

# **EXPRESSION OF INTEREST (EOI)**

**FOR**

## **Pilot on implementation of machine based tools for crop identification and assessment**

**Commissioner Land Records & Settlement  
Moti Mahal, Gwalior, MP - 474007**

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**December 2017**

## EOI Notice

### **“EOI for Pilot on implementation of machine based tools for crop identification and assessment”**

CLR invites response for Expression of Interest (EOI) from qualified and experienced firms for Pilot on implementation of machine based tools for crop identification and assessment.

Interested Bidders who qualify as per the criteria mentioned in the document may submit their response to the EOI latest by **18 December 2017 till 4 pm.**

The detailed EOI document can be downloaded from our website <http://landrecords.mp.gov.in>

**(Commissioner, Land Records)**

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## Acronyms

CLR	Office of Commissioner Land Records and Settlement
EOI	Expression of Interest
GoMP	Government of Madhya Pradesh
HO	Head Office
IT	Information Technology
RFP	Request for Proposal

## CHAPTER - 1

### 1.1 Information Provided

The **Expression of Interest (EOI)** document contains statements derived from information that is believed to be true and reliable at the date obtained but does not purport to provide all of the information that may be necessary or desirable to enable an intending contracting party to determine whether or not to enter into a contract or arrangement with CLR in relation to the provision of services. Neither CLR nor any of its officers, employees, agents, representative, contractors, or advisers gives any representation or warranty (whether oral or written), express or implied as to the accuracy, updating or completeness of any writings, information or statement given or made in this EOI document.

### 1.2 Disclaimer

Subject to any law of the country, and to the maximum extent permitted by law, CLR and its officers, employees, contractors, agents, and advisers disclaim all liability from any loss or damage (whether foreseeable or not) suffered by any person acting on or refraining from acting because of any information, including forecasts, statements, estimates, or projections contained in this EOI document or conduct ancillary to it whether or not the loss or damage arises in connection with any negligence, omission, default, lack of care or misrepresentation on the part of CLR or any of its officers, employees, contractors, agents, or advisers.

### 1.3 Costs Borne by Respondents

All costs and expenses incurred by Recipients / Respondents in any way associated with the development, preparation and submission of responses, including but not limited to attendance at meetings, discussions, demonstrations, etc. and providing any additional information required by CLR, will be borne entirely and exclusively by the Recipient / Respondent.

### 1.4 No Legal Relationship

No binding legal relationship will exist between any of the Recipients / Respondents and CLR until execution of a contractual agreement.

### 1.5 Recipient Obligation to Inform Itself

The Recipient must conduct its own investigation and analysis regarding any information contained in the EOI document and the meaning and impact of that information.

## CHAPTER – 2

CLR invites **Expression of Interest (EOI)** from qualified and experienced firms for Supply of Spatial Data Infrastructure Software for enabling spatial data sharing in Madhya Pradesh.

### 2.1 Background

Crop survey or fasal girdawari is an important activity taken up by the Commissioner of Land Records in Madhya Pradesh. This activity involves survey of the agricultural lands and the crops cultivated on them. The data from this exercise is used for estimation of the area under different crops in a given season. This information is useful for the following stakeholders: -

1. Banks/Financial Institutions use this information for decisions on extending agricultural credit in the form of short term loans or Kisan Credit Card. The type of crop grown decides the scale and term of short term finance.
2. Government uses this data for
  - a. Deciding the crops to be covered under agricultural insurance for a given tehsil/panchayat.
  - b. Procuring crops under the Minimum Support Price Mechanism from farmers.
  - c. Procuring crops under the Bhawantar scheme (Direct cash transfer of the difference between price at which crop produce was sold by farmer and the MSP).
3. Insurance companies use this information for deciding upon their strategies for agricultural insurance for a given tehsil/geographic region.

### 2.2 Objectives

Machine learning based strategies have increasingly become a potent tool for automation of work that is repetitive and follows a fairly recognizable pattern. It has been used successfully in recognition of features in images such as identification of a person based on facial features etc across a set of different images. Machine learning based strategies for crop identification is being attempted in several places and is seen to yield positive results. Some examples are as below:

1. [www.mdpi.com/2072-4292/6/6/5019/pdf](http://www.mdpi.com/2072-4292/6/6/5019/pdf)
2. [www.mdpi.com/2072-4292/7/7/9325/pdf](http://www.mdpi.com/2072-4292/7/7/9325/pdf)

## 3. Project Requirement

### 3.1 Scope of Work

The project defines following scope of work for the Selected Agency–

For the Rabi season of 2017, a pilot shall be attempted to explore the possibility of using machine learning based approach for validation of the information recorded by the patwari as to whether:

1. Crops have been cultivated on a land parcel or the parcel is fallow/vacant.
2. The correct crop has been recorded.
3. The area under which crop or crops have been cultivated.
4. In case of damage like hailstorm or frost, whether a particular crop grown in a plot has suffered damage in a land parcel has suffered damage and if possible the extent of damage.

