

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

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**LETTER OF AGREEMENT**

between

the Food and Agriculture Organization of the United Nations

and

*“Tashkent Institute of Irrigation and Agricultural Mechanization Engineers” National  
Research University (Uzbekistan)*

for provision of

**Output 3.2 Enhanced Comprehensive Environmental Quality Management and Regulatory  
Practices**

**Activity 3.2.1:** Assess water management in dust storm areas by installing monitoring network and training course

**Activity 3.2.2:** Water and soil quality assessment for Karakalpakstan and training on it.

of the Joint UNDP-FAO Project<sup>1</sup>: “Building knowledge and skills of local partners and communities to address environmental insecurities through innovative air, land, and water management solutions in the Aral Sea Region”

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<sup>1</sup> The term “project” is used for programmes, joint programmes and projects

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This Letter of Agreement (hereinafter the “LoA” or the “Agreement”) is made between the Food and Agriculture Organization of the United Nations (hereinafter referred to as “FAO”) and “*Tashkent Institute of Irrigation and Agricultural Mechanization Engineers*” National Research University (TIAME NRU) (Uzbekistan) hereinafter referred to as the “Service Provider”).

TIAME NRU will lead the Consortium, represented by researchers from TIAME NRU, Scientific Institute of Soil Science and Agrochemistry under the Ministry of Agriculture. LLS Innovation-Ideas, Nukus Branch of the Tashkent Agrarian University and Karakalpakstan branch of the Institute of Irrigation and Water Problems.

FAO and the Service Provider (hereinafter collectively referred to as the “Parties”), in consideration of the mutual covenants and agreements contained herein, hereby agree as follows:

### 1. Scope of Services

The Service Provider will provide certain services (the “Services”) described in detail in Annex B in support of the

Activity 3.2.1: Assess water management in dust storm areas by installing monitoring network and training course

Activity 3.2.2: Water and soil quality assessment for Karakalpakstan and training on it.

in the scope of the Joint UNDP-FAO Project: “Building knowledge and skills of local partners and communities to address environmental insecurities through innovative air, land, and water management solutions in the Aral Sea Region.”

### 2. Definitions

For the purposes of this Agreement, if not otherwise defined herein, the definitions listed in Annex A shall apply.

### 3. Compensation

To enable the Service Provider to provide the Services, FAO will pay the Service Provider a total amount not exceeding **328,500,000 UZS**, which represents FAO’s maximum financial liability under this Agreement (“Maximum Financial Liability”). Payments shall be made in accordance with the payment provisions set forth in Annex B.

In addition, FAO is committed to:

- cover directly expenditures associated with travel costs, up to maximum 12,000 USD (the equivalent in Uzbek Sum)
- provide the equipment, required for implementation of the activities (list of equipment to be purchased by FAO is mentioned in Annex D).
- contribute to the training expenditures (e.g. lunch for participants) up to maximum 1,111 USD for 3 training seminars for farmers of Karakalpakstan.

### 4. Designation of the FAO LoA Manager

Ms. Sara MARJANI ZADEH, Land and Water Officer, FAO Sub-Regional Office for Central Asia (FAOSEC), +90-312-307 95 00 ([sara.marjanizadeh@fao.org](mailto:sara.marjanizadeh@fao.org)) is designated the officer responsible for the management of this Agreement (“LoA Manager”) on behalf of FAO.

## 5. Entry into Force and Term

The Agreement will enter into force upon the later of **4 September 2024** and the date both Parties have signed the agreement (the “Effective Date”). Services shall be provided until **31 December 2024** (the “Services End Date”), unless terminated earlier in accordance with the provisions below, or extended by mutual, written agreement (the period between the Effective Date and the Services End Date, is hereinafter referred to as the “Operational Period”). Following the Operational Period there will be an additional period of 30 calendar days during which the Service Provider shall complete and submit to FAO the Final Report (the “Closure Period”). The Agreement shall terminate at the end of the Closure Period.

## 6. Purpose of the LoA

a. The purpose for which the funds provided by FAO under this Agreement shall be used is the following: to work with the FAO Project Task Force (PTF) and National and International Consultants in providing the following outputs

- under the “Building knowledge and skills of local partners and communities to address environmental insecurities through innovative air, land, and water management solutions in the Aral Sea Region” project:

**Output 3.2** Enhanced Comprehensive Environmental Quality Management and Regulatory Practices

Activity 3.2.1: Assess water management in dust storm areas by installing monitoring network and training course

Activity 3.2.2: water and soil quality assessment for Karakalpakstan and training on it

b. A detailed description of the Services, including technical and operational requirements, budget, work plan and timeframe, performance indicators and means of verification, as well as inputs to be provided free-of-charge by the Parties, if any, are set out in detail in Annex B.

## 7. Notices and Communications

All notices and other binding communications shall be in English, Spanish or French and shall be deemed to have been validly given (a) when delivered in person, (b) upon receipt after dispatch by registered or certified mail or international courier service, (c) upon confirmation of receipt by facsimile transmission or by email, in each case addressed as follows:

if to FAO:

Ms. Sara Marjani Zadeh, Land and Water Officer, FAO Sub-Regional Office for Central Asia (FAOSEC), +90-312-307 95 00 (Sara.Marjanizadeh@fao.org)

if to the Service Provider:

Dr. Akmal Karimov, Ass. Prof., Ecology and Water Resources Management dep., Tashkent Institute of Irrigation and Agriculture Mechnization Institute, National Research University (TIAME-NRU), + 99893-5310788 ( [akmalkarimov234@gmail.com](mailto:akmalkarimov234@gmail.com))

or to such other address as either Party may from time to time specify in writing to the other Party.

## 8. Terms and Conditions; Interpretation of the Contract

This Agreement is subject to the General Terms and Conditions for Letters of Agreement attached hereto as Annex A. The provisions of such Annex shall control the interpretation of this Agreement and in no way shall be deemed to have been derogated by the contents of this LoA or any other Annexes, unless otherwise expressly stated under Annex C of this LoA, entitled "Special Conditions and Derogations."

**9. Annexes, Appendices, Schedules: Integration**

The Annexes, Appendices and Schedules to this Agreement constitute an integral part of this Agreement and together constitute a single binding contractual instrument.

**10. Entire Agreement; No Prior Agreement**

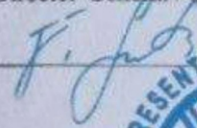
This Agreement constitutes the entire agreement between the Parties and terminates and supersedes any and all prior agreements and understandings (whether written or oral) between the Parties with respect to the subject matter of this Agreement.

**Signed on behalf of the Food and Agriculture Organization of the United Nations:**

Name and title of FAO Officer:

**Dr. Viorel Gutu**

Assistant Director-General / Regional Representative for Europe and Central Asia

Signature: 



**Signed on behalf of "Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" National Research University (TIAME-NRU)**

Name and title of the authorized signatory for Service Provider:

**Prof. Bekbadir Murodov**

Rector of the TIAME-NRU

Signature: 

Date: \_\_\_\_\_



The Service Provider will sign two copies of this Agreement and initial each page of this Agreement and its Annexes and return one complete executed set to the LoA Manager.

## **ANNEX A TO LETTER OF AGREEMENT: GENERAL TERMS AND CONDITIONS FOR LETTERS OF AGREEMENT**

### **Article I. DEFINITIONS**

**Section 1.01 Agreement:** As defined in the preamble to the LoA, the agreement between the Parties hereto.

**Section 1.02 Closure Period:** As defined in the LoA in paragraph 5, the additional period of time granted to the Service Provider to prepare and submit to FAO the Final Report.

**Section 1.03 Confidential Information:** As defined in this Annex A, Section 13.01, below.

**Section 1.04 Credit Event:** Any sudden and tangible (negative) change in the Service Provider's credit standing or decline in credit rating or other event that brings into question the Service Provider's ability to repay its debt.

**Section 1.05 Effective Date:** As defined in the LoA in paragraph 5, the date this Agreement enters into force.

**Section 1.06 Executing Institution:** An Executing Institution can be any of the following institutions selected to provide Services to, or on behalf of, FAO under the provisions of Manual Section 507: i) a United Nations or other Intergovernmental organization; ii) a national or local government body; iii) an Eligible Entity with whom FAO has established by means of a Memorandum of Understanding an official partnership agreement with a partnership objective relevant to the purpose and the activities of this Agreement. For purposes of this Agreement, (i) the Executing Institution shall be the entity named in the preamble to the LoA and (ii) the terms Service Provider and Executing Institution are used interchangeably.

**Section 1.07 FAO:** Food and Agriculture Organization of the United Nations.

**Section 1.08 Final Report:** As defined in this Annex A, Section 9.01, below.

**Section 1.09 Financial Period:** , The period from the Effective Date at the outset of the Operational Period to the end of the Closure Period[ referred to in the LoA in paragraph 5].

