

EXPRESSION OF INTEREST

For

Website upgrade, user based additional web application module and development of mobile applications

Consulting Firm/Joint Venture:

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.....

Prime Consultant (in case of a JV):

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.....

Employer:
Government of Nepal
Ministry of Population Environment
Department of Hydrology and Meteorology
Naxal, Kathmandu

January 2017



Government of Nepal
Ministry of Population and Environment
Department of Hydrology and Meteorology
Naxal, Kathmandu

Notice No:

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Expressions of Interest (EOI)

The Government of Nepal, Department of Hydrology and Meteorology (DHM) invites EOI (Expressions of Interest) for the purpose of short listing the qualified, eligible and experienced Companies/firms and or their joint ventures for **Website upgrade, user based additional web application module and development of mobile applications** works.

1. The budget to this purpose has been allocated by the Government of Nepal (GON) for the fiscal year 2073/074.
2. Experienced, eligible and interested Consulting Firms or companies are invited to submit their EOI, either alone or in joint venture with other firms with a certified copy of Consultancy /Company Registration Certificate, VAT and Tax Clearance (2072/73)/ Tax Return Submission receipt for the last fiscal year.
3. EOI documents could be obtained free of cost from DHM upon request during office hour on all government working days within the 15th day of the first date of publication of this notice or can also be downloaded from the website: <http://www.dhm.gov.np>. The instruction to the consultant, prescribed format, evaluation criteria, scope of the work and duration of the study and other details of the project are mentioned in the EOI. Only lead firm may obtain EOI form mentioning the names of all members of Association/JV and submitting Association/JV agreement.
4. Applications for EOI must be clearly marked **Website upgrade, user based additional web application module and development of mobile applications**
5. and shall be submitted in sealed envelopes by companies or their joint venture received by the due date and within the specified time in the presence of the applicant or their authorized representatives. Absence of any applicant (or their authorized representative), however, shall not obstruct or prevent the opening of the EOI in any way, which must be delivered to the following address within the given time below.

Last Date of EOI Submission:- **February 4, 2017 and 12:00 pm**

Date of EOI opening :- **February 4, 2017 and 01:00 pm**

6. Certified evidences of the client reference indicating satisfactory completion of the projects along with the cost of consulting services in NRs and date of completion of the assignment only will be counted.
7. In case the day of submission of the EOI falls on a public holiday, it shall then be submitted on the following working day at same hour. Only the short-listed Consulting Firms shall be invited for RFP (Request for Proposal). During the RFP process, the consulting firm/companies will be selected in accordance with quality and cost Based Selection procedure (QCBS).
8. DHM reserves the right to shortlist any or reject all of the Firms without assigning any reasons whatsoever. Further information or clarification can be obtained from DHM during office hours.

Procurement Unit

Department of Hydrology and Meteorology

Naxal, Kathmandu

E-mail: shivaamet@gmail.com, spd_acharya@yahoo.com, cbhetuwal@yahoo.com

Website: www.dhm.gov.np

Website upgrade, user based additional web application module and
development of mobile applications

1. INFORMATION ON THE CONSULTING FIRM

Information shall be provided in the following format. No field shall be left vacant. In case of a joint venture, the same form shall be filled by each of the JV partners separately. The form shall be submitted in the time, date and venue as mentioned in the published notice.

1. General

Name of Firm	Address	Telephone	Email	Fax	JV Percent

Out of the above list,
.....will be the Prime Consultant.

2. Financial Capacity

Annual turnover over the last three years are as follows. The auditor’s report/tax clearance certificates are attached.

Fiscal year	Turnover (Rs)

3. Overall Experience*

Overall experiences of the firm in relevant work during last ten years are as follows (Work completion certificates are attached).

Name of Project	Project	Client	Contract amount (excluding VAT)	Year of completion	Description of work carried out

4. Specific Experience*

Experiences of the firm in related field during last ten years are as follows. Work completion certificates are attached.

