

CALL FOR TENDER

TERMS OF REFERENCE HEATING & COOKING FUEL STUDY

OVERALL CONTEXT AND PROJECT

Set up in 1976, Geres is an international development NGO which works to improve the living conditions of the poorest and tackle climate change and its impacts. As a grassroots actor, the energy transition is a major lever in all its actions. In order to drive societal change, Geres promotes the development and dissemination of innovative and local solutions, supports climate-energy policies and actions and encourages everyone to commit to Climate Solidarity by taking action and supporting vulnerable populations.

Geres has been working in Afghanistan since 2002. During its 16 years of presence in Afghanistan and within the field of energy, various sub-sectors have been covered:

- Energy efficiency activities:
 - o Energy Efficiency in Public Building (schools, clinics and health centers, administrative buildings);
 - o Energy Efficiency in private housing;
- Sustainable farming Development:
 - o Insulated Greenhouses;
 - o Post-harvest cellars;
- Economic and entrepreneurship development:
 - o Capacity building of small entrepreneurs;
 - o Income generation activities;
- Performance of several diagnostics and surveys in regards to the 3 above-mentioned fields.

Within the last decade, Geres has developed a comprehensive array of verified technologies and has reached out to thousands of beneficiaries. Geres has also trained more than a thousand local craftsmen in order to develop local capacities. For improving quality and developing local skills, Geres implements all its project in close collaboration with Afghan ministries (agriculture; health; education; environment; urban and rural development; and energy), national and international NGOs and local partners.

Geres completed a 4 years (2014 – 2018) rural development project (Central Highlands Program in Bamyan and Wardak Provinces) funded by AFD and implemented by a consortium 3 international NGOs, Geres as leader and MADERA and Solidarités International as partners. Geres extended its intervention to urban context by implementing a regional project called AFG-TAJ, the project AFG-TAJ was implemented in 3 urban districts of Kabul city which was funded by AFD and Foundation Abbé Pierre.

The EU funded **SWITCH Asia Sustainable Consumption and Production** project '*Scaling up green homes in Kabul towards sustainable energy consumption and low emission development*' also called Kabul Green Homes Project (KGHP) is focusing on energy-saving market fostering – including value chain creation and strengthening of supply chains. The project in Kabul Province specifically aims at the dissemination of Passive Solar Houses (PSH) through market mechanism, training and support to micro-enterprises in order to improve private housing and living conditions of the populations during winter. At the same time, the development of PSH on a large scale allows reducing pressure on environment. Kabul Green Homes Project (KGHP) is being implemented by a consortium of 2 national and one international NGO. The intervention areas for KGHP are 15 districts of Kabul city (PDs 1,2,3,4,5,6,7,8,10,12,13,14,16,17 and 22), and some few dissemination of energy saving solutions out of coverage area.

Project duration is April 2016 till December 2020

The objectives of KGHP are:

- ESSs are accessible and affordable to different segments of Kabul's housing market, and produced by collectively organised and qualified SMEs endorsed and promoted by financial institutions;
- Dialogue with national and international institutions of Central Asia contributes to a favourable environment for scaling up ESSs and replicating in similar contexts

The project is implemented by a team of 40 people including 24 project staff and 16 support staff.

TECHNICAL SPECIFICATIONS

Context

In Kabul, most of the population lives in unplanned areas and below poverty line. The limited thermal performance of buildings, the energy-inefficient equipments and the lack of regulations & their enforcement, combined with high and unstable energy cost, induce energy deprivation, especially in winter when important temperature variations make households insecure about energy access, and more vulnerable. This widespread energy vulnerability creates negative side effects on comfort, education, health and children & women life.