**Section 1.10 Force Majeure:** As defined in this Annex A, Section 17.03, below.

**Section 1.11 Intergovernmental:** An organization established by a treaty or charter, and which is made up of sovereign nations.

**Section 1.12 Key Personnel:** Any persons whose names are set forth on Annex B, Appendix 2, if any.

**Section 1.13 LoA:** Specifically, this Letter of Agreement. Generally, a contractual instrument used to obtain Services from a Service Provider in accordance with FAO's policies, regulations and procedures described in detail in Section 507 of the Administrative Manual.

**Section 1.14 LoA Manager:** The person named in paragraph 4 of the LoA, or such other person as has duly been appointed by FAO to replace such person.

**Section 1.15 Manual Section 507:** FAO's Administrative Manual for letters of agreement

**Section 1.16 Maximum Financial Liability:** As defined in the LoA in paragraph 3, the amount representing FAO's maximum financial liability under this Agreement.

**Section 1.17 Miscellaneous Income:** As defined in this Annex A, Section 8.02, below.

**Section 1.18 Operational Period:** As defined in the LoA in paragraph 5, the period between the Effective Date and the Services End Date.

**Section 1.19 Party or Parties:** As defined in the preamble to the LoA, each of FAO and the Service Provider shall be a Party under this Agreement and collectively shall be referred to as the Parties.

**Section 1.20 Returnable Items:** As defined in this Annex A, Section 8.01, below.

**Section 1.21 Service Provider:** The entity named in the preamble to the LoA, selected to provide Services to, or on behalf of, FAO under the provisions of FAO Manual Section 507. In specific circumstances the Service Provider may be referred to in the LoA as the Executing Institution. For the purpose of this Agreement, the terms Service Provider and Executing Institution are used interchangeably.

**Section 1.22 Services:** Those services defined in the LoA in paragraph 1 and more fully described in Annex B of this Agreement. For purposes of any LoA with an Executing Institution the terms Services and Activities are used interchangeably.

**Section 1.23 Services End Date:** As defined in the LoA in paragraph 5, the date the Operational Period ends.

**Section 1.24 Termination Event:** As defined in this Annex A, Section 18.01.

**Section 1.25 VAT:** Value Added Tax.

**Article II. LEGAL STATUS OF THE PARTIES**

**Section 2.01** Pursuant, inter alia, to the FAO Constitution and the Convention on the Privileges and Immunities of the Specialized Agencies, FAO has full juridical personality and enjoys such privileges and immunities as are necessary for the independent fulfilment of its purposes.

**Section 2.02** Nothing contained in this Agreement or in any document or arrangement relating thereto shall be construed as conferring any privileges or immunities of FAO on the Service Provider, its personnel or any other persons providing the Services on its behalf.

**Section 2.03** The Service Provider shall be registered as a governmental, Intergovernmental (e.g. other United Nations organization), non-governmental or other not-for-profit entity. It shall have independent legal status vis-à-vis FAO, and it shall be fully responsible, in particular, for the acts and omissions of its personnel, agents and other representatives.

**Section 2.04** None of the officials, representatives, employees, or subcontractors of either of the Parties shall, by virtue of this Agreement, be considered in any respect as being an employee or agent of the other Party and nothing contained in this Agreement or in any document or arrangement relating thereto shall be construed as establishing or creating between the Parties the relationship of employer and employee or of principal and agent. The personnel assigned by the Service Provider to provide the Services shall not be considered in any respect as being employees or agents of FAO.

**Article III. RESPONSIBILITY FOR EMPLOYEES; KEY PERSONNEL**

**Section 3.01** The Service Provider will be responsible for all activities related to the provision of the Services and the acts or omissions of all employees, agents (including subcontractors) and other representatives providing the Services on its behalf.

**Section 3.02** FAO will not be held responsible for any accident, illness, loss or damage that may occur during the provision of the Services or any claims, demands, suits or judgements arising therefrom, including for any injury to the Service Provider's employees, agents (including subcontractors) or other representatives or to third parties, or any loss of, damage to, or destruction of property of third parties, arising out of or connected to the Service Provider's work or performance under this Agreement. Consequently, FAO will not entertain any request or accept any claim for indemnities resulting from such occurrence.

**Section 3.03** Upon FAO's request, the names of the persons selected by the Service Provider to provide Services hereunder shall be set forth on Appendix 2 to Annex B (such persons shall be deemed "Key Personnel"). FAO may also require that detailed personal history statements for Key Personnel be furnished to FAO. During the Operational Period, the Service Provider shall not substitute any Key Personnel without FAO's prior authorization. In the event a substitution becomes necessary, the Service Provider shall offer for FAO's consideration only persons having equal or comparable experience and skills to the Key Personnel being substituted. After a substitution has been approved by FAO, Appendix 2 shall be revised to reflect the substitution and the new individual shall be considered Key Personnel.

**Section 3.04** The Service Provider shall be responsible for the professional and technical competence of the Key Personnel under this Agreement and will select reliable and competent individuals who will be able to effectively perform the obligations under this Agreement and who, while doing so, will respect the local laws and customs and conform to a high standard of moral and ethical conduct.

**Section 3.05** FAO may request that the Service Provider replace any personnel, including Key Personnel, who, in the opinion of FAO, have not met appropriate standards of conduct or who are not performing as required under this Agreement.

**Article IV. INSURANCE**

**Section 4.01** The Service Provider shall make and thereafter maintain, in compliance with national legislation, or as otherwise required by FAO, provision for adequate insurance to cover such risks as damage to property and injuries to persons affected by the performance of this Agreement, as well as third party liability claims.

**Section 4.02** The Service Provider acknowledges and agrees that FAO accepts no responsibility for providing life, health, accident, travel or any other insurance coverage which may be necessary or

desirable in respect of any personnel performing Services for the Service Provider in connection with this Agreement.

**Section 4.03** Unless otherwise provided in this Agreement, prior to commencement of performance of any other obligations hereunder, and subject to any limits set forth hereunder, the Service Provider shall take out and shall maintain for the entire Financial Period:

- a) insurance reasonably adequate to deal with losses against travel related risks for all travelers whose travel costs are funded under this Agreement, or ensure that travelers have undertaken such insurance themselves at own initiative and cost;
- b) to the extent required by national legislation and local law where Services are being performed, all risks insurance to cover damage to property as a result of the performance of this Agreement, including any equipment or vehicles, or other transportation means, whether or not owned by the Service Provider, used during or in connection with the performance of this Agreement;
- c) to the extent required by national legislation and local law where Services are being performed, workers' compensation insurance, or its equivalent, or employer's liability insurance, or its equivalent, with respect to the Service Provider's personnel sufficient to cover all claims for injury, death and disability, or any other benefits required to be paid by law, in connection with the performance of the Agreement and particularly in view of the limitation of liability provisions of Section 3.02; and
- d) such other insurance as may be agreed upon in writing between FAO and the Service Provider.

#### **Article V. FAO RIGHTS OF ACCESS**

**Section 5.01** FAO's LoA Manager or authorized agents shall be granted access to all documentation and sites related to the Services, including during implementation of field activities and after the Operational Period, for review and audit purposes. The Service Provider agrees to comply without delay with any request by FAO that it submit evidence of expenses.

#### **Article VI. SUBCONTRACTING; ASSIGNMENT**

**Section 6.01** In the event the Service Provider requires the services of subcontractors to perform any obligations under this Agreement, except as may be provided in this Agreement, the Service Provider shall obtain the prior written authorization of FAO. FAO shall be entitled, in its sole discretion, to review the qualifications of subcontractors and to reject any proposed subcontractor that FAO reasonably considers is not qualified to perform obligations under the Agreement.

**Section 6.02** The Service Provider shall have the sole and full responsibility for the performance of its obligations under this Agreement. Any subcontracting arrangement shall in no way relieve the Service Provider of its responsibility to deliver the Services in accordance with this Agreement.

**Section 6.03** Subcontracts of the Services or procurement of the items set forth in the Annex shall be carried out in conformity with the Service Provider's own procurement rules and procedures. The Service Provider confirms that its procurement rules and procedures, and their implementation, ensure that the procurement process is transparent and consistent with generally-accepted principles governing public sector procurement to obtain best value for money.

**Section 6.04** The Service Provider will ensure that any agreement with any subcontractor requires such subcontractor (i) to maintain appropriate records to satisfy the requirements of Section 9.02 for a period of five years after the Financial Period, or such longer period as has been notified to the Service Provider, and (ii) to provide FAO access to all documentation and sites related to the Services, including during implementation of field activities and after the Financial Period, for review and audit purposes.

**Section 6.05** The terms of any subcontract shall be subject to, and shall be construed in a manner that is fully in accordance with, all of the terms and conditions of this Agreement.