### 3.2 Project Coverage

This project will be implemented as a pilot project in one division of State for a single crop. The State-wide implementation would be carried out through a separate selection process.

## 4. Eligibility Criteria

1. The Bidder should be a company registered under the Indian Companies Act, 1956 / 2003 OR a Government organization OR any international organization involved into work of similar nature. Appropriate certificate should be furnished as documentary proof.
2. The bidder shall not have been black listed by any State Government, Central Government or any other Public Sector undertaking or a Corporation as on the date of EOI.

## 5. General

1. This is not a **Request for proposal (RFP)** and **commercial bids** SHOULD NOT be submitted with EOI.
2. **CLR** reserves the right to examine / verify the supportive documents / reports furnished by the bidders.
3. **CLR** would constitute an evaluation committee to evaluate the responses in detail in order to determine whether they are substantially responsive to the requirements set forth in the EOI. The decision taken by the committee in this regard is final and binding on all the bidders of EOI.
4. CLR shall shortlist the vendors based on the requirements and the responses submitted. CLR reserves the right to call only short listed vendors for a **technical presentation / demo** of their proposed solution on the date and time decided by CLR. The decision taken by the CLR in this regard would be final and binding on all the bidders of EOI.
5. The **Technical proposal** should have following contents:

- a. Demonstration of capabilities with respect to machine based learning for crop identification and assessment
  - b. Previous experiences of the project implemented and challenges faced
  - c. Proposed approach and methodology for pilot implementation
  - d. Tentative timelines
  - e. Proposed outcomes of the project
6. The vendor presentation / demonstration of the product shall be held at **Office of Principal Revenue Commissioner, Bhopal**.
  7. If any information or document provided in the response to this EOI is found to be misleading subsequently, the bidder will be disqualified.
  8. CLR may reject any or all the responses received / cancel the entire process at any stage without assigning any reason whatsoever.
  9. CLR shall have absolute discretion to issue **Request of Proposal** to eligible bidders shortlisted under EOI or to go for open tender later. The decision taken by the CLR in this regard is final and binding on all the bidders of EOI.
  10. The applicants who wish to submit responses to this EOI should note that they should abide by all the terms and conditions contained in the EOI. If the responses contain any extraneous conditions put in by the respondents, such responses may be disqualified and may not be considered for the empanelment / selection process.
  11. The information exchanged between the bidders and CLR as part of this EOI shall be confidential and shall not be disclosed without the prior written consent of the CLR.
  12. Notwithstanding anything contained herein above, in case of any dispute, claim and legal action arising out of this EOI, the parties shall be subject to the jurisdiction of courts at Bhopal, Madhya Pradesh State, India only.

## **6. Submission of Proposal**

Bidders qualifying as per the criteria mentioned above and who are interested in providing the services detailed above may submit their response to this EOI as per formats given in annexure along with relevant documentary evidence latest by **Monday, 18 December 2017** till **4 PM**. Any response not containing information for all the parts of Annexure may be rejected.



The response to the EOI should be emailed to [crgwa@nic.in](mailto:crgwa@nic.in) comprising of the technical proposal in form of presentation having subject as **“Expression of Interest – Machine learning based tools for crop identification and assessment”**.

## **Annexure-1 Format of Application Form**

(On Applicant Organization's Letterhead)

**To,**

**The CLR**

**Moti Mahal, Gwalior - Madhya Pradesh**

**Subject:** Expression of Interest for Machine learning based tools for crop identification and assessment

**Dear Sir,**

This has reference pertaining to the above captioned subject.

We are interested in submitting our Expression of Interest for the same.

We would like to clearly state that we qualify for this work as our organisation meets all the pre-qualifying criteria indicated by you and our organisation is not under a declaration of ineligibility for corrupt or fraudulent practices.

We understand that if the details given in support of claims made by us are found to be untenable or unverifiable or both our EOI will be rejected without any reference to us. We further clearly understand that CLR is not obliged to inform us of the reasons of rejection of our bid.

**Yours sincerely**

**Signature**

<<Name, designation, contact address, telephone number, email>>

## Annexure -2 Bidder Profile

S/N	Particulars	Response
1	Company Name	
2	Date of incorporation	
3	Company Head Office Address	
4	Registered office address	
5	Contact person Name	
6	Address	
7	Telephone no.	
8	Mobile No.	
9	Fax No.	
10	e-mail ID	
11	Number of year experience in machine learning based tools for crop identification and assessment	
12	Whether company has been blacklisted for service deficiency in last 3 years.	
13	Turnover for Financial Years 2014-15	
14	Turnover for Financial Years 2015-16	
15	Turnover for Financial Years 2016-17	

**End of Document**