Name of Project	Project	Client	Contract amount (excluding VAT)	Year of completion	Description of work carried out

* The firm/s shall produce certified evidences of the client reference indicating satisfactory completion of the mentioned projects along with the cost of consulting services in NRs and date of completion of the assignment are required for the consideration of that project for evaluation. Sublet worksor assignment as a sub consultant shall not be considered for evaluation.

5. Human Resources

Human Resources in the company

Staff Member	Details	
	Permanent/part time	Name of personals

7. Other Resources

Other relevant resources available with us are as follows. The office layout, invoice/bill ofequipment/vehicle/software/computer is attached.

Resource	Unit	Total Available	Engaged by Works on Hand
Office area	m2		
Telephone lines	line		
Photocopy, Printers	set		
High capacity Computer	set		
vehicles(Four wheel Drive)	no		

Authorized signature:

Seal:

Date:

ANNEX 1: INFORMATION TO THE CONSULTING FIRM

General Information

Purpose of inviting the EOI:	The main purpose shall short-list suitable consulting firms or software development companies for upgrade of existing website and development of mobile apps and related products so that proposals could be invited from them only. However, the client may extend the short-list to include additional relevant consulting firms which are capable of giving the desired output.
Format and Signing of Application:	Applicant intending to file an application in response to this EOI should submit an “Application together with the duly completed EOI form providing all the information required therein after signing in by Authorized Representative of Consulting Firm or company (in case of Joint Venture, Authorized Representative of Lead Firm) with Company’s seal in every page of EOI forms.
Minimum eligibility of the firm:	Registered software development companies, consulting firms/company registered at VAT office and tax clearance certificates.
Deadline for submission of EOI:	at or before February 4, 2017 and 12 Noon (NST-Nepal Standard Time)
Number of copies to be submitted:	Two
Joint Venture:	A firm may apply to be short-listed alone or in joint venture with other firms. However once short-listed, JV partners are unchangeable.
Duration of completion:	Duration to complete the works will be 80 days from the signing of the contract agreement.
Information from the Client:	In due course of time, the shortlist shall be published on the Client’s notice board, at the website: www.dhm.gov.np . The client shall mail the short-list to each of the firms/JV submitting the EOI and initiate the process of RFP without waiting for the receipt from the firms that they have received the short-list.

ANNEX 2: EVALUATION CRITERIA

(I) Eligibility Criteria (Pass / Fail)

<i>Sr. No.</i>	<i>Eligibility Criteria</i>	<i>Requirement</i>	<i>Compliance</i>	<i>Remarks</i>
1.	Corporate Registration	Mandatory	Yes/ NO	Pass/Fail
2.	Tax Clearance / Tax Return Submission receipt for the last fiscal year (F/Y 072/73)	Mandatory	Yes/ NO	Pass/Fail
3.	Vat Registration	Mandatory	Yes/ NO	Pass/Fail
4.	Minimum Years of Standing	The applicant or the Lead partner of J/V applicant must have min. 5 years of standing.	Yes/ NO	Pass/Fail

II) Ranking Criteria (Out of 100%)

Experience of Consultant (70 marks) Work, completed during last 10 years		Office Set up and Logistics (10 marks)	Availability of Staff (10 marks)	Financial Turnover Last three years (10 marks)
<p>Overall experience of Firm. (40 marks) 5 Projects</p> <p>Work Experience of firm in Application software developments, software system supply and other software related work etc.</p> <p>(5x8=40 marks)</p>	<p>Work Experience in Specific Projects. (30 marks) 2 Projects</p> <p>Work Experience of firm in related field (Hydrological/Meteorological software development, Climate software development and supply, development of aviation meteorology related software and scientific study related to hydrology and meteorology)</p> <p>(2x15=30 marks)</p>	<p>Office equipment, space, communication facilities, Vehicle and related Software (10 marks)</p> <p>1. Office equipment & Work related software -5 marks (equipment-2, software-3 marks)</p> <p>2. Office Space -3 marks.</p> <p>3. Communication facilities -2 marks</p> <p>.</p>	<p>Related Technical Human Recourse (10 marks)</p> <ol style="list-style-type: none"> 1. Senior Software developer -1 number – 3 marks 2. Database Designer-1 number – 1 marks 3. Software Engineer – 1 number – 2 marks 4. Android developer – 1 number – 2 mark 5. Meteorologist – 1 number – 1Marks 6. Technician – 1 number – 1 Mark 	<p>Financial Turnover of the consultant within last three years</p> <ol style="list-style-type: none"> 1. Less than one million - 4 marks 2. UP to two million- 6 marks 3. More than two million- 10 marks

