



## UNITED NATIONS DEVELOPMENT PROGRAMME TERMS OF REFERENCE / INDIVIDUAL CONTRACT

### I. Job Information

Job Title:	International Consultant on development of 3 new illustrated manuals "Solar radiation calculation methodology for building exterior surfaces"; "Facade shading systems"; "Green Roofs and Facades"
Type:	Individual Contract
Project Title/Department:	UNDP/GEF "Market Transformation for Sustainable Rural Housing in Uzbekistan"/Environment and Climate Action Cluster
Duration of the assignment:	25 w/d during May – September 2022
Duty station:	Home-based desk work and online meetings with project partners
Expected travel site:	N/A
Reports to:	Project Manager

### II. Background

The UNDP/GEF and Government of Uzbekistan project on "Market Transformation for Sustainable Rural Housing in Uzbekistan" seeks to transform the rapidly growing rural housing sector in Uzbekistan towards a more sustainable and low-carbon development pathway by designing, piloting and scaling-up a green mortgage market mechanism, which will boost the demand for low-carbon housing among the Uzbek rural population. The project objective is to provide Uzbekistan's rural population with improved, affordable and environmentally friendly living conditions.

The project consists of four inter-linked outcomes. The first and principal outcome is the establishment of the green mortgage scheme to incentivize and eventually scale-up the demand for low-carbon housing. This outcome will be supported and enabled by three complementary outcomes related to strengthening domestic supply chain and capacities for construction of low-carbon housing (Outcome 2), introducing policies and regulations for low-carbon housing and settlements (Outcome 3) and raising public awareness about benefits and advantages of low-carbon housing (Outcome 4).

Component 3 focuses on strengthening and enforcing minimum energy performance standards (MEPS) in housing construction by reviewing existing and development of new building codes required for these needs.

Under the overall supervision of the Project Manager, and the direct supervision of the Task Manager on Building Designs, Codes and Standards, the International Consultant will be responsible for the assistance and support of a hired a National Company team by the Project in development of three illustrated manuals: "Solar radiation calculation methodology for building exterior surfaces"; "Facade shading systems"; "Green Roofs and Facades". S/he also verify them to be incorporated with internationally adopted criteria and requirements on this matter. The International Consultant shall ensure the content of these manuals to be complete, coherent, well-illustrated and convenient in navigation.

### III. Functions/ Key Outputs Expected

#### **Activity 1: Preliminary analysis and planning**

- Work with the National Company team contracted by the Project to specify issues, determine the content, format, and length of all three manuals, specify specialists to be involved (e.g., botanist,

illustrator, etc.), set milestones, and establish a timetable for the joint work;

- Work with the Project team, particularly with Task Manager on building codes (Component 3) and Project Chief Technical Adviser toward finalization and approval of the work schedule and tasks' sequence;
- Based on international research and studies, identify the main ways in which building envelope design and shading considerations affect energy consumption for cooling with focus on: How can design solutions influence these factors and reduce energy consumption? How does this translate to the situation in Uzbekistan? This will help in deciding which kind of measures likely have the largest impact and should thus be prioritized;
- Analyze building shading/cooling concepts and principles that promote energy efficiency and reduce GHG emissions, while considering the Uzbekistan context (e.g. static and dynamic architectural – design facade elements based on solar orientation and their materials); greening the roofs and facades (design/ construction, plant selection, watering); external elements (garden, neighbor buildings, etc.);
- Conduct comprehensive analysis of international norms/standards, scientific studies and best practices on building shading, greening over the last 5-10 years, and solar radiation calculation methodology/ tools for building exterior surfaces, considering climatic and actinometric features of the country regions;
- Participate in online meetings with the Project and contracted National Company team to receive/exchange all required/ requested information to get familiar with architecture, climate, construction norm, regulation documents etc. in Uzbekistan

