

A-14011/01/2012-MON

18.06.2012

1. M/s NIIT GIS Ltd.
2. M/s Rolta India Ltd.
3. M/s RMSI Pvt. Ltd
4. M/s SENES Consultants India Pvt. Ltd.
5. M/s Tata Consultancy Services Ltd.
6. M/s Quantum Asia Pvt. Ltd.

Subject: Consulting Services for setting up of GIS based Web Portal on Water Quality.

Sir,

In continuation of our letter of even number dated 15.12.2011, pre bid meeting on Consulting Services for setting up of GIS based Web Portal on Water Quality was held on 11.01,2012 with six shortlisted firms. Responses to the pre-bid queries and addendum to the RFP are enclosed herewith for your information. The Responses to the pre-bid queries and addendum to the RFP is also posted on the website of CPCB. The schedule of bidding process shall be as follows:

- (i) Bid Submission Date : July 23, 2012, 12:00 Noon (Monday)
- (ii) Bid opening Date : July 23, 2012, 12:30 P.M.(Monday)

Please inform us within a week of receipt of this letter that your firm will submit the proposal.

Yours faithfully,

(J.S.Kamyotra)
Member Secretary

Encl:As above.

A-14011/01/2012-MON

18.06.2012

M/s NIIT GIS Ltd.
B 1/H 9, Colosseum
Mohan Co-operative Industrial Area
Mathura Road
New Delhi-110044

Subject: Consulting Services for setting up of GIS based Web Portal on Water Quality.

Sir,

In continuation of our letter of even number dated 15.12.2011 the pre-bid queries and responses are added into RFP is enclosed herewith for information and posted on the website of CPCB. The schedule of bidding process shall be as follows:

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Please inform us within a week of receipt of this letter and confirm that your firm will submit the proposal.

Yours faithfully,

(J.S.Kamyotra)
Member Secretary

A-14011/01/2012-MON

18.06.2012

M/s Rolta India Ltd.
Rolta Coporate Park
187, Udyog Vihar, Phase-I
Gurgaon- 122016

Subject: Consulting Services for setting up of GIS based Web Portal on Water Quality.

Sir,

In continuation of our letter of even number dated 15.12.2011 the pre-bid queries and responses are added into RFP is enclosed herewith for information and posted on the website of CPCB. The schedule of bidding process shall be as follows:

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Yours faithfully,

(J.S.Kamyotra)
Member Secretary

A-14011/01/2012-MON

18.06.2012

M/s RMSI Pvt. Ltd
A-7 Sector 16
Noida 201301

Subject: Consulting Services for setting up of GIS based Web Portal on Water Quality.

Sir,

In continuation of our letter of even number dated 15.12.2011 the pre-bid queries and responses are added into RFP is enclosed herewith for information and posted on the website of CPCB. The schedule of bidding process shall be as follows:

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Please inform us within a week of receipt of this letter and confirm that your firm will submit the proposal.

Yours faithfully,

(J.S.Kamyotra)
Member Secretary

A-14011/01/2012-MON

18.06.2012

M/s SENES Consultants India Pvt. Ltd.
MBL House, DD-18/8, 5th Floor
Sector-1, Salt Lake
Kolkata

Subject: Consulting Services for setting up of GIS based Web Portal on Water Quality.

Sir,

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- | | | |
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| (x) | Bid opening Date | July 23, 2012, 12:30 P.M. |

Please inform us within a week of receipt of this letter and confirm that your firm will submit the proposal.

Yours faithfully,

(J.S.Kamyotra)
Member Secretary

A-14011/01/2012-MON

18.06.2012

M/s Tata Consultancy Services Ltd.
PTI Building
4 Parliament Street
New Delhi-110001

Subject: Consulting Services for setting up of GIS based Web Portal on Water Quality.

Sir,

In continuation of our letter of even number dated 15.12.2011 the pre-bid queries and responses are added into RFP is enclosed herewith for information and posted on the website of CPCB. The schedule of bidding process shall be as follows:

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Yours faithfully,

(J.S.Kamyotra)
Member Secretary

A-14011/01/2012-MON

18.06.2012

M/sQuantum Asia Pvt. Ltd.
34/A, Khanamet, Hi Tech City
Raillway Station Road, Madhapur
Hyderabad-500081

Subject: Consulting Services for setting up of GIS based Web Portal on Water Quality.

Sir,

In continuation of our letter of even number dated 15.12.2011 the pre-bid queries and responses are added into RFP is enclosed herewith for information and posted on the website of CPCB. The schedule of bidding process shall be as follows:

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Please inform us within a week of receipt of this letter and confirm that your firm will submit the proposal.

Yours faithfully,

(J.S.Kamyotra)
Member Secretary

Central Pollution Control Board
PariveshBhawan, East Arjun Nagar, Delhi-32
Pre Bid Meeting:11th January,2012

Subject: Minutes of the meeting – pre-bid meeting for Consultancy Services for Setting up of GIS based Web Portal on Water Quality

- i. The procurement of consultancy services for setting up of GIS based Web Portal on Water Quality through Quality and Cost Based Selection [QCBS] was initiated by CPCB after obtaining NOL from World Bank. Central Pollution Control Board issued Request for Proposal [RFP] to the six shortlisted consulting firms(1.M/s Quantum Asia Pvt. Ltd,India;2.M/s Rolta India Ltd, India;3.M/s NIIT GIS Ltd. India;4.M/s RMSI Pvt. Ltd. India;5.M/s SENES Consultants India Pvt. Ltd. India and 6.M/s Tata Consultancy Services Ltd.) and invited Proposals to provide the Consulting Services for setting up of GIS based Web Portal on Water Quality that delivers updated information on water quality in a basin context for improved understanding and decision making. The Water Portal is expected to serve as a one point national node or kiosk for all water quality related information covering surface and ground waters, water withdrawals and wastewater discharges from all States/Union Territories.
- ii. In compliance to invitation for proposals, pre-bid meeting convened on 11.01.2012 in Central Pollution Control Board, PariveshBhawan, East Arjun Nagar, Delhi-32. Pre-bid meeting was attended by 13 Participants of five consulting firms. The register of bidders/ participants is provided in Annex-I. The list of CPCB officers attended the pre-bid opening is given at Annex-II.
- iii. Procurement specialist from TAMC, Ministry of Water Resources, Mr. R.K. Visvanath explained the bidding process, World Bank guidelines, transparency issues besides technical aspects through comprehensive PowerPoint presentation. During the presentation, it was informed that the RFP was issued on 15.12.2011 and the last date for submission of bid is 06.02.2012 and opening of technical proposals on the same date. Financial proposals will be opened after getting approval of World Bank for evaluated technical proposals.
- iv. Pre bid queries were raised by M/s Quantum Asia Pvt. Ltd, India; M/s Rolta India Ltd, India; M/s NIIT GIS Ltd. India;M/s RMSI Pvt. Ltd. India;M/s SENES Consultants India Pvt. Ltd. India and M/s Tata Consultancy Services Ltd. in writing during the pre-bid meeting.
- v. The pre bid queries received from bidders / participants are compiled and the same have been replied by CPCB based on available information. All the pre bid queries received from bidders/participants and draft replies are provided in Annex-III.

Meeting ended with thanks to the Chair.