#### **Article VII. REIMBURSEABLE AMOUNTS: PERMITTED AND INELIGIBLE EXPENDITURES**

**Section 7.01** FAO will cover or reimburse eligible direct costs incurred in connection with implementation of the Services that:

- a) are specifically agreed and recorded in the Budget;
- b) are necessary for carrying out the Services, directly attributable to such activities, and have been charged in proportion to their actual use;



- c) are incurred during the Operational Period, with the exception of costs related to any audit of the Final Report;
- d) are actually incurred by the Service Provider, i.e. they represent real expenditure definitively and genuinely borne by the Service Provider;
- e) are recorded using historical cost;
- f) are reasonable, justified, identifiable and backed by supporting documents; and
- g) have not been claimed, reimbursed or budgeted for funding from any other source other than FAO pursuant to this Agreement.

**Section 7.02** FAO will not cover or reimburse costs outside the scope of this Agreement, including but not limited to, the following costs:

- a) bonuses or other exceptional remuneration other than ordinary salary;
- b) purchase cost of equipment and assets unless such asset or equipment is specifically purchased for the execution of activities under the Agreement and ownership is transferred to a beneficiary designated by FAO or, in the absence of such designation, remains with the Service Provider;
- c) duties, taxes and charges, including VAT, that are recoverable or deductible by the Service Provider;
- d) debts and debt service charges;
- e) provision for losses, debts or potential future liabilities;
- f) banking charges incurred in connection with the transfer of funds from FAO;
- g) costs incurred after the Operational Period, other than those permitted pursuant to Section 7.01(b), or after notification by FAO to the Service Provider to suspend activities under the Agreement or that the Agreement is being terminated, with the exception of such costs as are expressly agreed to by FAO;
- h) the purchase of land or buildings;
- i) interest owed by the Service Provider to any third party; and
- j) currency exchange losses.

**Section 7.03** FAO shall not pay interest or other charges to the Service Provider for late payment by FAO.

#### **Article VIII. RETURN OF UNEXPENDED FUNDS AND ASSETS; FAO'S RIGHT TO WITHHOLD, OFFSET OR RECOVER CERTAIN FUNDS AND ASSETS**

**Section 8.01** Upon termination of the LoA, the Service Provider shall return to FAO any unexpended funds budgeted and paid by FAO under this Agreement, any non-expendable assets that were procured by FAO and used by the Service Provider in executing the Services under this Agreement (other than those that were explicitly transferred to the Service Provider pursuant to transfer of ownership form), or the value thereof if the return of such assets is impracticable, as well as any inputs which have not, at the time of such termination, been distributed to the Beneficiaries (collectively, the "Returnable Items"). Returnable Items shall also include any Miscellaneous Income (as defined below) which was not authorized to be used, if any.

**Section 8.02** "Miscellaneous Income" shall consist of, inter alia, proceeds or receivables from the sale of any item or other asset provided under this Agreement, as well as any bank interest earned or accrued on funds remitted by FAO and which have been deposited or temporarily placed in an interest-bearing account. For LoAs with a Maximum Financial Liability of \$200,000 or greater, the Service Provider shall record all Miscellaneous Income as credit against funds receivable from FAO. The Service Provider shall not use Miscellaneous Income during the Operational Period except in the event FAO has granted express authorization to use Miscellaneous Income for the Services. Upon termination of the LoA, the Service Provider shall, in accordance with Section 8.01 credit such unused Miscellaneous Income to FAO in its Final Report.

**Section 8.03** FAO reserves the right to withhold, offset or recover from the Service Provider an amount equal to the value of:

- a) any expenditure found ineligible under criteria provided in this Agreement, including expenditures that are not included or properly reflected in any financial report or supported by appropriate documentation, as required by this Agreement;
- b) any Returnable Items; and
- c) any expenditure made by the Service Provider (or payment made by FAO) as a result of any irregularity or corrupt, fraudulent, collusive, coercive, unethical and/or obstructive practice, as defined in this

Agreement, by the Service Provider, any successors or assigns, employees, agents or representatives, or such other amount as is determined by FAO to be equitable under the circumstances.

**Section 8.04** FAO shall formally notify the Service Provider of its intention to withhold, offset or recover any such sums, specifying the amount and the reasons therefor and inviting the Service Provider to provide additional documentation in connection with the disqualified expenditure or Returnable Items within 30 days from the date of receipt of the notice. After examination of any additional documentation submitted by the Service Provider or if the Service Provider does not submit any additional documentation by the stated deadline, FAO will formally notify the Service Provider of its decision to withhold or offset other amounts payable to the Service Provider under this or any other agreement, and/or to proceed with a recovery of the disqualified expenditure or Returnable Items. Where FAO selects to proceed with a recovery, it shall also provide the Service Provider with a final deadline for repayment to FAO.

#### **Article IX. REPORTING AND RECORD MAINTENANCE REQUIREMENTS**

**Section 9.01** The Service Provider shall submit to the LoA Manager the Reports listed in Annex B on the dates set forth therein, including a final report consisting of a narrative report and a financial report within 30 days following the Services End Date (the “Final Report”). The Final Report must be sufficiently detailed to allow certification of deliverables and of expenditures, including spot checks on representative or risk-based transactions. The Final Report shall be signed and certified as to its correctness by a duly designated representative of the Service Provider (e.g. executive officer, chief financial officer, chief accountant or similar).

**Section 9.02** The Service Provider shall keep accurate financial records and maintain supporting documentation showing the utilization of inputs and funds under this Agreement and any other documentation related to the Services for a period of five years following the Financial Period, or such longer period as has been notified by FAO, during which period FAO, or a person designated by FAO, or the relevant auditing authority (e.g. national audit office) shall have the right, at any time, to conduct reviews and/or audits relating to any aspect of this Agreement. The Service Provider shall provide its full and timely cooperation with any such review or audit. Full and timely cooperation shall include, but not be limited to, making available to respond to questions employees or agents with knowledge of the Agreement and granting to FAO or other designated persons or relevant authority, access at reasonable times and conditions to the Service Provider’s premises or other sites where documentation related to this Agreement is kept or activities related to this Agreement are carried out. This obligation will survive the expiration or termination of this Agreement.

**Section 9.03** In addition to the requirements set forth in Section 9.01, the Final Report for LoAs having a Maximum Financial Liability of \$200,000 or greater shall also be signed by an independent third party auditor. Such auditor’s fees may be included in the LoA budget and reimbursed to the Service Provider.

**Section 9.04** If the Service Provider fails to submit the Final Report specified in Section 9.01 above within 30 calendar days following the Services End Date, FAO shall, after notice to the Service Provider, be under no further obligation to make payment to the Service Provider under this Agreement.

#### **Article X. MAXIMUM FINANCIAL LIABILITY**

**Section 10.01** This Agreement is a cost reimbursable contract, and FAO shall pay only costs actually incurred pursuant to the budget set forth in Annex B. Funds provided by FAO under this Agreement are to be used by the Service Provider exclusively for the provision of the Services in accordance with the terms of this Agreement. Neither the Service Provider nor its personnel nor any other persons providing the Services on its behalf, will incur on behalf of FAO any additional commitment or expense exceeding the Maximum Financial Liability.

#### **Article XI. USE OF NAME, EMBLEM OR OFFICIAL SEAL**

**Section 11.01** FAO does not, through this Agreement, endorse or recommend any commercial products, processes or services. The Service Provider may, in any information disseminated to the press, internal stakeholders or beneficiaries of the Services, including in any related publicity material, official notices, external communications, reports or publications about the Services, acknowledge the contributions of FAO. Any such acknowledgment should also provide a disclaimer that FAO’s contributions should not be considered as an endorsement of the Service Provider’s products, processes or services, or, in

connection with a report or publication, its views, unless FAO has explicitly authorized the relevant text. The Service Provider may also refer to this Agreement and to FAO's funding thereof in any financial or other report that the Service Provider is required to issue in order to comply with reporting requirements set by national law or its own internal statutes and regulations. No further use of the FAO name shall be permitted unless expressly authorized by FAO in writing.

**Section 11.02** FAO may, in certain cases, direct the Service Provider to use the FAO logo in connection with outputs described in this Agreement. Other than when directly required by FAO, FAO's logo may not be used by the Service Provider without the prior approval of FAO. Any requests for approval shall be directed to the LoA Manager named in this Agreement copying the email address "logo@fao.org". All use of the FAO logo shall be carried out in accordance with FAO logo policy, which, together with the appropriate FAO logo electronic files, will be provided upon request by the LoA Manager.

**Section 11.03** FAO reserves the right to request that the Service Provider limit use of its name and logo at any time, including when publicity under this provision could put the staff of the Parties at risk.