**Activity 2: Provide technical support on the illustrated manuals' development:**

- Assist on development of the content, format, and length of all three manuals, define indicators and necessary baseline data, conducting all required research and laboratory work (on load bearing, water resistance, etc. of proposed green design, shading details), select illustrations, identify stylistics and design of the pages for three illustrated manuals: "Solar radiation calculation methodology for building exterior surfaces"; "Facade shading systems"; "Green Roofs and Facades";
- Analysis and assessment of drafts/sketches of all three manuals on meeting the associated technical accuracy and visual requirements and standards (image legibility, scale, color, proportion, etc.), propose (if needed) additional data, calculations, views to be included;
- In cooperation with the contracted National Company team conduct a cost-effectiveness calculation of applied design solutions in all three illustrated manuals for energy efficiency;
- Recommend options to optimize the cost-effectiveness of design solutions for energy efficiency, taking account of input from the Project team and/or contracted National Company team on the market conditions of Uzbekistan for building materials and services;
- Provide prompt support (through e-mail, phone call, ZOOM meeting, etc.) upon issues/ questions occurred during the work on obtaining and upon reviewing the necessary baseline data of other samples of similar international manuals, standards and/ or other construction norms
- Participate in online meetings with the contracted National Company and the Project team to select key indicators and boundary conditions for the development of building shading/cooling and greening concepts and principles, as well as solar radiation calculation methodology for building exterior surfaces adjusted to national climatic and environment conditions, including climate conditions in various regions of the country (all required/requested information about climate and actinometric data will be provided by the Project team and/ or National Company team);
- Conduct online consultations with contracted National Company team, supported by dedicated Project task manager on Building Codes, on consistency of developed three manuals with

international ones.

**Activity 3: Provide technical support on the illustrated manuals' preliminary testing and workshop:**

- Contribute to preliminary testing/ analysis of the draft manuals by composing of the target/testing group in Uzbekistan, additionally by arranging for review by independent international architects and designers (if available from the International Consultant networking), analysis of feedback (national and international) received, and formulating recommendations;
- Contribute and participate on a workshop on application of the developed illustrated manuals with participation of representatives of the designated organizations and agencies by development of agenda, identification of required participants, a presentation on key takeaways from the developed three manuals.

**Activity 4: Submit report(s):**

- Prepare a summary report on contributions to the preliminary analysis, to draft report with guideline on development of three illustrated manual, and to a final report on findings of preliminary testing of the draft manuals and workshop outputs, including the recommendations on improving the results (up to 30 pages without annexes)

**IV. Deliverables / Timeframe**

The following deliverables and indicative schedule are expected from the consultancy contract. These deliverables, deadlines, and other elements of the scope of work and these Terms of Reference may be adjusted before contract signing per discussion and mutual agreement between the Project Manager and the consultant. The project reserves the right, if necessary, to amend the terms of reference of a consultant on a written agreement. The final schedule will be agreed upon in the beginning of consultancy assignment. All deliverables should be submitted to UNDP by the Consultant in English in e-version and then cleared by the Project Manager and approved by the Environment and Climate Action (ECA) Cluster.

The Consultant will be responsible for providing her/his own working station (i.e. laptop, internet, phone, scanner/ printer, specific software if needed, etc.) and must have access to a reliable internet connection. The consultant will engage regularly by email, online ZOOM platform and/or phone on an as needed basis

#	Deliverables	Timeframe	Payment structure
1	Work plan (aligned and coordinated with the Work Plan of the contracted National Company team) on planned activities to implement the assignment developed, submitted to, and cleared by Task Manager on Building Designs, Codes and Standards, and approved by Project Manager (1 w/d and 4% of the total assignment scope)	10 days from the date of signing the contract	20%
2	Report (up to 30 pages without annexes) included a summary of preliminary analysis (Activity 1 of Section III) findings and proposed content for development of three illustrated manuals: “Solar radiation calculation methodology for building exterior surfaces”; “Facade shading systems” and “Green Roofs and Facades” developed, submitted to, and cleared by Task Manager on Building Designs,	50 days from the date of signing the contract	