Register of short-listed firms participants for Pre-Bid Meeting held on 11th January, 2012 for consultancy services for setting up of GIS based Web Portal on Water Quality

S. N	Name of Consulting Firm	Place of Registration	Name of Representative	Phone No.	Email id
1	M/s Rolta India Ltd, India	India	Papiya	9818314337	<i>papiya.ract@rolta.com</i>
			S.K. Choudhary	981855441	
			G Jindal	9911962385	
			Manisha Shukla	9899061799	
2	M/s NIIT GIS Ltd. India	India	Dr. Pradeep	9711211763	
			Ashwani Kumar	9999299777	
			Amit Tewary	9910301180	<i>amit.tewary@niit-tech.com</i>
3	M/s RMSI Pvt. Ltd. India	India	Vishal Chandra	9873442866	<i>vishal.chandra@rmsi.com</i>
			Ashutosh Singh	9899452771	<i>ashutoshs@rmsi.com</i>
4	M/s SENES Consultants India Pvt. Ltd. India	India	Pritish	9871957807	<i>prish.bisoyi@pb.com</i>
			Nilanjan Paul	9830024382	<i>npaul@senesindia.com</i>
5	M/s Tata Consultancy Services Ltd. India	India	Amarpreet Singh	9717898999	<i>amarpreet.s@tcs.com</i>
			Shailesh Shankar	9268573678	<i>shailesh.sharma@tcs.com</i>

No of Firms present: 5

No of participants Attended: 13 persons

Members of High Level Technical Group and Participants from CPCB

1. ShriJ.S.Kamyotra, Member Secretary,
2. Shri Sanjay Gahlot, Deputy Director General
3. Shri Stephen Parsons, Team Leader, TAMC
4. ShriR.K.Visvanath, Procurement Specialist, TAMC
5. Dr.D.D.Basu, Sc.Eq
6. ShriA.Sudhakar, Scientist ~~D~~
7. ShriR.M.Bhardwaj, Sc.D
8. Mr. R.P.Gupta, ACO,
9. Ms.SunitiParashar, SSA
10. ShriAnkurRajpal, SRF
11. Ms. Shweta Gaur, SRF
12. Ms. SandhyaSrivastava, SRF

**CENTRAL POLLUTION CONTROL BOARD
HYDROLOGY PROJECT PHASE-II**

Pre-bid Meeting : 11th January, 2012

**CONSULTANCY SERVICES FOR SETTING UP OF GIS BASED WEB PORTAL ON WATER QUALITY
PRE-BID QUERIES AND RESPONSES**

S. No.	Page	Reference to Section and para/Clause of Bidding Document	Original Para or Clause in Bidding Document issued	Query	Response
1	Page 20	Pt.1. 4, Data sheet RFP	CPCB shall facilitate the data collection. All relevant data available with CPCB shall be shared with the Consultant. To collect the data from other sources, letters to concerned authorities will be given by CPCB.	The data procured from the CPCB will conform to the quality and projection standards and no data verification is required. Please confirm.	CPCB will procure dataset from NIC and other sources including NRSC. Conformity of data needs to be verified by consultant, so as to have the data in common projection system and standards.
2	Page No 22/4.3	Instructions to Consultants DATA SHEET	Consultant must submit the original and 5 copies of the Technical Proposal, and the original of the Financial Proposal.	It is assumed that the consultant has to submit 5 copies each of the Technical and Financial proposal to CPCB.	5 copies of the Technical Proposal and the original (one copy) of Financial Proposal shall be submitted.
3	Data Sheet, 5.2 (a) (iii), page No. 23		Key professional	We understand that only Key professional of 4 members' viz., Team leader, Web Developer, GIS specialist and Data Base Management Expert resumes will be evaluated for score calculations. Please clarify.	Yes. Detailed information about others will be credited
4	Page 28;	Form Tech2 B	B - Consultant's Experience Approx. value of the contract (in current US\$ or Euro):Approx. value of the services provided by your firm under the contract (in current US\$ or Euro):	Kindly allow us to use Indian Rupees to indicate the Approx. values of contracts/services etc. If compulsory to use US\$/Euros, please specify the conversion factor to be considered for US\$ and EURO to convert from Indian Rupees.	Use of Indian Rupees is accepted. Amendment 7.

5	Page No. 32	Technical Proposal - Standard Forms, FORM TECH-5,	Team Composition and Task Assignment	Is there any limit on additional/support resources to be proposed in FORM TECH- 5. Please clarify.	No .
6	Page No. 35	Technical Proposal - Standard Forms, FORM TECH-7,	Staffing Schedule	Do we need to give the Schedule for only Key professional of 4 members in FORM TECH-7? Please clarify	No. Detailed information about others will be credited.
7	FIN-6, Page No. 44	Technical Proposal - Standard Forms, FORM	Breakdown of costs for procurement of hardware, software and internet line	Present IT infrastructure at CPCB is given in Annexure 1, page no. 65. We understand that irrespective of existing infrastructure at CPCB, we need to provide costs as per FORM FIN -6. Please clarify.	Information requested in the bid is independent of existing infrastructure.
8	Page 44	Pt.15, RFP	BREAKDOWN OF COSTS FOR PROCUREMENT OF HARDWARE, SOFTWARE AND INTERNET LINE Related Data Sets (in addition of CPCB Database on Water Quality)	The amount of data to be procured will be based on the detailed SRS carried out as part of the current scope of work. Kindly advice on quoting for the same in the proposal when the quantity and source are not known.	Refer to the Revised FIN-6 specified in Amendment-1; the consultant has to plan their activities accordingly. RFP indicates a single quote for the project, including all procurement.
9	Page 47/ 1	Background	Currently EDB can be accessed by any User on CPCB website through link The online entry of water quality data is performed with respect to 2000 water quality monitoring stations covering 27 States and 6 Union Territories. This data is made available to the public.	Kindly confirm the spatial coverage of the area of interest. We assume it to be 27 states and 6 Union Territories.	The monitoring stations spatial coverage is within 28 states and 6 union territories Amendment 8.
10	Page47/Section1	Background	Data are gathered from different sources including the Central/State Pollution Control Boards. Background Page-47/Section-1	Kindly clarify the other sources for data collection besides Central/ State Pollution Control Boards.	No other resource for dynamic data collection. CPCB will provide all data.
11	Page47		The EDB comprises various modules viz. water quality, air quality, urban pollution, industrial pollution, hazardous waste, etc. Data structures for each of the modules are designed considering the requirements of various target user groups. Data are gathered from different sources including the Central/State Pollution Control Boards.	What would be volume of EDB data to be migrated in the new system?	Data volume migration would not be more than 10 GB.
12	Page48/Section1.2	Objectives	Achieve compilation and transformation of all existing water quality and associated data at one central server as a structured and dynamic resource	What is the format, type and volume of associated data?	The latest water quality data (5 GB) is available in MS excel in a designed template Data is available in hard copy and is equivalent to 5000 A4 sheets for 15 years and 28 parameters.

13	Page 48/1.2	Objectives	Hook data from automatic water quality monitoring stations and display on the portal on real time basis; issue warnings (if any) in the event of abnormal Situations	Is this expected to be seen on the GIS web Portal? If yes, then what would be the input data format?	Yes. Data from automatic water quality monitoring stations will be displayed on the portal on real time basis. It is expected to view the online data over the web GIS application for the current project. The procurement of automatic water quality station is in progress and the database format specified Extensible Mark-up Language (XML) or MSSQL.
14	48		Payments made to SPCBs for the supply of data are not integrated with this system. Payments are manually processed. There is no Financial Management Information System.	What are the different stages of FMIS we need to track? What would be the Approval Process of data received from SPCB? Are we required to track the same in application also? Are we required to develop the end to end process of tracking the entire work order for SPCB from beginning to payment through payment gateway?	FMIS system shall allow making payments via payment gateway and should maintain record of payments made to SPCB/Monitoring Agencies. FMIS Should have ability to generate reports based on SPCB/ Monitoring Agencies, river basin and time period. See also S.No 43.
15	Page No.48	Section 5, TOR, 1. Background,	1.2 Objectives	What is water quality index on on-line basis? Can you share sample related data / map for the same?	The water quality index will be a statistical formula which will be provided by CPCB. Water quality index provides a convenient means of summarizing complex water Quality data and facilitating its communication to a general audience. Utilization of the water quality index will help staff, lawmakers, and the public to evaluate progress being made in water quality management programs and will aid in establishment of priorities by providing quantitative data on overall water quality in regularly sampled water bodies. The index should allow staff to readily interpret and evaluate regularly generated laboratory data, recognise trends or problem areas, and optimise sampling location and Frequency
16	Page No.48	Section 5, TOR, 1. Background,	1.2 Objective	What is the format from Automatic water quality stations? Is the data stored in database server currently?	Automatic water quality stations are not existing at present, however, it is likely to be commissioned during the SRS finalisation and the format will be designed to integrate with the WEB GIS Server. See Sl.No.13 also.
17	Page No.48	Section 5, TOR, 1. Background	1.2 Objective	What kind of information is available with reference to wastewater discharges to observed water quality? Can you share sample data / map for reference?	The data shall be provided by CPCB to contractor for integration. Data in Excel format will be shared.
18	Page 48	Section 1.2 , RFP	Objectives Achieve compilation and transformation of all existing water quality and associated data at one central server as a structured and dynamic resource	Is there any hardcopy data (MIS+GIS) that needs to be digitized under the scope of this RFP.	Yes.Please refer S.No. 12.
19	Page No 49/1.2	Objectives	Set up a knowledge networking platform, discussion groups etc to connect users for sharing research in water quality domain	Does the networking sites and discussion groups need to be integrated with GIS portal?	Yes. CPCB recommends for having a synchronized system with integrated sites.