NOTE: The consultant should score more than 60 percent on the overall ranking criteria as mentioned above to qualify for short listing

Terms of References:-

Project Description:

Introduction: -

Meteorological Forecasting Division (MFD) of Department of Hydrology and Meteorology (DHM) is providing various types of forecast or services. Some of the major forecasts are public weather forecast, aviation forecast, and forecast for mountaineering expedition team. General weather forecasts are issued twice daily while mountaineering forecasts are issued once in the evening. In addition to this, several services such as three day weather outlook for agriculture, thick Fog monitoring during mid-winter, forecast during natural calamities, special forecast or bulletin are also issued based on user demand. These forecasts or information are available to the public as well as various stakeholders via website (www.mfd.gov.np).

Recently, three days weather forecast based on NWP model is also updated regularly in the website. The model forecast from WRF-ems is generated on hourly basis similarly, satellite images receiving from FY2-E Satellite is also updated at the interval of hourly/half an hourly in the website.

MFD collects three hourly meteorological data from 15 synoptic stations throughout the country. These data are transmitted to GTS through RTH, New Delhi. Similarly, MFD also receive vast amount of surface and upper air data in a regular basis in every three-hour interval from RTH New Delhi. These data are analyzed at every three-hour interval and used in preparation of weather forecast. Aviation weather data also is exchanged with AFTN network via AMHS installed at each station (Kathmandu and outside aeronautical stations).

Aviation community is one of the major stakeholders. Meteorological Forecasting Division of DHM located at Tribhuvan International airport premises is providing all the aviation services since 1968. One of the aviation focused dedicated service is flight documentation. The flight folder consists of the following, pertaining to the route of flight and approximate altitude: wind and temperature aloft forecast charts; significant weather charts (with abbreviated plain language descriptions of forecasts as appropriate); Terminal Aerodrome Forecasts (TAFs) for departure, destination and alternate; significant meteorological information (SIGMET) within Kathmandu FIR, aerodrome reports (METAR), special reports (SPECI), and relaying other information.

DHM intends to customize the website in local language Nepali so that users can get all the forecast, data and information in local language Nepali in addition to English language. Also, web based flight folder documentation system is another interest targeted to the aviation community. A mobile application is also required to access web based flight folder documentation. Similarly, another mobile application for public weather services is essential for the users to get various kinds of weather forecast, data and relevant information in their handset. The attached scope of work provides the requirement in details for Website upgrade, user based additional web application module and development of mobile applications.

Objective

The specific objectives of the works can be summarized as below:

- To customize the website (in Nepali language)
- To develop web based flight folder documentation system
- To develop mobile apps

Scope of Services

- A. Customize the website in Nepali language

- I. Various Forecast (General, Mountaineering, Fog monitoring, City etc.)
 - II. NWP model products (three days)
 - III. Satellite images (IR, Visible, Water Vapour etc.)
 - IV. Observation and data (METAR/TAF/SIGMET etc.)
 - V. Daily, weekly and monthly synoptic and climate data. Comparison and extreme data
 - VI. Astronomical information (Sunrise/Sunset/Moonrise/Moonset/Twilight or others)
 - VII. Special bulletin, news and others
 - VIII. Others
- B. Web based flight folder documentation system
- I. Flight and its route
 - II. General Weather/synopsis
 - III. Observation and forecast (METAR, TAF, SIGMET, Warning etc.)
 - IV. Charts and images (wind and temperature aloft forecast charts at different levels, significant weather charts for high and low levels, Satellite images)
 - V. Landing and takeoff forecast (Wind, temperature, pressure etc.)
- C. Mobile application for web based flight folder documentation system
- D. Mobile application for public weather services
- E. Weather widget