	Codes and Standards, and approved by Project Manager (4 w/d and 16% of the total assignment scope)		
3	Report (up to 30 pages without annexes) on contributions provided to development of drafts of the three illustrated manuals (Activity 2 of Section III), including the cost-effectiveness calculation of applied design solutions for energy efficiency, conducted in cooperation with contracted National Company team, developed, submitted to, and cleared by Task Manager on Building Designs, Codes and Standards, and approved by Project Manager (15 w/d and 60% of the total assignment scope)	80 days from the date of signing the contract	60 %
4	Report (up to 30 pages without annexes) on contributions provided to finalization of all three illustrated manuals, including the preliminary testing findings, results of feedback analysis, workshop outputs (Activity 3 of Section III) with recommended improvements developed, submitted to, and cleared by Task Manager on Building Designs, Codes and Standards, and approved by Project Manager (5 w/d and 20% of the total assignment scope)	130 days from the date of signing the contract	20%

#### **V. Reporting**

All reports must be submitted in English to the Project Manager and Environment and Climate Action Cluster in UNDP Country Office in Uzbekistan and made in accordance with UNDP templates requirements

#### **VI. Management arrangements**

The international consultant will work under the guidance of the Environment and Climate Action Cluster, UNDP Uzbekistan

#### **VII. Financial arrangements**

Applicants are required to submit an aggregated financial offer (“aggregated financial offer” is the total sum of all financial claims of the candidate for accomplishment of the task), which includes proposed consultancy fee, additional costs of subcontracted experts (if required), international travel costs, visa costs (if required), daily subsistence allowance (for accommodation, meals and local transport/communication).

Payments will be disbursed in three installments (20%, 60% and 20%) upon timely submission of respective deliverables (#1, 2, #3, and #4 respectively) and approval and certification by the Project Manager, and Environment and Climate Action Cluster in UNDP Country Office that the services have been satisfactory performed

#### **VIII. Recruitment Qualifications**

Education:	University degree (at minimum, a Master’s degree or equivalent, PhD is desired) in architecture, civil engineering, construction engineering, energy engineering, buildings design, energy efficiency or related fields
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Experience:	<ul style="list-style-type: none"> <li>• At least five (5) years of proven working experience in development/ enforcement of energy efficient and low-carbon building codes and regulations;</li> <li>• Professional knowledge and practical experience in design, installment and management of static and dynamic shades and shading devices, greening the roofs and facades, as well as solar radiation calculation methodology/ tools for building exterior surfaces;</li> <li>• Sound knowledge of tested and proved international practices related to building cooling and greening;</li> <li>• Proven experience in conducting high-level consultations and reporting skills;</li> <li>• Proven working experience in the relevant field in Eurasian Economic union (EAEU) and Central Asia countries;</li> <li>• Proven working experience with international development organization in promoting “green” buildings is an asset</li> </ul>
Language Requirements:	<ul style="list-style-type: none"> <li>• Proficiency in written and spoken English is required. Sound knowledge of Russian is an asset</li> </ul>
Competencies:	<ul style="list-style-type: none"> <li>• Strong analytical skills, result-orientation;</li> <li>• Ability to perform under tight deadlines and timely delivery of good quality products;</li> <li>• Ability to work in a multinational environment and establish good personal contacts;</li> <li>• Ability to use information and communication technology as a tool and resource;</li> <li>• Knowledge of spreadsheet and database packages, experience in handling of web-based management systems;</li> <li>• Understanding of local conditions and ability to work with local professionals</li> </ul>

## IX. Evaluation of Applicants

**Criteria for Evaluation of Proposal:** Only those applications which are responsive and compliant will be evaluated. Offers will be evaluated according to the Combined Scoring method – where the educational background and experience on similar assignments will be weighted at 70% and the price proposal will weigh as 30% of the total scoring. The applicant receiving the Highest Combined Score that has also accepted UNDP’s General Terms and Conditions will be awarded the contract.