## **Article XII. COPYRIGHT, PATENTS AND OTHER PROPRIETARY RIGHTS**

**Section 12.01** Any intellectual property rights including copyright, of material such as publications, software and designs, made available by the Parties to be used in implementing activities under this Agreement will remain with the originating Party. All intellectual property rights, including copyright, in the outputs produced under this Agreement are vested in FAO, including, without any limitations, the right to use, publish, translate, sell or distribute, privately or publicly, any item or part thereof. FAO hereby grants to the Service Provider a non-exclusive royalty-free license to use, publish and distribute the outputs delivered under this Agreement for non-commercial purposes, provided that FAO is acknowledged as the source and copyright owner.

## **Article XIII. CONFIDENTIALITY**

**Section 13.01** Neither the Service Provider nor its personnel will communicate to any other person or entity any "Confidential Information" disclosed to it by FAO nor will they use this information for private or corporate advantage. For purposes of this provision, Confidential Information is information (a) that has been provided by FAO and marked or flagged as confidential or (b) that is not available to the general public at the time of such disclosure (and which does not otherwise become available to the public through any dissemination or breach by the Service Provider).

**Section 13.02** The Service Provider may disclose Confidential Information to the extent required by law, subject to and without any waiver of the privileges and immunities of FAO, provided that the Service Provider gives FAO sufficient prior notice of a request for the disclosure in order to allow FAO a reasonable opportunity to take protective measures or such other action as may be appropriate before any such disclosure is made.

**Section 13.03** To comply with disclosure requirements and enhance transparency, FAO reserves the right to release and/or publish the following information about this Agreement: (i) the name and nationality of the Service Provider; (ii) a brief description and location of the Services provided; and (iii) the amount of this Agreement. FAO may also disclose information about this Agreement or the Service Provider to the extent required by the FAO Constitution or consistent with or pursuant to resolutions or regulations of the Conference of FAO. The Service Provider specifically consents to the release and/or publication of the foregoing information. FAO will not release or publish information that has been marked or flagged as confidential.

**Section 13.04** This Article will survive the expiration or termination of this Agreement.

## **Article XIV. REQUIRED DISCLOSURE**

**Section 14.01** The Service Provider agrees that it will notify FAO immediately of any of the following events:

- a) events or circumstances which are likely to affect significantly or delay the implementation of the LoA activities or the Service Provider's ability to deliver the Services;
- b) bankruptcy, insolvency, receivership or winding up or other Credit Event by or affecting the Service Provider or its controlling entity;
- c) use of FAO's name other than as expressly permitted pursuant to Section 11.01;

- d) changes in Key Personnel, as per Section 3.03;
- e) any conflict or problem arising in relation to national authorities, as per Section 23.02; and
- f) any other circumstances which could reasonably affect FAO's decision to award the LoA or the Service Provider's ability to comply with the requirements of this Agreement.

**Section 14.02** The Service Provider agrees that it will notify FAO immediately of any knowledge of any plans to change its name, legal status or direct or indirect controlling entity, which in any event shall be no less than five (5) days prior to any such change.

#### **Article XV. TAX EXEMPTION**

**Section 15.01** FAO enjoys certain privileges and immunities which include exemption from payment of sales taxes such as VAT, customs duties and importation restrictions. The Service Provider may not charge any tax to FAO for the provision of its Services but may request the reimbursement of the full value, including tax of items procured for the provision of the Services, if FAO agrees the recovery of such tax from the relevant fiscal authorities is exceptionally onerous or impossible.

#### **Article XVI. ESSENTIAL TERMS**

**Section 16.01** The Service Provider acknowledges and agrees that each of the provisions of this Article constitutes an essential term of this Agreement and that any breach of any of these provisions shall entitle FAO to terminate this Agreement immediately upon notice to the Service Provider, without any liability for termination charges or any other liability of any kind.

**Section 16.02 SOURCE OF INSTRUCTIONS.** The Service Provider shall neither seek nor accept instructions from any authority external to FAO in connection with the performance of the Services. Should any authority external to FAO seek to issue any instructions concerning or impose any restrictions on the Service Provider's performance under the Agreement, the Service Provider shall promptly notify FAO and provide all reasonable assistance required by FAO in order to help resolve the matter. The Service Provider shall not take any action in respect of the performance of its obligations under the Agreement that may adversely affect the interests of FAO, and the Service Provider shall perform the Services with the fullest regard to the interests of the FAO.

**Section 16.03 CODE OF CONDUCT, CONFLICT OF INTEREST AND VENDOR SANCTIONS.** The Service Provider shall observe the highest standard of ethics in providing the Services and agrees to adhere to the United Nations Supplier Code of Conduct, which can be viewed at <https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct> .

The Service Provider shall take all reasonable precautions to avoid any conflict of interest in the implementation of the Services. The Service Provider agrees that it shall inform FAO without delay of any situation constituting or likely to entail a conflict of interest, including any FAO personnel or first degree relatives of FAO personnel having a financial interest or employment relationship of any kind in the Service Provider's activities. The Service Provider warrants that no official, staff member or representative of FAO, or any family member of any such person, derives any benefit from this Agreement.

The Service Provider confirms that it has not engaged in, nor will engage in, any corrupt, fraudulent, collusive, coercive, unethical or obstructive practices in entering into or implementing this Agreement. If FAO determines that the Service Provider has engaged in such practices, it may impose sanctions, including termination of the Agreement, as provided by FAO's Sanctions Procedures ([http://www.fao.org/fileadmin/user\\_upload/procurement/docs/FAO\\_Vendors\\_Sanctions\\_Policy\\_-\\_Procedures.pdf](http://www.fao.org/fileadmin/user_upload/procurement/docs/FAO_Vendors_Sanctions_Policy_-_Procedures.pdf)). In addition, information on sanctioned Service Providers and other third parties may be shared with other Intergovernmental or United Nations organizations. This provision must be included in all subcontracts, sub-agreements or assignments entered into by the Service Provider under this Agreement.

For the purpose of this Agreement, the following terms shall have the following meanings:

- a) "*Fraudulent practice*" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain, financial and/or other benefit and/or to avoid an obligation;
- b) "*Coercive practice*" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

- c) “*Collusive practice*” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- d) “*Corrupt practice*” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value whether tangible or intangible to improperly influence the actions of another party;
- e) “*Unethical practice*” is an act or omission contrary to the conflict of interest, gifts and hospitality or post-employment FAO policy: (<http://www.fao.org/unfao/procurement/codedeconduitethique/en/>), as well as any provisions or other published requirements of doing business with FAO, including the United Nations Supplier Code of Conduct; and
- f) “*Obstructive practice*” is an act or omission by the Service Provider or its affiliates, successors or assigns that may prevent or hinder the work of the Investigation Unit of the FAO Office of the Inspector General.

In order to enter into an agreement with FAO, the Service Provider represents that neither it, nor any of its agents or authorized subcontractors, has been suspended, debarred or otherwise identified as ineligible by any other United Nations Organization or Organization within the World Bank Group, nor is it listed on the United Nations Security Council Consolidated List and that neither it, nor any of its agents or authorized subcontractors is subject to any sanction or temporary suspension imposed by any such organization. The Service Provider is therefore required to disclose to FAO whether itself, or any of its affiliates or agents, is, has been or becomes subject to any such sanction or measure at any time during the three years prior to this Agreement and at any time throughout the execution of this Agreement. The Service Provider recognizes that a misrepresentation under this provision will entitle FAO to terminate its Agreement with the Service Provider immediately upon notice to the Service Provider, without any liability for termination charges or any other liability of any kind of FAO and that material misrepresentations on its status constitute a fraudulent practice.

In accordance with the United Nations Supplier Code of Conduct, Service Providers are expected to refrain from offering employment to any FAO staff for a period of one year following their separation from FAO.

**Section 16.04 LABOR.** The Service Provider shall:

- a) respect the prohibition of forced or compulsory labor in all its forms;
- b) respect the freely exercised right of workers, without distinction, to organize, to further and defend their interest as well as the protection of those workers who exercise their right to organize;
- c) ensure equality of opportunity and treatment in respect of employment and occupation; and
- d) ensure fair and reasonable conditions of safety, health and welfare.

The Service Provider represents and warrants that neither it, its parent entities (if any), nor any of the Service Provider’s subsidiary or affiliated entities (if any) is engaged in any practice inconsistent with the rights set forth in the Convention on the Rights of the Child, <http://www.unhcr.org/protection/children/50f941fe9/united-nations-convention-rights-child-crc.html> including Article 32 thereof, which inter alia, requires that a child shall be protected from performing any work that is likely to be hazardous or to interfere with the child’s education, or to be harmful to the child’s health or physical, mental, spiritual, moral or social development.