20	Page 49 /1.2	Objectives	In addition to above functional requirements, CPCB proposes to acquire software, data and skills in image processing (remote sensed data) and advanced statistical analyses. These offline applications will complement the online Portal.	Kindly specify the referred software.	Please refer S.No. 63 and 67.
21	Page49 / 1.2	· Objectives	Conduct statistical analyses (interparameter, inter-station etc) for more effective interpretation	How many types of statistical analysis need to be generated? What would be complexity of statistical analysis reports?	CPCB recommends for basin wise information of the proposed solution. Reports are required on various queries related to water quality of monitoring station in administrative boundary of town, city, district, state, national as well as basin specific and inter basin comparisons in spatial as well temporal view in conjunction with other layers as per the need of client for all the possible statistical analysis.
22	Page49 / 2.1	· Tasks	Types of queries and reporting requirements (e.g. parliament questions, queries using RTI etc)	How many types and complex reports would be required?	It is proposed to generate reports on the fly dynamically based on the predefined templates and allowing users to customize / define his template as per requirement.
23	49_1.2	objectives (para 2)		What specific type of user-defined graphs required in the application?	CPCB proposes to have graphs based on the data collected for the monitoring stations (28 parameters), based on basin wise information, water body wise etc.
24	49		GIS based Web Portal on Water Quality interface to spatially view water quality monitoring stations, extract/compare/plot water quality data using spatial tools - Page 49 Conduct statistical analyses (inter-parameter, inter-station etc) for more effective interpretation.	What kind of spatial and statistical analysis are we required to provide?	Ability to utilize multivariate analysis to create optimal statistical models to produce reliable maps of predictions, prediction errors, quintiles, and probabilities for improved decision making.
25	Page No. 49	Section 5, TOR, 1.2 Objectives,	Provide basin wide perspective covering wastewater loads, flows and land use to understand behaviour of water quality and draw on actions	Does spatial data of Basin boundaries available with CPCB? If so, will CPCB provide that data? If not available, what is the mechanism for authenticating Basin Boundaries?	Please refer S.No 28.
26	Page No.49	Section 5, TOR, 1. Background,	1.2 Objective	What kind of wastewater load data / maps are available? What kind of wastewater flows are available?What kind of land use data / maps are available?	Please refer S.No 28 & 17 The geo-references of urban Centreswill be provided by CPCB.

27	Page No.49	Section 5, TOR, 1. Background	1.2 Objective	What kind of data / map related to polluted stretches are available? Can you share sample data / map?	Existing data is available as part of EDB system and same shall be shared with the consultant. Data processing and output generation will be guided for marking of polluted stretches on the watershed Maps.
28	Page 50/2.2	Project Scope	Base data may include following themes – (This list is indicative and not exhaustive) Land use (maps) Administrative Maps o National and State Boundaries o Districts and Talukas / Tehsil boundaries Watershed	We understand that CPCB has existing GIS databases. We request you to provide more details as to the available GIS layers with CPCB like format, scale and date of the data? Number of available layers Format of existing GIS data Are the existing layers geo-referenced and in the same projection system? Are there any updation needs? Level of quality checks needed? .	The Base data maps area will be procured by CPCB from National Informatics Centre (NIC)/NRSC and shall provide the same to consultant upon award of the contract. Administrative Maps (State, district, Tehsil boundaries) are available at 1:50K scale with LCC projection system. Water shed maps and land use maps where ever required will be procured by CPCB.
29	Page 50/2.2,	Project Scope	Base data may include following themes – (This list is indicative and not exhaustive) Land use (maps) Administrative Maps o National and State Boundaries o Districts and Talukas / Tehsil boundaries	We understand that migration of the layers available with CPCB to the geo-portal is major scope of work. Kindly confirm if GIS database creation is required. For better understanding of the scope of work, kindly fill in the format attached as annexure.	See also Sl.No.28.
30	Page No 50/2.2	Definition of scope	The consultant should assume that an entirely new system of data capture, quality control, storage and retrieval is to be designed and implemented.	As per our understanding CPCB requires to replace the existing EDB application with the new solution. Kindly clarify whether there is any need to integrate existing EDB application with the new Solution?	EDB and Web GIS portal will be two independent portals. EDB is a store house of data on water quality and does not have any GIS component. CPCB recommends building of a new system under the current scope; however the data from the EDB (water quality data) need to be migrated into the current proposed system. However, it is important that data between the two can be imported/exported with tools that the consultant will provide. Amendment 3.
31	Page No 50/2.2	Section-Functional 2.2 Definition of Scope	Base data – this will be static in nature. Changes in base data will be Occasional	Please clarify that the proposed web GIS system need to have web editing capabilities or data updation shall happen in offline mode?	Online as well as Off line web editing capabilities are required for data uploading.
32	Page 50/2.2	Definition of Scope	Consultant shall consider the database to be built for 50 GB for water quality monitoring. The Consultant will make required projections in terms of data volume and user community to recommend database and GIS based Web Portal on Water Quality software as well as server requirements. The application should have the capacity to handle 1000 transactions per hour for 100 simultaneously logged-in users	Need more information and details on transactions - Does these 1000 transactions per hour to be undertaken for a particular water station or it will be overall? What is the size of each transaction? Is this peak or average? Can all this be assumed for the Web GIS portal as well?	1000 transaction will be overall for real time monitoring data per hour. Each transaction shall not exceed average 100 Kb and will be for online Web-GIS Portal in public domain. There is requirement of one offline user and 1000 online users for desktop and image processing, accordingly license is required to be procured. Amendment 2.
33	50	Section 2.2	States that the monitoring database size will be 50 GB	What is the expected size of the spatial datasets, raster datasets, financial datasets, etc. for a 5 year period from the date of commencement of the project?	CPCB shall provide detailed scope during the requirement phase of the project. However FIN-6 given in Amendment- 1 may be referred. The data base storage size shall not exceed 5TB.

