of the debtor.
 - c) If it is established that untrue data were included in the bid from the seller in connection with the public contract.
3. The seller can withdraw from the contract in case of its significant breach by the buyer. A significant breach of the contract is considered to be among others:
 - a) Commencement of bankruptcy proceedings in which the buyer is in the position of the debtor.
 - b) Delay of the buyer with settlement of an invoice by more than 30 days.
4. Withdrawal must be made in writing and it becomes valid when delivered to the other party.
5. Withdrawal from the contract does not cancel the mutual vindicatory liability of the parties.

X. RESPONSIBLE PERSONS OF THE PARTIES

1. The representative of the buyer is Ing. Jan Hanuš, hanus.j@czechglobe.cz. This representative of the buyer can act on behalf of the buyer in connection with this contract in any respect, but he is not allowed to change or terminate this contract.
2. The representative of the seller is Dr. Tommaso Julitta This representative of the seller can act on behalf of the seller in connection with this contract in any respect, but he is not allowed to change or terminate this contract.

XI. JOINT PROVISIONS

1. The right of ownership for the subject matter of purchase is transferred at the moment when the subject matter of purchase is handed over to the buyer.
2. Without written consent from the other party, none of the parties is allowed to transfer a receivable or liability arising from this contract to a third party.
3. Each of the parties accepts the risk of a change of circumstances pursuant to section 1765 of Civil Code for its debts arising on the basis of this contract.

Fluorescence spectroradiometer

4. No rights and obligations can be inferred from practices introduced by the parties or customs observed as a standard, both generally and in the particular field, concerning the subject matter of fulfilment of this contract.
5. If any of the provisions of this contracts becomes imaginary (petty), the impact of this defect on the other provisions of this contract will be assessed similarly according to section 576 of Civil Code.
6. The parties exclude application of the following provisions of Civil Code to this contract: section 557 (contra proferentem rule).
7. The seller is aware of the fact that it is a person obliged to cooperate during financial inspection. The seller is obliged to bind all its subcontractors to cooperate during a financial inspection.
8. The parties agree that the court competent to negotiate and decide all the potential disputes arising between the buyer and the seller pursuant to this contract or in connection with it is the general court of the buyer.
9. For the entire duration of the contract, the Seller shall ensure:
 - a) decent working conditions, fulfillment of obligations arising in particular from labor law, employment and occupational health and safety regulations, towards all persons who will participate in the performance of the contract, while the fulfillment of these obligations will be ensured by the seller and his subcontractors,
 - b) proper and timely fulfillment of financial obligations to its subcontractors under the conditions arising from this contract,
 - c) elimination of environmental impacts in the pursuit of sustainable development.

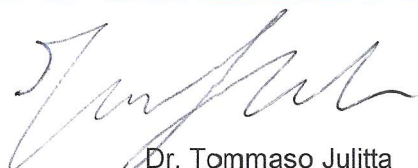
XII. FINAL PROVISIONS

1. This contract is governed by Czech legal regulations with the exception of colliding provisions. All the connected negotiations are held in Czech, Slovak or English language.
2. This contract does not depend on any other contact. No other contact depends on this contract.
3. This contract contains full agreement concerning the subject matter of the contract and all the particulars the parties were supposed to and wanted to agree in the contract and which they consider important for binding character of this contract. No statement of the parties made during negotiations concerning this contract may be interpreted in contradiction with the explicit provisions of this contract and it does not establish an obligation of any of the parties.
4. This contract can only be changed in writing in the form of numbered supplements to this contract. The parties can object invalidity of the contract or its supplement anytime due to the failure to observe the form, even if the fulfilment has already started.
5. The parties are aware that this contract meets the requirements specified in Act No 340/2015 Coll. and therefore it is subject to the obligation to be published in the register of contracts. The buyer undertakes to enter the contract in the register of contracts within the statutory period and send a confirmation that the contract was published to the seller upon its request.
6. This contract is prepared in two counterparts and each party will obtain one of them.
7. The following annexes are an integral part of this contract:
 - a) Annex No 1: Technical specification of the subject matter of purchase
8. This contract comes into force at the moment when it is published in the register of contracts.

Milano on this day 23/04/2021

Brno, on this day

M. J. 2021



Dr. Tommaso Julitta
Managing Director

JB Hyperspectral Devices GmbH



603 00 Brno, Bělidla 4a
Czech Republic

prof. RNDr. Ing. Michal V. Marek, DrSc., dr. h. c.
Director

Ústav výzkumu globální změny AV ČR, v. v. i.
(Global Change Research Institute)

ANNEX NO 1: TECHNICAL SPECIFICATION OF THE SUBJECT MATTER OF PURCHASE

Subject matter of purchase will fulfil all followed technical parameters:

Fluorescence spectroradiometer

Manufacturer: JB Hyperspectral Devices GmbH

Type: FloX

General description:

The system must consist of two spectroradiometers. The first spectroradiometer will be used to detect the fluorescence signal. The second spectroradiometer will be used to interpret the fluorescence signal.

Technical parameters:

1. Instrument will be designed for use in outdoor conditions
2. Both spectroradiometers will measure incoming solar radiation and reflected radiation from the vegetation
3. First and second spectroradiometers will be mounted in the same box with mounting points
4. Both spectroradiometers will be possible to manually operate from same interface
5. Instrument will be supplied including software for processing of the data. Final output of first spectroradiometer will be fluorescence estimation in radiometric values. Final output of second spectroradiometer will be at sensor reflectance and calculated vegetation indices.
6. Instrument will be supplied including spectral and radiometric calibration and calibration documentation
7. Fully autonomous measurement mode will be available for instrument
8. Instrument will be able to provide unattended data collection for months
9. Instrument will repeat measurements in 60 sec intervals at least
10. Remote access and data download will be possible
11. Remote access and data download via SmartFlux (LiCOR) will be possible
12. Instrument will be cooled (inside temperature of instrument will be stabilised)
13. Power consumption of instrument will not exceed 120 Watt
14. Possibility of operation from battery/solar panels will be available

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15. Data storage capacity will be 30 GB at least
16. Field of View (FOV) of both spectroradiometers (reflected radiation) will be between 20 and 30 degrees
17. Difference of FOV between first and second spectroradiometer (reflected radiation) will not be higher than 2 degrees
18. Field of View (FOV) of both spectroradiometers (downwelling radiation) will be 180 degrees
19. Length of optical cables for both spectroradiometers (reflected radiation) will be 7 meters $\pm 5\%$
20. Weight of the instrument will not exceed 20 kg
21. Size of the instrument will not exceed 60 x 40 x 30 cm
22. Instrument will be able to operate in range of temperatures (-10 to 50 °C).

Technical parameters of first (fluorescence) spectroradiometer:

1. Minimum spectral range of the spectroradiometer: 680 – 780 nm
2. Maximum spectral step of individual bands (spectral sampling): 0,2 nm
3. Spectral resolution – FWHM (Full Width Half Maximum) of one band will higher than: 0,4 nm
4. Minimum signal coding (digitalized output): 14 bitů

Technical parameters of second (standard) spectroradiometer:

1. Minimum spectral range of the spectroradiometer: 420 – 950 nm
2. Maximum spectral step of individual bands (spectral sampling): 3,0 nm
3. Spectral resolution – FWHM (Full Width Half Maximum) of one band will higher than: 3,0 nm
4. Minimum signal coding (digitalized output): 12 bitů