### Cumulative analysis

The award of the contract shall be made to the individual consultant whose offer has been evaluated and determined as:

a) responsive/compliant/acceptable; and

b) Having received the highest score out of a pre-determined set of weighted technical and financial criteria specific to the solicitation.

Technical Criteria weight: 70% of total evaluation (70 points)

- Education and language skills (5 points)

- Sound experience with development of illustrated building/ construction norms, codes and/ or standards (15 points)
- Proven practical experience in design, installation and O&M of static and dynamic shades and shading devices, greening the roofs and facades (design/ construction, plant selection, watering), as well as solar radiation calculation methodology/ tools for building exterior surfaces (25 points)
- Proven experience in Eurasian Economic Union (EAEU) and particular experience in Central Asia region, preferably in Uzbekistan, focused on energy efficient and low-carbon buildings (5 points)
- Brief description (max 1 page) approach to work/ technical proposal on how s/he will implement and complete the assignment (20 points)

Only candidates obtaining a minimum of 49 points would be considered for the Financial Evaluation

Financial Criteria weight: 30% of total evaluation (30 points)

Total Score + Technical Criteria (max. 70 points) + Financial Criteria (max. 30 points)

## **X. Application procedures**

Applicants are requested to apply online through the UNDP website at <http://www.uz.undp.org> Application shall be submitted by indicated deadline. Incomplete applications or applications received after the closing date will not be given consideration. Application should contain a current and complete C.V. with indication of the e-mail and phone contact. Shortlisted candidates will be requested to submit a price offer indicating the total cost of the assignment (including daily fee, daily subsistence allowance and travel costs). Incomplete applications will be excluded from further consideration.

Interested individual consultants must submit the following documents/information to demonstrate their qualifications:

- Letter of Confirmation of Interest and Availability** using the [template](#)<sup>1</sup> provided by UNDP;
- CV and a Personal History Form (P11 form<sup>1</sup>)**;
- Brief description of approach to work/technical proposal** on how s/he will implement and complete the assignment; (max 1 page);
- Financial Proposal** – specifying a total lump sum amount for the tasks specified in this announcement. The financial proposal shall include a breakdown of this lump sum amount (number of anticipated working days, and travel, daily subsistence allowance and any other possible costs, if any) and in accordance with the table provided in Annex I to this TOR.

UNDP is an equal opportunity employer. Qualified female candidates, people with disabilities, and minorities are highly encouraged to apply. UNDP Balance in Manage Policy promotes achievement of gender balance among its staff at all levels.

## **IX. Signatures- Post Description Certification**

Incumbent (*if applicable*)

Name	Signature	Date
Name	Signature	Date

**Annex I Aggregated Financial Offer of the International Consultant**  
**International Consultant on development of three new illustrated manuals**

	#of units*	Units	Rate/USD	Total/USD
<b>Work in home office**</b>				
Home based work	25	man/days		
		man/days		
		man/days		
<b>Sub-total fee</b>				
<b>Travel costs</b>				
<b>Sub-total travel costs</b>				
<b>TOTAL</b>				

\*Estimates are included in the TOR, the applicant is requested to review and revise, if applicable

\*\*Add rows as needed

*\*Please, note that the **financial proposal is all-inclusive** and shall take into account various expenses incurred by the consultant/contractor during the contract period (e.g. fee, health insurance, vaccination and any other relevant expenses related to the performance of services, etc.).*

*Payments will be made only upon confirmation of UNDP on delivering on the contract obligations in a satisfactory manner.*

**I agree to perform this assignment for a lump sum of \_\_\_\_\_ USD**

**Name:** \_\_\_\_\_

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

**Date:** \_\_\_\_\_ / \_\_\_\_\_ / **2022**

This offer remains valid for a period of 3 months from the date of signature of this document.