34	Page No. 50	Section 5, TOR, 2.2 Definition of Scope,	Base data – this will be static in nature. Changes in base data will be occasional	Is Base Data available with CPCB? If available, please clarify: a) what is the format – Is it Textual data, Raster, Vector, paper maps?b) What is the Scale of Maps? c) Is this data a recent one OR what is the age of this data?d) Any modification required now in available data? If Base data need to be created by Consultant - Please clarify: a) What is the scale and level of mapping CPCB looking for?b) If consultant creates required base data, what is the mechanism for approving created database?	Please refer S.No 28& 12.
35	Page No. 50	Section 5, TOR, 2.2 Definition of Scope,	Base data – Land Use Maps, Urban centre's (Class I to Class VI)	Please provide classification for Urban centre's Class I to Class VI	Latest census of Govt. of India would be the basis.CPCB will provide the data.
36	Page No. 50	Section 5, TOR, 2.5 Preparation of procurement plan,	Support for procurement of data sets– including remote sensing data, SOI/NRSA datasets	Request to please specify - what are the data sets needs to be procured form Survey of India (Sol) and NRSC.	CPCB will procure and provide the data. Amendment 5
37	Page No.50	Section 5, TOR, 2.2 Definition of scope,	Base Data	Can we assume that Land use maps, Administrative Maps, Watershed Maps shall be provided by CPCB?Please let us know at which scale the maps are available with CPCB?	Please refer S.No. 28
38	Page 50	Section 2.2, RFP	Scope of work also includes the design of web-application user interface to include commonly used web-tools such as discussion forums, FAQs, polls, news and events, picture gallery etc.	Please define all the requirements specifically for the purpose of effort estimation.	CPCB recommends for basin wise information of the proposed solution. Reports are required on various queries related to water quality of monitoring station in a administrative boundary of town, city, district, state, national as well as basin specific and inter basin comparisons in spatial as well as temporal view in conjunction with other layers as per the need of client for all the possible statistical analysis. CPCB is looking forward for a platform to share information among industry users of same category and form of FAQ's, news and events and showcase the case study pictures in the form of picture gallery. It is also looking for user involvement in the form of polls.
39	Page 50	Section 2.2, RFP	Note: In the segment of dynamic data, the Consultant should note that CPCB will hook real time data transmitted by automatic water quality monitoring stations to the Portal.	We understand the data from the automatic water quality monitoring stations will be fed into the database and the portal will access this MIS databases to provide information to the end users. Please clarify.	Please refer S.No. 69. Data from automatic water quality monitoring stations will be displayed on the portal on real time basis
40	Page 50	Section 2.2, RFP	Consultant shall consider the database to be built for 50 GB for water quality monitoring	Is there any task of data generation under the scope of work?	No data generation by consultancy firm.The task refers to migration of the data into the proposed new data model for the application.

41	Page 51/3.3	Definition of Functions Format	Remote Sensing Data Processing (RSDP) functions – to handle raster data analysis.	Kindly provide details as to what kind of raster data analysis capabilities CPCB is looking for.	RSDP by consultant is required. CPCB proposes the following Raster Analysis : <ul style="list-style-type: none"> · Ability to perform Image enhancement · Ability to perform Image Classification · Ability to perform transformations · Ability to perform image resampling · Ability to Import/Export into data formats
42	Page 51	Definition of Functions Format	In UMIS; online application database queries, report generation and publishing is the requirement <ul style="list-style-type: none"> · In UMIS, offline functions required- For GIS -off line functions “tool for assess impacts of water pollution on surrounding land use, interface with water quality modules” 	What types of reports are required? pl specify · What type of statistical assessment/ analysis are required? pl specify Please clarify more	The query builder should allow customizing the reports in a required format and also interpolate / extrapolating the data for various scales such as political and hydrological boundaries which tend to intersect each other. The interbasin comparison should be facilitated. Tool should have ability to utilize multivariate analysis to create optimal statistical models to produce reliable maps of predictions, prediction errors, quintiles, and probabilities for improved decision making. The GIS water modelling tools output in either shape file format of GeoDatabase (GDB) format shall be required to perform analysis with the base layers planned to be developed as part of the current proposed application.
43	Page 51	Definition of Functions Format	We are given understanding that spatial unit of the present study will be basin wise for the both GIS, GIS -UMIS integration but for FMIS it will be statewide	Please clarify more	The GIS water modelling tools output in either shape file format of GDB (GeoDatabase) format shall be required to perform analysis with the base layers planned to be developed as part of the current proposed application. The FMIS will be for internal use of CPCB; Purpose of FMIS is to process payments to Data Providers like State PCBs and other monitoring agencies. However the use of GIS for assessment of financial component is required on various queries related to water quality of monitoring station in administrative boundary of town, city, district, state, national as well as basin specific and inter basin comparisons in spatial as well temporal view in conjunction with other layers.
44	Page 51/2.3	Definition of Functions	Offline functions shall be made available to selective users at CPCB and SPCBs as required. These are intended to enable advanced assessment of data which is possible online. Offline tools may include integration with third party applications. not RSDP and advanced statistical analyses are examples of such off-line functions Request information with bifurcation of number of users for performing offline functions of RSDP and advanced statistical analysis. This information shall be useful in establishing the need for the number of desktop image processing and GIS software.	Please clarify the information about the number of concurrent Desktop Image processing and GIS users?	CPCB recommends for systems built as per industry standards for its offline and online functions. There is requirement of one offline user and 1000 online users for desktop and image processing, accordingly license is required to be procured. Amendment 2. Industry Standards: Ability to read and publish data using ESRI data formats or equivalent. Ability to disseminate data using ESRI based server agent or equivalent. Ability to explore data variability and spatial relationships, look for unusual data values, and examine global and local trends. Ability to utilize multivariate analysis to create optimal statistical models to produce reliable maps of predictions, prediction errors, quintiles, and probabilities for improved decision making.

45	Page No 51/2.2	Functional 2.2 Definition of Scope	The scope will therefore involve providing access to the Portal through PDAs by development of applications.	Please clarify whether provision to be made for accessing applications through PDA in the current phase of this project? If Yes, what PDAs does the client have in mind? Are these Android, Windows, Iphones, or other? What form factor is being referred to here?	Development of application should be compatible for display in any mobile technology, as per Govt. of India [NIC] guidelines.
46	Page No 51/2.2	Database 2.2 Definition of Scope	Dynamic data – this will be regularly updated by the CPCB	Please provide more the details on data updation process, that this task shall be performed automatically or manually? If it would be done automatically, then what would be the mode for data access?	Automatic water quality monitoring data will be integrated with application on continuous basis whereas other data shall be uploaded manually.
47	Page 51/ 2.2	Definition of Scope	Further, web application shall be compatible with major browsers such as Internet Explorer, Google Chrome, Fire Fox, Safari etc.	Safari is only on the Apple platform, Chrome and Firefox OS is (Windows or Linux). Kindly clarify the operating system to be used.	Compatibility shall be at least on Internet explorer, Firefox and Google chrome.
48	Page No .51/ 2.2	Definition of Scope	The Consultant will make required projections in terms of data volume and user community to recommend database and GIS based Web Portal on Water Quality software as well as server requirements.	Kindly clarify whether we need to perform a capacity planning exercise based on requirements, existing and planned infrastructure and then recommend servers numbers and configuration or The number of servers required is the one specified by CPCB under the procurement plan of Hardware and Software.	Refer to the Revised FIN-6 specified in Amendment-1; the consultant has to plan their activities accordingly.
49	Page51/2. 3	Definition of functions	The proposed system will have online and offline functions under main four sections	What would be volume of data to be uploaded in the system as offline activity?	As the offline data upload be in the form of excel sheets, the data volume shall be approx. 3000-4000 records per excel sheets.
50	Page51/2. 3	Definition of functions	Offline tools may include integration with third party applications. RSDP and advanced statistical analyses are examples of such off-line functions.	What type of third party application need to be integrated with offline functionality?	CPCB refers to any third party tools used to perform the offline functionalities. It recommends integration of the same into the application.
51	51	Section 2.2	Discusses hooking of real time data from automated monitoring stations	Please disclose the hardware and data exchange parameters (e.g. file formats, data exchange modes, etc.) of the automated monitoring stations for data integration considerations in the web-GIS Portal?	Automatic water quality stations is not existing at present, however it is likely to be commissioned during the SRS finalisation and the database format specified Extensible Mark-up Language (XML) or MSSQL. See SI.No.13 also.
52	51	Section 2.3	Discusses offline functions to be made available to SPCBs	Will the SPCBs be enabled to publish output of offline RSDP on the web-GIS portal?	CPCB proposes to plan all publishing from central location at one location.

