

**REQUEST FOR EXPRESSIONS OF INTEREST
(CONSULTING SERVICES – SELECTION OF INDIVIDUAL CONSULTANTS)
GEORGIA
Third Regional Development Project (RDPIII) – P150696
Loan No: 8494-GE**

**Individual Consultant for Telescope Rehabilitation in
Abastumani Astrophysical Observatory**

Reference No: IBRD/RDPIII/CS/IC/16-2021

The Municipal Development Fund of Georgia (MDF) is a Legal Entity under Public Law (LEPL) of Georgia with the objective to assist enhancement of institutional and financial capacities of local self-governmental bodies, invest in local infrastructure and services, and improve of main economic and social conditions for the local population. MDF implements significant infrastructural projects such as: urban renovation of the cities, arrangement of infrastructure at tourist and cultural heritage monuments, construction and rehabilitation of schools and kindergartens, improvement of infrastructure aimed at preventing the natural disasters, creation of sustainable economic base for IDPs, rehabilitation of WS and WSSs, construction of shelters for homeless animals, arrangement of the cable ways, renovation of sports infrastructure, and enhancement of the component in support of State and Private Sector Investments (PPI).

MDF is the implementing agency of the Third Regional Development Project (RDP3) financed by the World Bank Group and the Government of Georgia (GoG).

The main objective of the Project is to support infrastructure, which will contribute to improvement of living conditions of the towns and promote tourism-based economy in the selected regions, including Abastumani in the Samtskhe-Javakheti region.

Development of Abastumani as a tourism destination is one of the flagship investments under the Project. Two important projects have recently been completed: These are the Rehabilitation of the selected Historic Heritage Houses, rehabilitation of the main Observatory building, landscaping of the area and rehabilitation of the cable car that connects the town with the Observatory premises. The Project aims to further support the development of the resort with planned investments still to be implemented in the town. Sustainability and Operationalization of the Abastumani Observatory building is one of the planned interventions.

Nowadays, Abastumani serves as one of the last enclaves of a strong scientific community within Georgia and a potential tourist attraction due to its history and nature. Abastumani has a potential to become a place of inspiration for future generations of astronomers, scientists and researchers, and this transformation can start by modernizing the Abastumani Observatory area and making it more attractive and engaging for various domestic and international visitors from the targeted tourism markets.

The Abastumani Astrophysical Observatory renamed in 2004 as Evgeny Kharadze Georgian National Astrophysical Observatory, was founded in 1932 on Mount Kanobili (1650 m above the sea level), near the resort of Abastumani, in the Samtskhe-Javakheti region in South-Eastern Georgia. Currently, the Observatory is an independent LEPL operating under the Ministry of Education and Science of Georgia.

The observatory is located about 250 km away from the capital city Tbilisi, being distant from the air pollution and sky illumination together/along with excellent natural conditions (hilly landscape covered with coniferous forest) makes this place being among one the best observatories in the Euro-Asian continent. Weather is stable, with no harsh and sudden changes.

The Abastumani Observatory is running wide-profile research, spanning different fields of Astronomy and Astrophysics from Asteroid to most distant Black Holes.

The objective of this assignment is to prepare a Detailed Implementation Plan to fully operationalize the 125 cm Ritchey–Chrétien telescope($f/13$) located in the main building of the Abastumani Observatory Complex. Detailed Implementation Plan shall be developed through a detailed inspection and analysis of the conditions of mechanical, optical and electronic parts of the telescope along with a public digital museum to be arranged in the same building.

To achieve the set objective, the Consultant shall perform the following services:

1. Audit the existing observatory telescope's stress-induced fractures near the support points in the primary mirror segments. The cracks are believed to result from deficiencies in the original design and implementation of the adhesive joints connecting the Invar support components to the mirror. Stresses caused by temperature cycling over 40 years of service may have driven cracks that developed at the glass-metal interfaces. Inspection the electronic parts of 125-cm RCh, 70-cm meniscus telescopes and 40-cm double astrograph and preparing detailed recommendations for their rehabilitation.
2. Audit the existing observatory telescope equipment's other sub-segments to identify obsolete/non-operational spare parts, technical problems and deficiencies ranging from drives and motors to precision optics (temperature compensation for secondary mirror) and instruments to thermal and HVAC systems and develop guidelines for rehabilitation process and upgrade or construction of new instruments (focal reducer to $f=1/4$; spectrograph and two band imaging polarimetry; CCD cameras) to mount/attach on/to the 125-cm telescope very needed to effectively use observatory telescopes.
3. Inspect the Telescope, evaluate the systems, dome and whole building conditions, assess life safety and disabled access compliance, identify required repairs, and propose capital and operation and maintenance (O&M) cost.
4. Prepare and submit to the MDF Employers Requirement for consulting services for elaboration of the detail design package for the Telescope rehabilitation.
5. Evaluate and determine the possibility whether one company shall perform the design and full installation works for the telescopes and the domes, or the works shall be split into packages.
6. Perform supervision services during the implementation of the planned rehabilitation works in a close collaboration with Scientific-Technical Council of Observatory.
7. Perform other relevant duties to fully achieve the set objective under this ToR.

The Terms of Reference of the assignment is available on the following link:

https://drive.google.com/file/d/1mF8gEv25wAq6Q8fnO9v5PI_k84NGZhdq/view?usp=sharing

Tentative duration of the assignment is 15 months, out of which 3 months is for the reports preparation and 12 months for author supervision.

The Municipal Development Fund of Georgia (MDF) now invites eligible individual consultants ("Consultants") to express their interest in providing the Services. Interested Consultants should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services.

The shortlisting criteria are:

Qualification Requirements for Consultant:

- (i) Master Degree in Civil Engineering/Astronomical instrumentation.
- (ii) Work experience with large telescopes (diameter $>4m$) is preferred.

- (iii) Over 3 years of experience in project management.
- (iv) Over 10 years of experience in design, construction, installation, operation and maintenance of telescopes (including robotized telescopes).
- (v) The curriculum vitae of the Consultant should contain information at least on two projects he/she has successfully completed in the last 10 years, with names and addresses of the clients.
- (vi) Minimum 3 years of international experience in field of astronomical instrumentation and telescope system engineering.
- (vii) Fluency in written and spoken English. Good communication and reporting skills

Note: the MDF reserves it's right to verify submitted references and use obtained information for evaluation purposes.

The attention of interested Consultants is drawn to paragraph 1.9 of the World Bank's [Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers - January 2011, revised July, 2014 \("Consultant Guidelines"\)](#), setting forth the World Bank's policy on conflict of interest.

A Consultant will be selected in accordance with the Individual Consultant (IC) method set out in Section V of the *Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, January 2011, revised July 2014.*

Further information can be obtained by e-mail procurement@mdf.org.ge to Mrs. Eka Ezugbaia, World Bank Procurement Consultant.

Expressions of Interest with CV must be submitted electronically to the e-mail address below no later than July 05, 2021, 18:00 hours:

Municipal Development Fund of Georgia
Attn: Mr. George Shengelia, Executive Director of MDF
E-mail: procurement@mdf.org.ge