Contributing to improve this situation, KGHP has, as of December 2019 performed a wide range of field activities enabling the creation of a set of pilot good practices, namely :

- Collaboration with Kabul Municipality and other local authorities in selection of 15 districts, sub districts and households
- Selection and training of 132 MSMEs and/or craftsmen in Energy Efficient Solution – ESS - (including supply and set-up)
- Establishment of 154 ESS demonstration houses for awareness raising and used for practical trainings
- 4 large technical training session for key stakeholders (authorities, SMEs, masters, craftsmen, suppliers)
- 4018 houses are equipped with ESS through a differentiated and inclusive subsidy system. 1324 with 30% capexp subsidy, 175 houses with 80 % (poorest and most vulnerable), 30 houses through 20% subsidy (urbans ESS mainly), 2489 houses are equipped through 10% subsidy and 393 houses visited and registered at M&E database with no subsidy (self-dissemination). It is worth noting that self-dissemination is likely much higher but difficult to track for project team (security, expense of the city, time constraints).

- 695,000 people of targeted areas are informed about KGH project and ESS through awareness campaign (targeted or mass-media)

Purpose & Objectives

KGHP has identified, defined and mainstreamed a set of ESS appropriate to Afghan context and the target population of Kabul municipality. Those solutions include:

- **Veranda wooden frame covered with plastic:** This solution is designed for solar gain during day time and transfer heat to attached rooms, the design is for medium and low economy classes of Kabul unplanned areas. In frame of KGH project **645** houses are equipped with this technology under subsidy policy.
- **Veranda metal frame covered with plastic:** This solution is designed for solar gain during day time and transfer heat to attached rooms, the design is for medium and low economy classes of Kabul unplanned areas. In frame of KGH project **75** houses are equipped with this technology under subsidy policy.
- **Veranda Wooden frame covered with glass and polycarbonate:** This solution is designed for medium and high class families, who have modern houses. In Frame of KGH project only **2** houses are equipped with this technique.
- **Veranda metal frame covered with glass or polycarbonate:** This solution is designed for medium and high class families, who have modern houses. In Frame of KGH project **99** houses are equipped with
- **Double Glazing on wood frame windows:** This is for any class families who have wood frame windows, In Frame of KGH project **33** houses are equipped with this technique.
- **Roof thermal Insulation:** This technique is designed for traditional roofs covered with wood or iron beam and mud layers on top. In Frame of KGH project only **154** houses are equipped with this technique.
- **Tandoor Cap:** This technique is designed for local kitchens, who use Tandoor (in ground oven) for cooking purposes, main use is to avoid smoke inside kitchen and to reduce fuel consumption. **510** units are disseminated in KGHP.
- **Solar Cooker:** **47** units are disseminated under KGH project
- **Biogas:** Mainly designed for dairy farms, **7** units are built in KGH project.

Combined packages:

- Double glazing + Roof insulation (Glass wool): **1161** houses are equipped under subsidy policy.
- Double glazing + Roof Insulation (Polystyrene): **19** houses are equipped under subsidy policy.
- Windows Improvement + Roof Insulation (Glass wool): **1247** houses are equipped under subsidy policy.
- Windows Improvement + Roof Insulation (Polystyrene): **102** houses are equipped under subsidy policy.

However, the implementation of those solutions are only a first step that allowed Geres to **pilot a set of good practices and demonstrate their ability** to reduce financial burden on HHs, increase their thermal comfort and participate to an effort to reduce air pollution in Kabul.

Geres understands that EES must further be accompanied by additional work on the behaviour of people and their relationship to heating and cooking, both well established and deeply anchored practices for households but also within a set of commercial value chains for devices and combustible.

To do so, the economical and environmental efficiency together with heating & cooking devices and habits are to be considered as a nexus, for which only integrated solutions can support long term improvements.

Within KGHP and after putting in place the ESS (and value chain support mechanisms) as a starting point (2016-2019), Geres wishes to further contribute to address the challenge by analysing the **usage** and **impact** of selected fuel both on the environment and as a cost for targeted households. Indeed, fuel types, consumption and patterns of use can be either positive or detrimental to the overall energy efficiency of EES. It is for example possible that after thermal insulation of a house, certain fuels and stoves might simply overheat the houses with only marginal efficiency gains. To the contrary, it is possible that switching to other fuels, stoves or consumption patterns might greatly improve the overall efficiency. This study aims at giving to Geres a first analysis of the situation to further inform future programming around the nexus fuel/stove/envelope energy efficiency.