53	Page 51_2.2	Objectives (Para 2 - Dynamic Data _ Note)	The consultant should note that CPCB will hook real time data transmitted by automatic water quality monitoring stations to the portal.	It is seen that CPCB is requiring functionality so that they can hook real time data from WQMS to Web GIS Portal. What kind of communication the existing remote stations with central station/server	.See Sl.No.13 and 51.
54	51_2.2	Objectives (Para 2 - Dynamic Data _ Note)	In the course of next 5 years, 200 automatic water quality monitoring stations are expected all over the country. The Geodatabase will be developed for all major, medium, minor river basins, lakes, tanks, ponds, creeks, canals, drains comprising of 2000 monitoring locations in the country which shall be expanded to 2500 by March 2012 indicated in Table 1	The latitude/longitude of the monitoring locations will be provided by CPCB. Please confirm our understanding.	CPCB shall provide the geographic location of monitoring stations.
55	51		Offline tools may include integration with third party applications	Integration with what kind of third party applications is required, please clarify What type of raster analysis will be performed by CPCB with the help of Remote Sensing tool.	Refer S.No. 50 and 41.
56	Page No.51	Section 5, TOR, 2.2 Definition of scope,	Dynamic Data	Can we assume that Surface water quality monitoring station location shall be provided by CPCB? Can we assume that Ground water quality monitoring station location / map shall be provided by CPCB? Can we assume that Continuous monitoring data shall be provide by CPCB? Can we assume that Industrial inventory map and data shall be provided by CPCB?	CPCB shall provide all the data related to monitoring station and its locations of installations, and any other data need to be collected from SPCB or need to be procured as part of data procurement.
57	Page No.51	Section 5, TOR, 2.3 Definition of Functions	Definition of Functions	What is the format of the UMIS data that will be linked to the monitoring station locations?	Please refer S.No. 42 .
58	Page 51	Figure 1, RFP	Illustrative online and offline functions Offline Functions Tools for optimization of monitoring Locations	What is meant by optimization of monitoring locations? Please elaborate on the functionality.	CPCB plans to add new monitoring locations as part of the current water quality monitoring stations and intends to have the system capable to handle and efficiently manage the addition of new stations. CPCB intends to analyse water quality data for optimization of network to meet the guidelines for setting up of monitoring locations and strengthening to meet the targets committed to Government of India. Network expansion to 5000 is to be optimized. Future strengthening of sites during AMC, if any, shall have to be incorporated by consultant on need basis.

59	Page 51 Page 51	Figure 1, RFP Section 2.3,RFP	Illustrative online and offline functions Value added Services · RSS feed, Twitter etc. · FAQ's, Poll etc. · Multimedia Data Integration 2.3. Definition of Functions Offline functions shall be made available to selective users at CPCB and SPCBs as required.	Please define all the sub functionalities envisaged under value added services. Please elaborate on the specific requirements of the multi-media data integration? Will these Offline functionalities be available to user on Data centre only, or the SPCB is also required to access these functionalities? How many users are expected to use these functionalities concurrently at CPCB and SPCB?Will all the offline functionalities be available to all Offline users at SPCB and CPCB users?	CPCB is looking forward for a platform to share information among users and form of FAQ's, news and events and showcase the case study pictures in the form of picture gallery. It is also looking for user involvement in the form of polls. CPCB proposes to have online web editing. Off line as well as web editing capabilities are required for data uploading. There is requirement of one offline user and accordingly license is required to be procured. CPCB proposes a synchronized system with web GIS interface. As the proposed system would work on role based system, at any point in time it proposes to have max of 1000 concurrent users. One Administrator and Editor node shall be part of the proposed system.
60	Page 51	Section 2.2, RFP	The scope will therefore involve providing access to the Portal through PDAs by development of applications.	How many users are envisaged?Please define the functionalities that will be available to the PDA user. What mode of connectivity is envisaged for PDA user?Will be on-ground Offline connectivity or on- ground online connectivity? By offline it is meant that the user will collect data on ground and will update it by the end of the day on central server using internet or intranet connection.	CPCB proposes a synchronized system with web GIS interface. As the proposed system would work on role based system, at any point in time it proposes to have max of 1000 concurrent users. One Administrator and Editor node shall be part of the proposed system. Online mode of connectivity is envisaged for mobile users. Development of application should be compatible for display in any mobile technology.
61	Page 51	Section 2.3, RFP	2.3. Definition of Functions Offline tools may include integration with third party applications. RSDP and advanced statistical analyses are examples of such off-line functions.	Please list out all 3rd party application integration required.	Please refer S.No. 50
62	Page 52 /2.5	Preparation of Procurement Plan	The consultant will procure hardware /software/ dataset/ connectivity goods requirements (e.g. servers, computers/ laptops/ handhelds, GIS/ spatial information systems, database, statistical, modeling, web development, and other software, datasets – including remote sensing data, SOI/NRSA datasets, etc.), connectivity requirements in CPCB offices, etc. to fulfill the task.	Please provide details as to the GIS data to be procured from SOI and satellite imagery to be procured from NRSA.· Kindly mention the area of interest for the satellite data procurement and the required resolution of the satellite data.· At what map scale are the land use maps to be prepared?· What will be the base data (top sheets, satellite images, existing maps, etc.) for creation of the land use maps? In case satellite imagery is to be used, what will be the resolution of the satellite data? Spatial features like industries, STPs, CETPs and industrial estates are to be digitized as points or polygons?	The consultant is required to procure hardware, software, connectivity goods requirements (e.g. servers, computers, laptops, handhelds, Arc GIS,standard statistical tool to fulfil the task)- Amendment-1 and Amendment 5. Please Refer Sl.No.1 and 36 also.

63	Page No 53/2.5	Preparation of Procurement Plan	Procurement of Hardware-Software- Internet Arc GIS server license	Is it mandatory to provide ArcGIS server or competent industrial software can be suggested for the same? (as vendor specific brand restricts leading vendors to offer qualitative products at competitive prices). It has been observed that GIS software requirement is specified with a particular brand. We feel that this will restrict similar technologies that can provide identical solutions from participating in the tender. Therefore, we request that this option is kept open and brands are not mentioned. We believe that this will ensure more competition which would be in the best interest of the CPCB	No change
64	53	Section 2.5	States that consultant will have to procure the hardware and software	The hardware, software and associated peripherals to be procured under the project will be of a considerable value. It is, therefore, understood that the CPCB will reimburse the entire cost of procuring the hardware and software after delivery installation of the same. Please clarify. Can the consultant use its own software development infrastructure to develop the application and procure the hardware and software for CPCB during application testing phase? This is in the best interest of the CPCB as it will allow for procurement of the latest hardware and software applications, available at the time system deployment.	Refer Amendment-1. CPCB recommends hardware procurement as a parallel activity for the current project. RFP indicates the price bid including the hardware /software procurement in the current context. Consultant will have to use its own software development infrastructure to develop the application and procure the hardware and software for CPCB during application testing phase.
65	54	Section 2.5	Illustrates components to be procured and their respective quantities (Bill of Materials)	Following issues have been noted in the table: a. Total servers are 4 nos. but operating system license requirement is 1 no. Please clarify. b. Total database servers are 2 nos. but Database server software is 1 no. Please clarify. c. Item 10 mentions GIS software with license and Item 11 mentions arc editor (which is also GIS software). Please clarify. d. Item 13 mentions the requirement of 20 Terabytes (4TB x 5 nos.) of backup hard drive requirement and Item 14 mentions tape drives (also used for data backup). Please clarify. e. Item 15 mentions Related Data Sets to be procured is 1 no. What is meant by Related Data Sets? f. Considering the above, is the Bill of Materials specified in the RFP final or can the consultant make modifications to the same according to requirements of the solution being offered?	Refer to the Revised FIN-6 specified in Amendment-1; the consultant has to plan their activities accordingly.
66	53	Section 2.5		What is the need of using 2 Server-Database with Rack? Please confirm our understanding that CPCB might be planning to use one server as "Database Backup Server"	Yes. Please refer to Amendment-1 of Addendum.
67	Page No 54/2.5	Preparation of Procurement Plan	for integration-arc editor & geo statistical license	Is it mandatory to provide arc editor & geo statistical or competent industrial software can be suggested for the same? (as vendor specific brand restricts leading vendors to offer qualitative products at competitive prices)	No change