**Section 16.05 TERRORISM.** The Service Provider agrees to undertake all reasonable efforts to ensure that none of the funds received from FAO under this Agreement are used to provide support to individuals or entities i) associated with terrorism, as included in the list maintained by the Security Council Committee established pursuant to its Resolutions 1267 (1999) and 1989 (2011) or ii) that are the subject of sanctions or other enforcement measures promulgated by the United Nations Security Council. This provision must be included in all subcontracts, sub-agreements or assignments entered into under this Agreement.

**Section 16.06 SEXUAL EXPLOITATION.** The Service Provider shall take all appropriate measures to prevent sexual exploitation or abuse of any beneficiary of the Services provided under this Agreement, or to any persons related to such beneficiaries, by its employees or any other persons engaged and controlled by the Service Provider to perform any Services under this Agreement. For these purposes, sexual activity with any person less than eighteen years of age shall constitute the sexual exploitation and abuse of such person. In addition, the Service Provider shall refrain from, and shall take all reasonable and appropriate measures to prohibit its employees or other persons engaged and controlled by it from exchanging any money, goods, services, or other things of value, for sexual favours or activities, or from engaging in any sexual activities that are exploitive or degrading to any direct

beneficiary of the Services provided under this Agreement or to any persons related to such beneficiaries.

#### **Article XVII. FORCE MAJEURE**

**Section 17.01** In the event of and as soon as possible after the occurrence of any cause constituting Force Majeure, the affected Party shall give notice and full particulars in writing to the other Party, of such occurrence or cause if the affected Party is thereby rendered unable, wholly or in part, to perform its obligations and meet its responsibilities under this Agreement. The affected Party shall also notify the other Party of any other changes in condition or the occurrence of any event which interferes or threatens to interfere with its performance of this Agreement. If the affected party is the Service Provider, not more than fifteen (15) days following the provision of such notice of Force Majeure or other changes in condition or occurrence, the Service Provider shall also submit a financial statement to FAO detailing the use of funds up to the date of notice as well as the estimated expenditures that will likely be incurred for the duration of the change in condition or the event of Force Majeure. FAO shall not be liable for any excess costs incurred as a result of lack of prompt notice by the Service Provider of the Force Majeure event.

**Section 17.02** On receipt of the notice(s) required hereunder, FAO shall have the right to suspend or terminate the Agreement in accordance with Article XVIII or take such other action as it reasonably considers to be appropriate or necessary in the circumstances, including the granting to the affected Party of a reasonable extension of time in which to perform any obligations under this Agreement. In any case, FAO shall be entitled to consider the Service Provider permanently unable to perform its obligations under this Agreement in case the Service Provider is unable to perform its obligations, wholly or in part, by reason of Force Majeure for any period in excess of ninety (90) days.

**Section 17.03** “Force Majeure” as used herein means any unforeseeable and irresistible act of nature, any act of war (whether declared or not), invasion, revolution, insurrection, terrorism, or any other acts of a similar nature or force, provided that such acts arise from causes beyond the control and without the fault or negligence of the Service Provider (or on the part of its personnel, agents, other representatives, or authorized subcontractors), and proves insurmountable in spite of all due diligence. Defects in equipment, material or supplies, or delays in their availability (unless due to Force Majeure), labor disputes, strikes or financial difficulties shall not constitute an event of Force Majeure. Notwithstanding anything to the contrary herein in this Agreement, the Service Provider recognizes that the provision of Services may from time to time be performed under harsh or hostile conditions, including civil unrest, in areas in which FAO is engaged, preparing to engage in, or disengaging from any humanitarian or similar operations. Consequently, delays or failure to perform caused by foreseeable events arising out of, or in connection with, such difficult conditions, shall not, in and of themselves, constitute Force Majeure under this Agreement.

#### **Article XVIII. SUSPENSION; TERMINATION; REMEDIES**

**Section 18.01** Any of the following shall be considered a “Termination Event” under this Agreement:

- a) transfer by the Service Provider to third parties, either directly or indirectly through an intermediary, of all or part of the rights and obligations pertaining to the Services under this Agreement, except for subcontracts duly authorized by FAO;
- b) changes in the Service Provider’s name, legal status or control, except those which, following prior disclosure to FAO under Article XIV, have been expressly permitted in writing;
- c) the Service Provider’s bankruptcy, insolvency, receivership or winding up;
- d) willful misconduct by the Service Provider;
- e) unjustified delay in the execution of the Services, so as to substantially prejudice the achievement of FAO’s objectives under this Agreement;
- f) serious contractual breaches by the Service Provider that have not been remedied notwithstanding notice by FAO and an opportunity to cure;
- g) breach by the Service Provider of any of the Essential Terms; and
- h) non-compliance with the disclosure requirements of Article XIV.

**Section 18.02** FAO shall have the right to suspend performance of all or part of the Services under this Agreement upon written notice to the Service Provider if (a) it suspects that a Termination Event has

occurred or is occurring and needs additional time to determine how to proceed or (b) in the event of Force Majeure.

**Section 18.03** Following suspension of the Agreement, FAO may:

- a) revoke the suspension and require the Service Provider to proceed with the performance of the Services. In this case, if the period of suspension has exceeded more than thirty (30) days, FAO may, in its sole discretion based on the circumstances of the suspension, compensate the Service Provider for expenses incurred as a result of the suspension and resumption of its Services, and the Services End Date shall be extended for a period equal to the time during which the performance of the Services had been suspended;
- b) revoke the suspension subject to certain conditions which, if not met by the Service Provider, will give rise to a new Termination Event; or
- c) terminate the Agreement by written notice to the Service Provider, which termination shall be effective upon notification.

**Section 18.04** FAO shall have the right to terminate the Agreement for unforeseen causes beyond the control of FAO or an event of Force Majeure affecting FAO. In the event of termination pursuant to this paragraph, FAO shall provide notice to the Service Provider of such termination and shall complete all payments for expenses that have been incurred by the Service Provider up to the date of receipt of notice by the Service Provider of such termination. After the notice date, additional expenses involved in winding down the Services may be approved by FAO on a case by case basis and must be in writing.

**Section 18.05** Either Party shall have the right to terminate this Agreement at any time upon sixty (60) day's advance written notice to the other Party.

**Section 18.06** In the event of termination of this Agreement:

- a) The Service Provider shall (i) refrain from undertaking any further or additional commitments under the Agreement as of and following the date of receipt of such notice; except as may be approved in writing by FAO, (ii) terminate all subcontracts, (iii) take all reasonable measures to avoid any loss or deterioration of goods, equipment, materials or supplies, or any other damage and (iv) shall be responsible for refunding to FAO any payment already received in respect of Services that have not been performed to a standard considered acceptable to FAO.
- b) FAO shall complete all payments which may be due and payable up to the effective date of termination, less any amounts subject to adjustment based on claims arising from or connected with the performance of this LoA, as well as the pertinent provisions of this Agreement, and in particular those of Article VIII of this Agreement. In the event of termination on the basis of Force Majeure affecting the Service Provider, the Service Provider shall also refund to FAO any funds already received in respect of Services that have not been performed.

**Section 18.07** FAO shall have the right to terminate this Agreement without any liability whatsoever to the Service Provider, following written notice to the Service Provider, for breach of the obligations and warranties set forth in Article XVI, Essential Terms, as more fully described therein. In addition to the rights set forth in Sections 9.04; and 8.04 to withhold, offset or recover certain amounts, FAO shall take other action as it deems appropriate. Failure to comply with such repayment and/or other remedial action requested by FAO may result in further proceedings and/or sanctions against the Service Provider in accordance with FAO's Vendor Sanctions Procedures.

## **Article XIX. AMENDMENTS**

**Section 19.01** No amendment shall be permitted:

- a) which would have the effect of significantly altering the scope and/or purpose of this Agreement; or
- b) which increases the Maximum Financial Liability by more than one hundred percent of the original Maximum Financial Liability, except in such cases where a provision has explicitly been made that the Agreement is subject to officially agreed periodic revisions of the work plan and budget.

**Section 19.02** The following changes or amendments to this Agreement shall be permitted only if evidenced by a writing signed by both Parties:

- a) budget reallocations or variations of more than 25% between the major headings of the Agreement budget;
- b) budget reallocations of any amount that indicate a serious deterioration of the Service Provider's cost efficiency, whereby costs of salaries, fees, travel and accommodation and/or per-diems for the Service

Provider staff or subcontractors increase significantly from the original or previously amended budget, without commensurate changes to the quality or quantity of deliverables;

- c) cost increases;
- d) extensions of the Operational Period of the Agreement, but only if made prior to the Services End Date. Any such extension shall be requested by the Service Provider by notice to FAO no later than one calendar month prior to the Services End Date and provide a documented justification and an interim financial report; or
- e) changes to the payment instructions.