General Requirements

- A. Customize the website in Nepali language
- All the website contents (pages) should be customized into Nepali language.
 - Special care should be taken for public weather forecast template for the language translation.
 - All the language conversion should be automatic.
 - The web pages (including Nepali) must be supported by all the modern web browsers available on the market without any additional plug-in or extension requirement.
- B. Web based flight folder documentation system
- There should be separate flight folder documentation for each and every domestic and international flight operated at Tribhuvan International Airport.
 - All the forecast/data or information or charts or images should be visualized in a single platform.
 - There should be provision of both automatic or manual uploading forecast/data or information or charts or image.
 - All the information should be in text file, image (JPG, PNG) or Post Script (PDF) format and/ or Excel format and /or HTML format or any other format as per the consultation with MFD.
 - There should be provision of user access permissions configurable with administrative rights.
 - System monitoring as well as uploading approval platform should be included.
 - User allows reading and printing features should be included.
- C. Mobile application for web based flight folder documentation system
- It should include all the contents of web based flight folder documentation system.
- D. Mobile application for public weather services
- It should include at least following basic information related to public weather services.
- Display of “Today”
 - I. Available Current Weather Condition (Cloud condition, Actual/Real feel Temperature, Wind Speed Visibility, Humidity, UV Index, Barometric Pressure, Dew Point, Percentage Probability of rainfall etc.)

- II. Available Weather Forecast _day (Cloud condition, Temperature, Percentage Probability of rainfall etc.)
- III. Available Weather Forecast _night (Cloud condition, Temperature, Percentage Probability of rainfall etc.)
- Display of “Forecast” for tomorrow and day after tomorrow forecast
 - I. Available Weather Forecast _day (Cloud condition, Temperature, Percentage Probability of rainfall etc.)
 - II. Available Weather Forecast _night (Cloud condition, Temperature, Percentage Probability of rainfall etc.)
- Display “Satellite” for satellite images
- Display of “Sun & Moon” for Astronomical information
 - I. Sun & Moon rise and set time
 - II. Track of Sunrise and Sunset Time
 - III. Lunar Moon Phases
- Display of “warning” for warning or any other specific information.
- E. Weather widget
 - Development of DHM Weather widget
 - Inclusion of WWIS weather widget in the website

In addition to the above-mentioned agreement, parties should assign following terms and conditions.

- Mobile applications should be based on android operating system.
- Appropriate symbols should be used for weather parameters/information as required.
- All the observation/forecast/information should be displayed at the given specific location automatically.
- Date, time and place based on GPS tracking should be incorporated in both mobile applications and widget.
- Available observation/forecast/information should be used as per the consultation with DHM.
- Absent information should be hidden automatically.
- Information under Satellite should be full screen mode with zoom and also terrain, satellite, cloud overlay views.
- There should be regular notifications with alert sound for forecast/warning or any other special information.
- The language used should be in English/Nepali.
- Alternate units should be displayed as desired.
- There should be provision of sharing all the information via email and social media.
- The application should provide the user to configure the font size, themes etc.
- The applications should be supported by all kind of smart phone available in the market without any additional plug-in or extension requirement.
- All the forecast/data or information or charts or images etc. receiving from website/mobile application or widget should clearly viewable in all devices such as desktop, tablets and smart-phones etc.
- SMS/Notification alert system must be configured whenever applicable.
- All the contents should be allowed for reading and printing to the users.
- A government water mark should be included whenever required as per the consultation with DHM.
- The navigation and the user interface must be intuitive enough so as the users don't need user manual for using and navigating through the information.