68	Page no 54/2.6	Performance Development of UMIS Framework	While designing such functionalities Consultant shall ensure optimum performance by the system in terms of time taken to render the results online	Is there any set defined benchmark defined for the performance of the system?	Performance of system should meet the standard requirement of public domain. Standard requirement. Map Display Performance .Quality vs Speed .Optimizing symbology .Optimizing of Map Service.Ability to read and publish data using ESRI data formats or equivalent..Ability to disseminate data using ESRI based server agent orequivalent. Ability to explore data variability and spatial relationships, look for unusual data values, and examine global and local trends .Ability to utilize multivariate analysis to create optimal statistical models to produce reliable maps of predictions, prediction errors, quintiles, and probabilities for improved decision making.
69	Page54 / 2.6	Data Entry module	Data Entry Module – Data entry will be in different ways. a. Online entry – user friendly data entry formats shall be designed b. Inclusion of real-time monitoring station data c. Ability to import from common formats (e.g. spreadsheets)	What would be volume of real-time monitoring station data to be uploaded?	Real time monitoring data shall be stored directly into the database and hence need to be migrated and bridge program need to be created for dumping the data online. Data volume will not be more than 5 GB.
70	Page No.54	Section 5, TOR, 2.6 Development of UMIS Framework	Development of UMIS Framework	Can we assume that the relevant standards shall be provided by CPCB?	CPCB shall provide all the standards required during implementation.
71	Page No.54	Section 5, TOR, 2.6 Development of UMIS Framework	Development of UMIS Framework	Can you share sample graphs required for the project?	It is proposed to develop charts as part of the GIS website on the fly based on the water quality parameter and designed geo-database design.
72	Page No.54	Section 5, TOR, 2.6 Development of UMIS Framework	Development of UMIS Framework	Can you provide sample formats for reports required as part of fixed reports and customized reports? Request to also share sample maps that need to be integrated with the reports? Request to share sample graphs that need to be integrated with reports?	Reports need to be prepared based on the predefined templates and custom templates and based on the water quality parameters.
73	Page No.54	Section 5, TOR, 2.6 Development of UMIS Framework	Development of UMIS Framework	Can we assume PDF creation third party required for integration shall be purchased by CPCB?	Consultant need to purchase any third party software's required for the proposed solution --costing to be a part of development by the Consultant
74	Page 54	Section 2.6,	a. Administration module System should be scalable to allow CPCB administrators to add new locations, new users, new reports etc. without any dependency on the Consultant.	Is there any GIS editing or spatial data creation functionalities sought in Online Application?	CPCB intends to perform online editing as part of the current application.

75	Page 55/2.7.	Development of GIS based Web Portal on Water Quality Framework	Integration of MIS data into GIS based Web Portal on Water Quality framework as attribute information – tabular/ nonspatial Information shall be linked to relevant map based data.	Kindly clarify the formats of MIS database. Also is the data standardized?	The database should be integrated and relational and query builder should be flexible to allow extraction of spatial and temporal data in required format. The data is available in excel and hardcopy. Please refer Sl.No.12. The data standardization is the scope of this consultancy.
76	Page No 55/2.7	Geodatabase designing and development	The Geodatabase will be developed for all major, medium, minor river basins, lakes, tanks, ponds, creeks, canals, drains comprising of 2000 monitoring locations in the country which shall be expanded to 2500.	Kindly clarify whether coordinates (GIS location) are available for all water monitoring station locations or the location shall be given in reference to a certain landmark / village. If the location is not available, is a GPS survey required?	CPCB shall provide the geo-coordinates of monitoring stations.
77	55		All maps in various formats shall be converted into GIS based Web Portal on Water Quality formats by Consultant	What are the different types/formats and size of GIS data available with CPCB ?	Please refer S.No. 28. The Base data maps area available with NIC and NIC shall provide the same to consultant upon award of the contract. Administrative Maps (State, district, Tehsil boundaries) are available at 1:50K scale with LCC projection system. Water shed maps and land use maps where ever required need to be procured. Any further details shall be shared during the stock taking and requirement phase of the project.
78	Page No. 55	Section 5, TOR, 2.7 development of GIS based Web Portal on Water Quality Framework	a. Geodatabase design and development	Request you to provide the list of maps along with its status required for conversion and to be used for the web portal.	List of maps proposed for the project has been provided in the Section 5 of the TOR. CPCB recommends integration of the layers provided to be integrated into the application as current scope of the project.
79	5658	Table 1	Provides a list of 2000 monitoring stations	Are the geographic lat-longs for these monitoring stations available with the CPCB?	CPCB shall provide the geographic locations of monitoring stations.
80	Page Nos. 56, 57, 58	Section 5, TOR, 2.7 development of GIS based Web Portal on Water Quality Framework,	Table 1: Water body wise distribution of monitoring stations	Can we assume that all the spatial data related to river basin monitoring station (2000) locations shall be provided by CPCB? Can we also assume that the future locations shall be provided by CPCB?	CPCB shall provide the geo-locations of the monitoring stations.
81	Page59 / 2.8	Development of FMIS	The system should provide a module to generate payment details and status based on data quantity and quality and maintains the database. FMIS should be able to generate reports as per state, institution, river basin and time period.	FMIS system will be for use to maintain data of payments and will not be a full-fledged accounting system? Please clarify.	It will be a payment calculation module however the assessment of expenses with various options has to be developed see also S.No. 43. FMIS system shall allow making payments via payment gateway and should maintain record of payments made to SPCB/Monitoring agencies and should have ability to generate reports based on SPCB/Monitoring agencies data, river basin specific and time period.
82	59	Section 2.8	discusses development of Financial Management Information System (FMIS)	Is there a requirement to develop a computerized double entry accounting system software or the requirement is to track only the payments made to SPCBs as per approved monitoring results?	Software requirement is to track the payments made to SPCBs as per approved monitoring results/protocol. Please Refer S.No. 81.

83	Page No. 59	Section 5, TOR, 2.8, Development of Financial Management Information System(FMIS),	Consistency and acceptability of the monitoring data received from SPCBs and other monitoring agencies	We understand that CPCB will be the accepting authority of the data received. Please clarify.	CPCB takes the ownership of the data.
84	Page No. 59	Section 5, TOR, 2.7 development of GIS based Web Portal on Water Quality Framework	b. Integration of MIS data into GIS	Request you to confirm the availability of link field for MIS GIS integration.	We understand that MIS link field need to be generated based on the data wherever it is not available.
85	Page No. 59	Section 5, TOR, 2.7 development of GIS based Web Portal on Water Quality Framework,	c. Visualization of spatial data	Can we assume that the symbols required for the project will be given by CPCB for integration?Layouts and Graphs required for the project shall be provided by CPCB for integration?Can we assume that Images required for integration will be provided by CPCB?	CPCB shall provide the business requirement for any process and understand that the consultant shall conceptualize it for CPCB. All the templates required shall be discussed during the requirement phase of the project and shall be finalized. All the spatial data required for the development shall be provided by CPCB.
86	Page No. 59	Section 5, TOR, 2.7 development of GIS based Web Portal on Water Quality Framework,	d. Basic spatial analysis functionalities	Can we assume that contours shall be provided by CPCB for integration?	CPCB recommends integration of the layers provided to be integrated into the application as current scope of the project.
87	Page 59	Section 2.7 d , RFP	2.7 Development of GIS based Web Portal on Water Quality Framework d. Basic spatial analysis functionalities – system shall be designed to provide geospatial tools such as overlay, spatial query, buffers, distance, contours etc.	Please elaborate on the functionalities required for the effort estimation purpose.	Please referS.No. 71,72 and 73.
88	60	Section 29	discusses web-security of the System	The section mentions firewall protection, antivirus application, anti-spyware applications, etc. although there is no provision for procurement of the same in the Bill of Materials published in the table on Pages 53-54. Please clarify.	Web Security [firewall protection, antivirus application, anti-spywares]will be provided by CPCB/NIC.