**Section 19.03** Any deviations in performance under, or amendments to the terms of, this Agreement, other than those expressly prohibited in Section 19.01 or permitted by a signed writing in Section 19.02 shall be permitted if agreed via email exchange or other writing by both Parties.

**Section 19.04** During the Closure Period, if Services are continuing to be provided as if the Agreement is in full force and effect, an amendment may be permitted, if in writing and signed by both Parties, with a view to extending the Operational Period of the Agreement to permit completion and delivery of stated outputs and deliverables and winding down of the Services.

#### **Article XX. NON-WAIVER OF PRIVILEGES AND IMMUNITIES**

**Section 20.01** Nothing in this Agreement or in any document relating hereto, shall be construed as constituting a waiver of privileges or immunities of FAO, its personnel or any other persons providing the Services on its behalf or as its acceptance of the jurisdiction of the courts of any country over disputes arising out of this Agreement.

#### **Article XXI. NON-WAIVER OF RIGHTS**

**Section 21.01** The failure by one Party to require performance of any provision shall not affect that Party's right to require performance at any time thereafter, nor shall a waiver of any breach or default of this Agreement constitute a waiver of any subsequent breach or default or a waiver of the provision itself and shall not relieve the Parties of any of their obligations under the Agreement.

#### **Article XXII. LANGUAGE OF THE AGREEMENT**

**Section 22.01** The LoA shall be in one of English, Spanish or French. Any LoA-related documentation, reporting and monitoring and any other official correspondence between the Parties shall be the same language as that of the LoA. Translations of the LoA or LoA-related documentation into other languages shall be for convenience only and shall not be binding on the Parties.

#### **Article XXIII. APPLICABLE LAW**

**Section 23.01** The present Agreement shall be governed by general principles of law, to the exclusion of any single national system of law. General principles of law shall be deemed to include the UNIDROIT Principles of International Commercial Contracts of 2016.

**Section 23.02** In providing the Services, the Service Provider shall conform to all national laws applicable to its activities and its relations to third parties, including employees. The Service Provider shall promptly correct any violations thereof and shall keep FAO informed of any conflict or problem arising in relation to national authorities.

#### **Article XXIV. INTERPRETATION OF THE AGREEMENT**

**Section 24.01** In the event of a conflict or inconsistency between the provisions of this Annex and of Annex C, Annex C shall prevail.

#### **Article XXV. COMPUTATION OF DEADLINES**

**Section 25.01** Unless stated otherwise, "days" as used herein means calendar days.

#### **Article XXVI. SETTLEMENT OF DISPUTES**

**Section 26.01** Any dispute between the parties arising out of the interpretation or execution of this Agreement, if not settled by negotiation between the parties or by another agreed mode of settlement, shall be submitted at the request of either party, to one conciliator. Should the parties fail to reach agreement on the name of a sole conciliator, each party shall appoint one conciliator. The conciliation



shall be carried out in accordance with the Conciliation Rules of the United Nations Commission on International Trade Law, as at present in force.

**Section 26.02** Any dispute not resolved by conciliation shall, at the request of either party, be settled by arbitration in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law, as at present in force. The arbitral tribunal shall have no authority to award punitive damages. FAO and the Service Provider agree to be bound by any arbitration award rendered in accordance with this article, as the final adjudication of any such dispute.

**Section 26.03** The parties may request conciliation during the execution of this Agreement and in the period not to exceed twelve months after the completion, expiry or termination of this Agreement. The parties may request arbitration not later than ninety (90) calendar days after the termination of the conciliation proceedings. All dispute resolution proceedings shall be conducted in the language in which the Agreement is drafted, which shall be either English, Spanish or French.

**Section 26.04** The provisions of this Article XXVI shall survive the termination of this Agreement.

## TERMS OF REFERENCE AND PAYMENT PROVISIONS

### 1. Context

Karakalpakistan, situated in the lower reaches of the Amudarya River, faces severe land degradation primarily due to increased upstream water demand and climate change. These factors have led to unstable irrigation water withdrawals, resulting in variable irrigation coverage—averaging only 59% of the potential irrigated land. This instability has severely impacted soil fertility, with only 37.5% of the potential irrigation area having low organic matter content, and only 7% exhibiting high or very high levels of organic matter. Poor irrigation water quality and shallow saline groundwater are contributing to secondary salinization of the soil.

This degradation manifests in low crop yields, which are roughly 50% of the average yields seen in Uzbekistan. Crop yields in Karakalpakistan are as follows: 1.7 tons/ha for cotton, 3.2 tons/ha for wheat, 2.4 tons/ha for rice, 5.9 tons/ha for potatoes, 8.9 tons/ha for fruits, and 1.4 tons/ha for grapes. Low soil fertility, high soil salinization, and unstable water supply are the primary factors contributing to these low yields. Despite its inefficiency, irrigated agriculture remains the cornerstone of the region's economy and is crucial for the food security of its predominantly rural population.

Land degradation in Karakalpakistan is associated with persistent changes in soil properties, including declines in organic carbon and increases in soluble salts. This degradation exacerbates overall land degradation and contributes to dust and sand storms. Previous studies have often focused on single factors, such as irrigation water supply or soil salinity, but more comprehensive approaches are needed to address the intertwined issues.

This initiative, conducted jointly by FAO and the TIAME-NRU, aims to address the current environmental degradation in Karakalpakistan. The collaboration between FAO and TIAME-NRU leverages expertise in assessing water quality and quantity and developing nature-based solutions training course.

This assessment will inform improved management practices by local communities, thereby reducing environmental stress and enhancing ecological resilience. The integration of FAO solutions, and sustainable water management practices represents a pioneering effort in the region. By institutionalizing these innovative approaches, the Programme will promote the adoption of new technologies and practices for monitoring and improving water, air, and land resource utilization.

Furthermore, the assessment will specifically evaluate the contribution of cropland and pastures to water quality. By understanding the impact of agricultural activities on water quality, the modeling results will provide valuable information for designing targeted interventions and sustainable land management practices. This aspect is crucial for addressing environmental challenges related to water pollution in the region.

Moreover, community awareness sessions will be organized to disseminate knowledge about the One Health approach and the implications of sand and dust storms. These sessions aim to engage and educate local communities on the interconnectedness of environmental, human, and animal health. By fostering awareness, the activity contributes to building resilience at the community level and encouraging sustainable practices that mitigate the adverse effects of sand and dust storms.

### **Innovation**

This study is innovative in several ways:

1. **Comprehensive Coverage:** For the first time, the study will cover the entire irrigated area of Karakalpakistan. This large-scale approach, combining remote sensing/GIS with detailed field studies, will identify areas with degrading vegetation and soil health.

2. **Integrated Assessment:** The study will integrate large-scale salinity assessments with detailed field sampling of water and soil. Long-term monitoring at representative locations will provide valuable data on salinity trends and soil health.
3. **Holistic Solutions:** The study will recommend measures to improve crop productivity by targeting various aspects of soil health—physical, chemical, and biological properties—rather than focusing on a single factor. This holistic approach aims to address soil degradation (including sand and dust storm) at both the farm and regional levels.
4. **Spatial Recommendations:** It will identify spatial zones within the study area requiring specific interventions to enhance soil biological activities, promoting more effective and localized solutions.

### Methods

- **Remote Sensing:** Identification of hotspots with degrading crop biomass and productivity across the entire irrigated area of Karakalpakistan.
- **Soil and Farming Practices Surveys:** In Fall 2024 conducting field sampling at approximately 30 points throughout Karakalpakistan. Key parameters to be measured include:
  - Soil texture, bulk density
  - Soluble solids, electrical conductivity (EC), and ion concentrations (Na<sup>+</sup>, Ca<sup>2+</sup>, Mg<sup>2+</sup>, HCO<sub>3</sub><sup>-</sup>, Cl<sup>-</sup>, SO<sub>4</sub><sup>2-</sup>)
  - Soil biological activity and microorganism presence, at two depths (arable and below arable layers) and four depths for other parameters (0-30 cm, 30-60 cm, 60-90 cm, and 90-120 cm).
- **Long-term Monitoring:** Installation of six monitoring stations at farm sites, equipped with wells, thermometers, precipitation gauges, and anemometers. Each station will monitor groundwater levels, temperature, precipitation, and wind speed.
- **Training Seminars:** Three seminars will be conducted in the southern, central, and northern regions of Karakalpakistan. These seminars will target farmers and relevant staff from the Ministry of Agriculture.