- A complete functional testing of all the modules and functionalities should be carried out and it should be also bug free.
- Immediate repair or maintenance or update should be made once received any bug or troubleshooting.
- A penalty of Rs. 100/per day is charged in case of not entertaining any kind of support during 24 hrs.
- Source code of the website/mobile apps should be available to DHM.
- The system should be maintained for one year with no additional cost.
- Report on the performance of the apps should be available in every month.

Manpower

The following technical experts and assistants are envisaged for the completion of the study.

Position	Qualification and Requirements	No of Required Man Days
Senior Software Developer	<ul style="list-style-type: none"> • BE in computer/electronics or Bachelor in IT or higher • More than 4 years of working experience • Previous experience of working in Hydrology and Meteorology field 	39
Software Engineer	<ul style="list-style-type: none"> • BE in computer/electronics or Bachelor in IT • More than 2 years of working experience in relevant field 	69
Android Developer	<ul style="list-style-type: none"> • BE in computer/electronics or Bachelor in IT • More than 2 years of working experience in relevant field 	69
Database Engineer	<ul style="list-style-type: none"> • BE in computer/electronics or Bachelor in IT • More than 2 years of working experience in relevant field 	7
Meteorologist/ Forecaster or Equivalent	<ul style="list-style-type: none"> • Masters in Meteorology or related • More than 2 years of experience • Provide inputs for data verification • Previous work Experience in related fields 	10
Technical Assistant	<ul style="list-style-type: none"> • Diploma in IT/ Training • More than six months of experience in related field 	2

Timeline

The duration of the development of complete system is within 80 days effective from date of consultancy agreement.

Schedule of Implementation

The time schedule for the completion of the report is as follows:

S.N.	Description	No. of Reports to be Submitted	Due date for submission after effective date of contract agreement
1.	Inception software demo/report	2 Copy	15 days after the date of agreement
2	Interaction/training for the use of web pages/apps with draft software/report	1 day training for MFD forecasters with 2 copies of draft software report	70 days after the date of agreement
4.	Final version of the software incorporating all the comments	3 copies of the same software along with keys and printed version of operation manual	80 days after the date of agreement

The draft report and final report/demo software with digital and hard copy should be presented to the Meteorologists and others in MFD, Kathmandu Airport.

Schedule of Payment

Schedule of Payment for this work will be as follows:

S.N.	Description	% of Contract Amount
1.	Submission and approval of Inception software demo/Report	20 %
2.	Submission and approval of Draft Software/ Report	30%
3.	Submission and approval of Final software/Report	50%

Deliverables

- Two copy of Inception Software demo/ Copy shall be prepared and submitted to MFD no later than 15 days after the signing of the contract agreement. This software demo/copy shall contain the finalized work program and a general approach and methodology that the Consultant proposes to conduct the work. MFD will review the Inception demo/copy submitted by the consultant and will send its comments, if any, to the consultant.
- A presentation shall also be given by the consultant at MFD at the time about the tools the consultant plans to use and the methodology the consultant would be following.
- A one day training with use of web pages/apps with two copy of Draft Reports shall be prepared and submitted to MFD no later than 70 days after signing the contract agreement. The Draft Final report of study shall include details as formulated in the scope of work.
- Three copies of the software along with keys and printed version of operation manual shall be prepared and submitted to MFD within 80 days of the signing of the contract by the consultant.
- A presentation/training shall be given by the consultant at the time of submission of final report at MFD to the technical staffs of the MFD along with any other professionals MFD deems necessary to invite. The presentation/training shall include the methodology implemented by the consultant and the tools that the consultant used to complete the work and the ways of using the software.
- The consultant should prepare and submit the final report by incorporating all the comments and suggestions, if any, from MFD/DHM.

- A digital copy for all software and operation manual shall be provided by the consultant preferably in a clearly labelled optical disk.
- A one day training program to be held at MFD to teach the forecasters how to use upgraded website and also how to solve simple problem if any arises.
- A one day training on how to use the aviation and weather mobile apps.

1. Data, Local Services, and Facilities to be provided by the Client

All the necessary meteorological data for the study will be provided by the client.