89	Page 60	Section 2.9, RFP	2.9. Module Integration All four modules shall be integrated as they are interlinked	(i) Is this a database level integration Does CPCB have any Document Management System? Does CPCB have any specification with regards to the financial services providers / Banks for the integration of the payment gateway? How will the costing with regards to any services providers / Banks for the payment gateway be managed?	Module integration refers to UMIS, GIS, FMIS and RSDP modules. It will be a payment calculation module however the assessment of expenses with various options has to be developed. All the work flow and process shall be provided / shared with consultant during stock taking and requirement phase of the project. Payment gateway requirement can be designed for procurement as part of the project.
90	Page No 61/2.12	Training and Institutional Development	Consultant shall train CPCB staff for effective use of the system.	We assume that the training will be centralized. Please provide the tentative number CPCB staff to be trained by the consultant. Please specify approximate locations where training is intended? Please specify approximate number of Persons to be trained.	Training shall be conducted at Delhi. Core team of CPCB consisting of about 10 persons will attend training.
91	Page 61;	Section 6: Clause 2.12	Training and Institutional Development Consultant shall train.....Plan for institutional sustainability	Kindly clarify the following: 1. No. of People to be trained? 2. How many days training?	CPCB recommends training for 10 Resources for 15 days timeframe.
92	Page 61;	Section 6: Clause 2.13	Maintenance Support and Service level Agreement Full-time support (at a location to be agreed, but likely to be within the Clients office) to immediately address any issues that develop	1. Is this Full-time support and a qualified professional's job / work is one at the same? OR The Man Power deployed for both the job is same?	Both queries refer to same point. Full time support is indicated. Amendment 4.
93	Page 61;	Section 6: Clause 2.13	Maintenance Support and Service level Agreement Web GIS-based MIS shall be maintained by Consultant for three years after initial maintenance period under provisions of an Annual Maintenance Contract (service level agreement)	Kindly confirm whether offer submitted should be with 1 yr warranty OR with 1 yr warranty and 3 years AMC? Kindly confirm whether the budget allocated is for 1 yr warranty only OR with 1 yr warranty & 3 yrs AMC? What is the Budget allocated for this project?	Maintenance support for one year followed by 3 years AMC. There shall be single financial quote. Approximate budget provision be about Rs. 1.75Crore (including Procurement of hardware and software)
94	61	Section 2.13	discusses Service Level Agreement(SLA)	Warranty and Service of all hardware and 3 rd party software products are governed by terms and conditions specified by their respective manufacturers which are not under direct control of the consultant. Therefore, it is suggested that the CPCB considers separate SLAs for support of the hardware and 3 rd party software during the AMC period. The consultant will provide support for maintenance of the web-GIS portal and perform any upgrades / modifications as may be required.	No change envisaged. Amendment 4.

95	61	Section 2.13		As per RFP there is 1 year maintenance support & after that 3 years support. Does current scope of work includes support of 4 years (3 years support + 1 year maintenance support) or it is only 1 year maintenance support and for additional 3 years support there will be separate budget ?	CPCB requests for 3 year of AMC after successful initial maintenance period after deployment of the software and hardware. 1 year maintenance+ 3 year AMC.Budget for AMC will be inclusive of development
96	Page No. 61	Section 5, TOR, 4.1, Project Monitoring by CPCB,	A review Committee will monitor the project progress and outputs. A Review Committee will be formed by CPCB.	Request for providing a Single Point of Contact for all project related activities in order to avoid unnecessary delays.	Consultant will contact single point.
97	Page No. 61	Section 5, TOR, 2.13 Maintenance support and Service Level Agreement	Maintenance support and Service Level Agreement	Request to explain "Web GIS based MIS"	CPCB recommends having a synchronized GIS application and hence refers to Web GIS based MIS. Amendment 4.
98	Page 61	Section 2.13, RFP	2.13. Maintenance support and Service Level Agreement A qualified professional in computer science and GIS based Web Portal on Water Quality shall provide support for the entire period under maintenance	Is this resource required as Onsite fulltime support (24x7)? Please confirm.	Yes -Please also refer S.No.94 and 96. Amendment 4.
99	Page No 62 / 3.	Deliverables and Timelines	Development of UMIS, FMIS and GIS based Web Portal on Water Quality Frameworks	Development of GIS based Web Portal is expected to be done in 180 days. The activity depends on the procurement of spatial layers, satellite imageries and other datasets from various line agencies and departments of CPCB. If there is a delay in providing the above mentioned datasets by the varied sources, will the time be extended accordingly? Also if the scope of work involves geo-spatial database creation the stipulated time is insufficient. Can it be extended?	Development of GIS based Web Portal will be expected to be done in 180 days after data is provided by CPCB. Please refer S.No.28 and 68. The current scope of the project doesn't reflect / state creation of spatial layers rather discuss about integration of spatial layers into the new geo-database model to be built under the current scope of the project.
100	Page 63/4.	Role of CPCB	CPCB shall facilitate the data collection. All relevant data available with CPCB shall be shared with the Consultant.To collect the data from other sources, letters to concern authorities will be given by ...	As per our understanding CPCB shall be the focal point for data collection and the consultant is not expected to physically collect the data from the respective agencies. Kindly clarify.	Please refer S. No. 10.
101	Page 63/ Section 4	Role of CPCB	GIS license software will be bought by Consultant based on the requirement in the name of CPCB and will transfer the ownership to CPCB after development of applications. Necessary official endorsement will be done by CPCB.(There is no mention of Production and development environment. The RFP mentions 1 Arc GIS server license. Refer section 2.5 page 53)	Kindly clarify whether development software licenses are to be bought and transferred or production software licenses bought and transferred?	CPCB proposes to have the entire license on its name including the source code of the portal and will be transferred to client by consultant. Copy right of the developed system will be with CPCB and consultant cannot utilize the source code including publication of papers.

102	63	Section 4 states that the CPCB will provide support through official endorsements for procurement of remote sensing data from the Sol/NRSA		As per prevailing rules and guidelines of the NRSA, high resolution (<1m) remote sensing data can be procured only by a government department in prescribed NRSA formats and by making direct payment to the NRSA. Therefore, it is understood that procurement of any high resolution data will be done directly by the CPCB. Please clarify.	CPCB shall procure and provide data to consultant.
103	Page No 67/section 4	Work Authorization and service level	Service Goals: The System will be available not less than 98% of the agreed production hours. Unscheduled outages will not exceed 1% of the time.	What are the agreed production hours? Also it seems that their expectation of SLA around unplanned downtime is 99% - is this correct?	No change envisaged. CPCB expects to have downtime of minimum 99.5% service level agreement. Internet speed should not be less than 5MBPS. Screen refresh rate should not be more than 3 seconds. Internet bandwidth should be optimized accordingly. Amendment 2
104	Page No 72 / 23	General	Bidder shall provide necessary hardware, software and infrastructure at site	Please specify the details of office infrastructure that will be provided by CPCB.	CPCB shall provide need based basic infrastructure for Consultants' use.
105	Page No 72/ Section 23	General	Bidder shall mobilize and place the resources on a project within two weeks of placing of work order by CPCB.	Resource Mobilization is expected to be within 2 weeks of WO sign off. Can this be relaxed to a month?	Appropriate/reasonable time extension would be considered. CPCB recommends for the time period mentioned in TOR but is open for discussion during negotiation time with the successful consultant.
106	72	clause 8 - Termination of Agreement		Option of opting out of the contract at anytime in sole discretion must also be available to the Bidder.	No change envisaged. CPCB has the sole right in this regard and its decision is final.
107	73	clause 12 - IPR		Bidder shall be the owner of the Technological knowhow and methodology used for creating the final deliverables for the client.	No change envisaged.
108	91	clause 3.4/Pg 99, clause 3.4 - Insurance		Being a service provider company, point no. 3.4 (a) relating to Motor Vehicle liability not applicable to us. Rest of the required insurances are in place. Is this fine.	Yes.
109	92	clause 3.8 - Accounting, Inspection and Auditing		The inspections, audits ,etc referred to shall all be restricted to technical records, time sheets etc for time spent, effort's made. At no point shall access to financial records fall under this scope.	Refer to 3.8 of GCC.