### Expected Outcomes

1. **Identification of Hotspots:** Locations within the irrigated lands of Karakalpakistan with degrading crop biomass and productivity will be identified.
2. **Soil Property Assessment:** Detailed physical, chemical, and biological properties of soil at fifty hotspots will be determined.
3. **Salinity Trends:** Causes and trends of soil salinity will be specified across three zones with varying irrigation water supply levels.
4. **Monitoring Stations:** Six monitoring stations will be installed and maintained at farm sites to provide ongoing data.
5. **Prescriptions for Improvement:** Tailored recommendations will be developed to improve soil fertility and reduce soil salinity for each hotspot.
6. **Training Seminars:** Three training seminars will be conducted to disseminate findings and promote best practices.
7. **Water Quality Report:** Report will include spatial mapping of the key pollutants over entire Uzbekistan and additional focus on the state of this problem in Karalpakistan Autonomous region. The

service provider will assist the FAO international consultant in validation of national data and parameters to finalize the technical assessment.

This comprehensive approach aims to reverse soil degradation, enhance soil fertility, and restore crop productivity to 125-133% of current levels - in the longer term. Additionally, the measures proposed are expected to contribute to reduced dust storms and overall environmental improvement in Karakalpakistan.

2. Scope

a. Purpose:

The objective of this study is to assess the level of land degradation in Karakalpakistan through enhanced monitoring of water and soil characteristics. The goal is to propose solutions to reduce degradation and improve crop yields by addressing multiple factors affecting soil health and productivity.

The Parties acknowledge that no amendments may be made to the LoA to permit activities that fall outside the purpose of the LoA. Based on the results of this LOA, the extension will be made to support with the PRODOC.

b. Outputs:

The Service Provider (SP) will work with the FAO Project Task Force (PTF) and International and National Consultants in support the project experts for the delivery of the following outputs:

-under the “Building knowledge and skills of local partners and communities to address environmental insecurities through innovative air, land, and water management solutions in the Aral Sea Region” project:

**Output 3.2.** Enhanced Comprehensive Environmental Quality Management and Regulatory Practices:

Activity 3.2.1: Assess water management in dust storm areas by installing monitoring network and develop training course

Activity 3.2.2: water and soil quality assessment for Karakalpakstan and training on it

c. Activities:

The Service Provider (SP) will set up the project team and carry out below activities for achieving Activity 3.2.1 and 3.2.2. In order to conduct these activities, FAO is committed to procuring and delivering the required equipment mentioned in Annex D in a timely manner, respecting the implementation timeline for these activities.

	<b>Sub Activities</b>	<b>Period</b>
1	Large scale salinity mapping using remote sensing/ GIS	1.09.2024 – 31.10.2024
2	Field survey of soil chemical and biological properties at hotspots	10.09.2024 - 31.10.2024
3	Installing and maintenance of 6 monitoring stations (Including groundwater monitoring wells plus precipitation gauge, thermometer, anemometer)	15.10.2024-31.12.2024
4	Laboratory analysis of soil samples	10.10.2024-20.12.2024
5	Training materials developed and three seminars conducted	01.12.2024-31.12.2024

6	Final report on proposed solutions to reduce degradation and improve crop yields by addressing multiple factors affecting soil health and productivity.	31 December 2024
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Milestones	Sub Activities
Milestone 1	Large scale salinity mapping using remote sensing/ GIS created and reported
	Field survey of soil chemical and biological properties at hotspots conducted and reported
	6 monitoring stations (Including groundwater monitoring wells plus precipitation gauge, thermometer, anemometer) installed and reported
Milestone 2	Maintenance plan of the stations described and provided
	Laboratory analysis of soil samples conducted
Milestone 3	Training materials developed
	Training seminars conducted
Milestone 4	Final report on proposed solutions to reduce water and land degradation and improve crop yields by addressing multiple factors affecting soil health and productivity. (final report)

d. Key Performance Indicators and Means of Verification:

1. Milestone 1 and associated progress report delivered
2. Milestone 2 and associated progress report delivered
3. Milestone 3 and associated progress report delivered
4. Milestone 4 and associated final report delivered

e. Workplan/Calendar of Activities:

Works should be initiated by adjusting the attached work plan (see Appendix 2) including Table 2 on tentative deadlines (if needed) and submitting the Inception report to FAO.

Table 2: Tentative deadlines for deliveries of agreed outputs

	Agreed Outputs	Tentative Deadline
1	Milestone 1 including Progress Report 1	31 October 2024
2	Milestone 2 including Progress Report 2	20 December 2024
3	Milestone 3 including Progress Report 3 (Timely purchase of the equipment mentioned in Annex D by FAO is the pre-requisite)	31 December 2024
4	Milestone 4 including Final Report (consisting of narrative report including lessons learned/good practice examples from the implementation of the LoA, detailed)	31 December 2024

### 3. Reports that Must be Submitted to FAO

The SP shall submit to the Responsible Officer all required deliverables (in English) within the given timeline in electronic copy. This include also interim financial reports mentioned under paragraph 7 bellow, for which the Appendix 1 (Request for Payment template) hereto should be used.

All reports including their Annexes must strictly adhere to the FAO language style, which will be provided upon request of the SP by FAO. Otherwise, FAO reserves the right to refuse the Reports. The same applies for Reports submitted in flawed English. In this case, FAO may request prior its technical review English editing by a professional company or adequate expert/academician with experience in given technical fields at the costs of the SP.

All deliverables will be reviewed and cleared by the Responsible Officer. Other FAO staff can be involved in the review and clearance process at the discretion of the Responsible Officer. Revision(s) will be requested in case when submitted deliverables do not meet expectations of FAO. Revisions (including multiple revisions if necessary) will be made free of charge by the SP and submitted within a maximum of four working days starting from the day following the one on which the SP has been notified. All revision(s) have to be submitted in track changes modus of the Microsoft Word latest software to allow for tracking of the made changes. In addition to the respective revisions in the body of the text, separate response is required to all comments made by the Responsible Officer and other FAO staff in the course of the review process. Translation of relevant deliverables in Russian and Turkish should only be made after the clearance for the English version (i.e. master version) was granted.

The Final Report, consisting of narrative and financial report, shall be signed and certified as to correctness pursuant to Section 9.01 of Annex A.

### 4. Detailed Budget

No	Descriptions	Unit of measurement	Qty	Position	Unit cost (UZS)	Subtotal
<b>1</b>	<b>HUMAN RESOPURCES INPUTS (Staff and consultants)</b>					
1.1	<i>GIS studies</i>					
1.1.1	Deliverable: Hotspots of degrading soils within irrigated lands of KK	Month	4	GIS specialist	5,000,000	20,000,000
		Month	1	Data management specialist	5,000,000	5,000,000
1.2	<i>Field survey</i>	Month				
1.2.1	Deliverable: Soil samples (150) from the hotspots for soil chemical and biological analysis	Month	1	Soil Senior Researcher	6,000,000	6,000,000
		Month	1	Biology Senior Researcher	6,000,000	6,000,000
		Month	2	Biology Researcher	5,000,000	10,000,000
		Month	2	Irrigation Senior Researcher	6,000,000	12,000,000
		Month	2	Project Leader	6,000,000	12,000,000
		Month	2	Soil Researcher	5,000,000	10,000,000
		Month	2	Specialist	3,000,000	6,000,000
		Month	2	Specialist	3,000,000	6,000,000
		Month	2	Researcher	4,000,000	8,000,000
		Month	2	Researcher	4,000,000	8,000,000
		Month	1,7	Researcher	3,000,000	5,100,000

		Month	1	Researcher	3,400,000	3,400,000
1.3	<i>Installing monitoring station</i>	Month				
1.3.1	Deliverable: Monitoring stations (6) installed	Month	1	Irrigation Senior Researcher	6,000,000	6,000,000
		Month	1	Water specialist	3,000,000	3,000,000
1.4	<i>Maintenance of the stations</i>	Month				
1.4.1	Deliverable: Maintenance and data collected and analyzed on groundwater depths and climate parameters at the stations	Month	2	Irrigation Senior Researcher	6,000,000	12,000,000
		Month	2	Project Leader	6,000,000	12,000,000
		Month	4	Irrigation specialist	3,000,000	12,000,000
		Month	3	Irrigation specialist	3,000,000	9,000,000
		Month	3	Irrigation specialist	3,000,000	9,000,000
1.5	<i>Laboratory analysis of soil samples</i>	Month				
1.5.1	Deliverable: Soil salinity level, main soluble salts and biology organisms determined	Month				
		Month	3	Soil Senior Researcher	6,000,000	18,000,000
		Month	3	Biology Senior Researcher	6,000,000	18,000,000
		Month	2	Biology Researcher	5,000,000	10,000,000
		Month	3	Laboratory analyst	4,000,000	12,000,000
		Month	3	Laboratory analyst	4,000,000	12,000,000
		Month	3	Laboratory analyst	4,000,000	12,000,000
		Month	3	Laboratory analyst	3,000,000	9,000,000
		Month	3	Laboratory analyst	3,000,000	9,000,000
		Month	2	Water specialist	3,000,000	6,000,000
		Month	2	Specialist	3,000,000	6,000,000
		Month	2	Specialist	3,000,000	6,000,000
1.6	<i>Training seminars</i>					
1.6.1	Deliverable: About 300 participants trained on a status of the irrigated soils and methods of improving their productivity	Month	2	Project Leader	6,000,000	12,000,000
		Month	1	Biology Senior Researcher	6,000,000	6,000,000
		Month	1	Soil Senior Researcher	6,000,000	6,000,000
		Month	1	Irrigation Senior Researcher	6,000,000	6,000,000
<i>Total</i>						328,500,000

#### 5. Description of Inputs to be Provided In Kind by FAO and Schedule of Provision

FAO inputs will be made available upon signature of this LoA. FAO will establish working relations with FAO country Offices in respect to the subject of this LoA. FAO will:

- Guide the implementation of the LoA and provide technical supervision;
- Provide necessary technical and operational support through its network of experts during the LoA implementation;
- Ensure visibility of results achieved by the LoA.