Guiding Questions

- For each ESS and within the KGHP target area, can we uncover and qualify/quantify fuel usage patterns?
- Identify the supply of fuel for cooking and heating proposed on the local market?
- What is the proportion of sustainable fuel available on the market and can the cost differences be estimated?
- What is the proportion of EES heating & cooking devices available on the market and the cost?
- What are the unproductive/counterproductive behaviours for HHs already benefitting from ESS?
- what are the causes: price? lack of knowledge of environmental and health damage? household behaviour survey: what makes them use energy-efficient cooking and heating appliances and sustainable fuel - what's the triggering factor
- How to identify and promote the usage of more sustainable fuel for heating and cooking (following criteria of heating efficiency, GHG emissions reduction, indoor pollution reduction, outdoor atmospheric pollutants emissions, factoring in principles of biomass fuel used for heating the houses. (Natural Resources Management)
- How to support further monetary savings on fuel for HHs?
- How to support further usage of less polluting fuel?
- What are the gaps in the fuel supply chains?
- How and from where the heating & cooking devices are provided? how can orient the people to more efficient devices (heating and cooking)?

Scope of work

The study will encompass:

- Each ESS piloted, developed and disseminated under the project,
- Typological differentiation between urban and periurban settlements, partially on and off-grid
- Follow a socio-economical classification of HHs as for their usage and behaviours (baseline data existing)
- Typology and usage of typical fuel (biomass, gas, coal, charcoal, electricity, solar PV, solar water heaters, generator, etc.

Methodology

A scoping meeting with the project team and managers

Desk review (including project documents)

Development of a study methodology, including action plan, survey questionnaires, interviews

In Field work on target groups + control groups

Cross-cutting:

Gender sensitive
Economic development approach

Key deliverables

1. Study, including executive summary
2. Business cases on at least 3 fuel (with most potential for scale-up and energy efficiency)
3. Recommendation for KGHP team and Geres regarding potential fuel reduction and heating / cooking devices
4. A PowerPoint presentation prior to the final report, presenting study outcomes,

Financial resources

The estimated duration for the assignment should be around 15 to 20 full days (Including of field mission in Kabul)

The financial offer must include the fees of the entire evaluation team, per diems, national and international transport costs.

Geres will provide logistic support for field mission in Afghanistan, which include:

- Local transportation (field missions)
- Transfer from/to airport to/from Geres office (if expat consultant/company is selected)
- Housing at Geres guesthouse (in secured Geres office premises (to be agreed prior to contract) only if expat consultant is selected.
- Lunch at Geres office (at own cost of around 150 Afn)
- Provide translator only if needed

Dedicated budget: max 15.000EUR INCL. VAT and all taxes

Proposed Deadlines

Activities	Periods
Tender announcement	15 July 2020
Selection of consultants and signature of contract	14 August 2020
Scoping meeting and note of methodology	3 rd week August 2020
Mission, surveys, interviews et debrief meetings	From End of August 2020
Provisional and final report	End September 2020

Instruction For Applicants

A firm / consultant will be selected under consideration of quality and cost and according to the procedures described in this ToR.

In case none of the consultants are willing to perform field work or in case the travel restriction due to COVID 19 remain, remote consultancy option will be considered. However, a field team, field work conditions/ budget will be agreed prior to the start mission.

Clarifications may be requested not later than 3 (three) days before the submission deadline, only by e-mail at q.moreau@geres.eu and / or r.rameen@geres.eu

Preparation:

- Bid shall be submitted in English.
- Applicants shall state a detailed costing in EUR/USD.
- Tenders must remain valid 60 days after the submission date.
- Tenders must include up to 10 page technical and one page financial proposals,

Application Conditions

This call is launched from July 15 2020 and will be closed on August 14th 2020.

Candidates are invited to address their application only by e-mail to: r.hamdil@geres.eu, with Cc to: r.rameen@geres.eu and q.moreau@geres.eu

Tenders must be submitted not later than 14 August 2020, 13:00 Afghanistan time UTC + 4:30. Final selection will be communicated to the selected candidate by 4th week of August 2020.

The award of contract is expected to be given on end August 2020