



Dr. Dhaval Patel, IAS
Commissioner of Geology & Mining
Industries & Mines Department
Government of Gujarat



No: CGM/Expl/NMET-Procurement/965/2023-24/ 147 to 148

Date- 23 FEB 2024

To,
Director,
National Mineral Exploration Trust
Ministry of Mines, Government of India.
New Delhi, Delhi-110001.

Sub: Financial Assistance for procurement of Software aimed at enhancing the Exploration activity.

Ref.: NMET letter no.: F.No.6/9/20156-NMET/71 dated 8th June 2022

Respected Sir,

With respect to above mentioned subject, we are submitting proposal for Procurement of 8 Software.

It is requested to NMET to allot the fund of Rs.1,85,84,000 (Rupees One Crore Eighty-Five Lakhs Eighty-Four Thousand Only) for Procurement of Geographic Information System (GIS) Software.

We would like to submit the same under sub-section 5 of section-9C of the MMDR Act-2021 for NMET funding.

Thank you.

Your Faithfully,

23/2/24

(Dr. Dhaval Patel, IAS)
Commissioner
Geology and mining,
Gujarat State, Gandhinagar

Enclosed: As above

Copy to: Joint secretary, Industry and Mines Department, New Sachivalay, Gandhinagar

**Proposal for Procurement of Geographic Information System (GIS)
under NMET**



By

**Commissioner of Geology and Mining
Gujarat**

Place: Gandhinagar

Date: 22 February 2023

1. Justification for Purchase Software Product:

1. The Commissioner of Geology & Mining (CGM), Gujarat deals with the exploration of minerals within Gujarat. This largely includes the collection of data on field, its management and utilization of the data for future exploration planning within the state. The CGM, Gujarat has carried out extensive exploration in the past and resources have been established at various levels through Pre- Detailed Mineral Survey, Detailed Mineral Survey and Drilling explorations for several industrially important minerals.
2. The CGM, Gujarat compiles all the available data set of all the exploration/ geological reports, leases/ mines (existing, closed), etc. till date which is digitized to access & make data into evaluate on a single platform. This enables to determine the current status of exploration, mining done as well as to plan future exploration within the state. Based on mentioned data Commissioner of Geology and Mining, Gujarat has decided to do extensively exploration in Bauxite, Limestone, Clays, etc. Commodity in next Five years.
3. During the National Geo-Chemical Mapping Program (NGCMP), the Commissioner of Geology and Mining (CGM), Gujarat and GSI collaborated to launch the Gujarat Geo-Chemical Mapping Program (GGCMP). CGM has also conducted a similar geochemical mapping program in the Kachchh area, entitled Kachchh Geo-Chemical Mapping Program (KGCMP).
4. Recently, Geological Survey of India is launched the National Geoscience Data Repository (NGDR). NGDR is a flagship initiative for hosting all exploration related geoscientific data, geological data of their all stakeholder into GIS compatible formats. To access and work onto this data GIS software is very needful.
5. Currently organization is also engaged in the processing No Objection Certificates (NOC), Project Monitoring Unit (PMU) and report cell activities of CGM, Gujarat.
6. These above tasks include preparation of KML file, geological maps, borehole sections, Geological cross section, analysing specific areas for NOC by simultaneously superimposing various files and layers onto a unified platform and preparing mining plans and their respective plates. Also, during and after mineral exploration activities for the making of geological maps and preparation of geological/exploration reports, a user-friendly software is essentially required.
6. In view of this, Commissioner of Geology & Mining, Gujarat has planned to purchase an Geographic Information System (GIS) Software package of latest version to meet these requirements. Hence, CGM, Gujarat has decided Procurement of **Annexure-1** mentioned software.

2. Utilization of Software products:

1. A dedicated GIS software in the organization will enable the creation of detailed and informative maps related to mineral exploration and geology, facilitating better visualization and understanding of data.
2. Moreover, it allows for data digitization and in-depth analysis, empowering the team to make accurate interpretations and informed decision based on the gathered data. GIS brings together different data layers of lease data, exploration data layer of Gujarat state into one place, making it easier to see all the information, organize the data and allows to analyse it efficiently by bringing in various data sources seamlessly.
3. The software also converts files into different types so they can work with other tools, making it easier to access important information by exporting data in different formats like CAD, PDF, Excel, summarized graphical representation, etc.

3. Available facility and technical manpower:

1. Currently, the Exploration branch has access to **Eight (8)** robust workstations equipped with superficial specifications capable of seamless multitasking and running resource-intensive software.
2. All exploration branch manpower is familiar with basics of using the software, which would ensure a smooth workflow within the proposed GIS ecosystem.

- **Annexure-I: Detailed Software products and rate**

ANNEXURE-1

Sr. no.	Name of Software product	Rate (Approx.)	Unit	Total Amount	Availability within department	Justification
1	ArcGIS Desktop Standard 10.8.2	11,90,000	8	9520000	NIL	Creation of GIS data layers, Helps in generating maps, Georeferencing & visualize various layers
2	Geostatistical Analyst Extension	3,49,000	8	2792000	NIL	For interpretation of borehole data into 3D for sub surface geological mapping & visualization
3	Spatial Analyst Extension	3,49,000	8	2792000	NIL	For terrain analysis, hydrological analysis, generating contour maps, statistical insights, etc.
4	Image Analyst Extension	4,35,000	8	3480000	NIL	For satellite image classification, creation of multidimensional raster, deep learning models for image feature extraction etc.
	Total			18584000		