#### 6. Inputs to be Provided by Service Provider without Charge to FAO and Schedule of Provision

n/a

7. Payment Terms

a. Any requests for payment shall be made using the payment form provided in Appendix 1 hereto or such other form as has been specifically authorized by FAO or agreed in advance by the Parties.

b. The Service Provider shall submit each request for payment to the LoA Manager at the address for notices and other communications under paragraph 7 of the LoA.

c. Payments will be made in the currency stated in paragraph 3 of the LoA and according to the banking instructions provided by the Service Provider in paragraph 8, below.

d. Payments under this Agreement will be made only after certification by the LoA Manager that proper request has been made by the Service Provider and of the satisfaction by the Service Provider of the requisite conditions set forth for the payment. The proposed schedule of payments and related conditions is as follows:

**i) first (advance) payment** not to exceed **98,550,000 UZS** (equivalent in UZS) upon signing of LoA by both parties.

**ii) following review and approval of the relevant interim report submitted by the Service Provider in accordance with paragraph 3 above, interim payment** payment number [2] for [164,250,000 UZS] upon [acceptance by FAO of Milestone 1]

**iii) following review and approval of the narrative and financial Final Report submitted by the Service Provider in accordance with Section 9.01 of Annex A, final payment** not to exceed **65,700,000 UZS** for Milestone 2,3, and 4.

8. Banking Instructions

Payments shall be made to the Service Provider using the following banking information:

Bank Name Central Bank of the Republic of Uzbekistan		Bank Routing Sort Code and/or Branch Code 00014
Department of Treasury		
Exact Bank Account Holder Name (account must be held in the name of the Service Provider, FAO cannot make payments to third parties)  THE NATIONAL RESEARCH UNIVERSITY: “TASHKENT INSTITUTE OF IRRIGATION AND AGRICULTURAL MECHANIZATION ENGINEERS”		Account Number (general)  2340 2000 3001 0000 1010  Sub-account number (specific) 4001 1086 0262 6970 941 00 350 002
Swift/BIC Code CBUZUZ22	IBAN	Account Currency UZS
Bank Address (physical address, no PO boxes) 100001, Tashkent, Islam Karimov street, 6		
Bank City Tashkent	Bank Country Uzbekistan	
Intermediary Bank Details (if applicable)		



9. Identification Data Relating to the Service Provider

The Service Provider warrants that the following information is true and correct and acknowledges its notification obligations pursuant to Section 14.02 of Annex A.

Full Name of Service Provider (as Legally Registered) THE NATIONAL RESEARCH UNIVERSITY: “TASHKENT INSTITUTE OF IRRIGATION AND AGRICULTURAL MECHANIZATION ENGINEERS”	FAO Supplier Number (if known) [REDACTED]
Other Trading Name(s) of Service Provider (if applicable) [REDACTED]	
Address Line 1 Republic of Uzbekistan, Tashkent city 39, 100000, 39 Kori Niyazi street	
City Tashkent	Postal Code 100000
State -	Country Uzbekistan
Email Address admin@tiame.uz	Website https://tiame.uz/universi ty/other/about
Telephone Number (incl. country and area code) +99871 237 19 40	Fax Number (incl. country and area code)

**Appendix 1: Request for Payment Template**

For the attention of the Service Provider: Please note that by the time of the end of the LoA and the submission of the Final Report, the copies of the following supporting documentation should reach FAO together with the payment requests:

- a) For the procurement of any goods or services copies of the relevant invoices issued by its suppliers as well as copies of evidence of their payment in full.
- b) For the salaries and other Human Resource related payments, copies of payroll reports detailing the payments of the salaries of employees that are dedicating their time to the LoA activities together with any explanations regarding any secondment charges.
- c) For the travel, hospitality and accommodation expenses copies of evidence of the appropriate use of the budgeted resources including: i) evidence of payment for travel tickets exhibiting the name of the traveler and the dates and destinations of travel ii) signed evidence of receipt of daily subsistence allowance payments by the travelers; or in the case of travel of staff of the Service Provider the relevant payroll or other internal reports evidencing the payment of monies for the daily subsistence allowances.

LoA Part II - Annex B

LoA INTERIM FINANCIAL STATEMENT AND REQUEST FOR REIMBURSEMENT						
FAO PURCHASE ORDER (PO) NUMBER: _____						
DATE OF ISSUE OF STATEMENT: _____						
Currency: _____						
USD - United States Dollar						
Cat. NO.	Items Description	Units of measurement	Qty (no. of units)	Unit Cost	Total Cost	Supporting documentation
				USD	USD	(invoice, receipt, timesheet etc.)
<b>1</b>	<b>HUMAN RESOURCE INPUTS (Staff time and consultants...)</b>					
1.1					0	
1.2					0	
1.3					0	
1.4					0	
1.5					0	
1.6					0	
<b>2</b>	<b>EXPENDABLE EQUIPMENT ANCILARY TO SERVICES</b>					
2.1					0	
2.2					0	
2.3					0	
2.4					0	
2.5					0	
2.6					0	
<b>3</b>	<b>TRAVEL (Flights, inland travel...)</b>					
3.1					0	
3.2					0	
3.3					0	
3.4					0	
3.5					0	
3.6					0	
<b>4</b>	<b>ACCOMMODATION (board and lodging costs...)</b>					
4.1					0	
4.2					0	
4.3					0	
4.4					0	
4.5					0	
4.6					0	
<b>5</b>	<b>EXPENSES</b>					
5.1					0	
5.2					0	
5.3					0	
5.4					0	
5.5					0	
5.6					0	
<b>6</b>	<b>-----</b>					
6.1					0	
6.2					0	
6.3					0	
6.4					0	
<b>7</b>	<b>-----</b>					
7.1					0	
7.2					0	
7.3					0	
7.4					0	
	<b>TOTAL EXPENSES INCURRED TO DATE</b>				0	
	<b>PAYMENTS RECEIVED FROM FAO TO DATE</b>		<b>DATE</b>		<b>AMOUNT</b>	
	PAYMENT 1				0	
	PAYMENT 2				0	
	PAYMENT 3				0	
	...				0	
					0	
					0	
					0	
					0	
					0	
	<b>TOTAL AMOUNT RECEIVED FROM FAO TO DATE</b>				0	
	<b>NET BALANCE TO REIMBURSE</b>				0	

Date: \_\_\_\_\_ Name of SP's Chief Accountant (print): \_\_\_\_\_

Signature: \_\_\_\_\_

## Equipment to be purchased by FAO

	Activity	Equipments	Number	Cost	Shipping	total	Cost	Shipping	total
				th.sum	th.sum	th.sum	USD	USD	USD
1	Field survey	EM-38-MK2-1, Geonics Limited, Mr. Mike Catalano, geonics@geonics.com	1				13940	944	14,884
2	Installing monitoring station								
	groundwater monitoring wells	plastic tube of 4m, 89 mm diameter	6	60.884		365.304			29
		metal tube of 1 m for protection, 102 mm diameter	6	62.6		375.6			30
	climate monitoring devices	Bresser 6-day 4CAST PRO SF 7 in 1 Wi-Fi Weather Station with Solar-powered Sensor. Product number 7003220	6	4460.16	631.75	30551.4	353	50	2418
		Soil temperature and moisture meter. Product number 7009972	6				43	10	318
		anemometer							
		steel pipe of 40 mm of 3 m	6	57.606		345.636			27
		Reagents for soil microbiological analysis (Details will provided to FAO)	150	315		32472			2570
		Metal fencing mesh, 96 m long, height 1.7 m	96	1920	250	2170			172
		Metal profile of 3 x 2 cm, height 2 m, number 13, for 6 stations total = 156 m	156	3900	250	4150			328
		padlock, warranty 6 months, width - 87 mm	6	534		534			42
	<b>Total</b>								<b>20,818</b>