110	97		Payment schedule	It is understood that the schedule of payments relates to the consultancy services to be provided under the project and not to procurement of hardware and software. Please clarify.	Please Refer SCC 6.4 (a) Hardware and software procurement are linked in the timeframe and payment schedule.
111		General	General	In RFP, as no information given regarding Earnest Money Deposit and Cost of Tender Document, we assume not to submit the same. Please clarify.	No EMD & Tender cost need to be submitted to CPCB in this context.
112				Please specify in detail the GIS functionalities required for this project. Is there any document or workflow diagrams available that you can share with us for better understanding & clarity?	The detailed requirements shall be shared during the stock taking and requirement phase of the project with the successful consultant. Please refer Sl.No.89 also.
113				Please provide the level of security required for accessing the MIS and GIS data by different user groups	CPCB proposes to have security standards as per the industry. Please refer S.No. 88.
114				Please confirm whether Data migration is under current project scope. If yes, please specify the data volume, and what all different type of data formats are available to be considered for data migration.	Please refer S.No.11,40, 49 & 51.
115				Does scope of work includes any data digitization work ?	Refer S.No. 11,12 and 28.
116				Please confirm the new web based MIS/GIS application will be deployed at one centralized location and no deployment is required at other locations.	Please refer S.No.44
117				What is scope of mobile application ? Does it require to be complete replica of online functionalities of modules including UMIS, GIS, FMIS &RSDP ?	Please refer Sl.No.45 CPCB recommends its online application with GIS and UMIS part as part of its mobile application including the report generation module. However CPCB welcomes views from consultant in this regard.
118				Does the proposed system need to integrate with any other existing system ?	Please refer S.No. 30.
119				Are there any GIS software & system, image processing software currently being used by CPCB. Please specify	No. CPCB plans to build entirely new system under the current scope of the project.
120			100 simultaneous users mentioned in RFP	Please specify the number of concurrent users and total number of users : 1) For Web based application (MIS) 2) Administrators 3) Data entry operators/ editors4) WEB GIS application (only viewing and no spatial updates) 5) WEB GIS application (Spatial data edit if required on web)	CPCB proposes a synchronized system with web GIS interface for Web based application (MIS), WEB GIS application (only viewing and no spatial updates) WEB GIS application (Spatial data edit if required on web).As the proposed system would work on role based system, at any point in time it proposes to have max of 1000 concurrent users. One Administrator and Editor node shall be part of the proposed system.
121				Is the base map & Dynamic maps will be provided by CPCB	YES. Please refer S.No. 28.

122				What are the major type of satellite images (like IRS LISS MSS and PAN, Cartosat, Quickbird, MODIS, NOAA etc.) to be processed with the help of this tool.	RSDP by consultant is required. CPCB assumes the processing of all major satellites including the raw imagery processing.
123				What are the major Image processing activities will be done with the help of this tool like Image Classification, Georectification, DEM generation, 3D analysis, Slope analysis (for Flood modeling) etc.	Please refer S.No.41.
124				Will the Image analysis tool directly be used for discriminating the range of quality of water based on colour difference with the help of particular type of input images.	No. Image analysis is one time exercise for geo-referencing of monitoring stations/urban centres/industrial locations on image.
125				What will be the frequency of publishing the raster output on web.	Raster data will be used for only once, geo-referencing to depict good for situation.
126				What will be the volume of data to be processed through remote sensing tools and the frequency of data processing?	Volume of data will be assessed by the consultant after processing of images. Please refer S.No. 126.
127				During support CPCB has asked for a. Full time support b. Hot-Line support c. Fault Rectification Please clarify point a and b? Is there separate budget for 3 year AMC?	Please refer SI.No.94.
128		Sec 1.2		Please elaborate the "optimize and strengthen of monitoring locations" requirement?	CPCB intends to analyse water quality data for optimization of network to meet the guidelines for setting up of monitoring locations and strengthening to meet the targets committed to Government of India. Network expansion to 5000 is to be optimized. Future strengthening of sites during AMC, if any, shall have to be incorporated by consultant on need basis.
129		Sec 2.2		Please specify what will be the frequency of changes in base data?What all data will be changed (Land Use, Administrative Maps & Watershed maps). Also if the user will be required to edit the data through the web?	Whenever the need, changes inland Use, Administrative Maps & Watershed maps will be carried out.
130		Sec 2.3		What type of data will be required to be consumed from RSS Feed (spatial or non spatial)? Is there also a requirement to publish the data from WebGIS application to RSS Feed?	Both spatial and non-spatial data is required to be published to RSS feed. There is requirement to publish the data from Web GIS application to RSS Feed.
131		Sec 2.6		Please elaborate what is the format and interfaces (web services/database, etc) available to access real time monitoring data from monitoring stations?	Please refer S.No 13.
132		Sec 2.6		As per the RFP there is a requirement for developing a tool for "Search Engine (within System and Global Search)" Please explain what all will be covered under the Global Search?	Global search of the web portal.

133		Sec 2.7		As per the RFP "System shall provide handle to users to design symbology of map". We assume that this functionality will only be available to the System Administrator through the backend. Please confirm.	Yes.
134		Sec 2.7		As mentioned in the RFP "All maps in various formats shall be converted into GIS based". Please specify the formats in which the data is to be converted.	All the maps need to be migrated into the geodatabase.Please refer Sl.No.78.
135		Sec 2.7		Are there any technology preferences in terms of usage of mapping & database servers?	CPCB is open for technology meeting the requirements specified in the RFP.
136		Sec 2.2		Please provide us with a list of functionalities which should be available on the PDA.	Please refer Sl.No.45.
137		Form Fin-6 Breakdown of Costs For Procurement of Hardware, Software and Internet Line		Please confirm if the cost to be mentioned in "Form Fin-6" will be inclusive of the sales tax or not. If not, where (in which form) these taxes are to be mentioned?	Inclusive of Taxes. Form FIN-2
138	General	General		In case of award of contract, we would like to have the following clauses included in the contract document: 1. Limitation of Liability: Except for causes of action giving rise to any indemnification obligations, each Party's liability to the other Party, whether in contract, tort, negligence, strict liability or by statute or otherwise, arising out of or relating to formation and performance of this Agreement will not exceed the fees payable to Bidder for work which gave rise to the cause of action. All liability is cumulative and not per incident. This limitation will apply notwithstanding any failure of essential purpose of any limited remedy provided herein. The foregoing limitation of liability does not limit either Party's liability for any cause of action for death, bodily injury, or damage to tangible property. The Parties stipulate and agree that Section was part of the consideration for any agreed-upon fees. 2. Consequential Damages: Neither Party will be liable to the other, whether in contract, tort, negligence, strict liability or by statute or otherwise, for any indirect, special, incidental, exemplary, or consequential damages (including without limitation, damages for loss of profits, loss of business, loss of use or of data, or interruption of business), arising out of or relating to formation and performance of this Agreement, even if the Parties have been advised of the possibility of such damages. The Parties stipulate and agree that Section was part of the consideration for any agreed-upon fees. 3. Intellectual Property Rights: Notwithstanding anything contained	No change envisaged. Also refer to Amendment-6 for change in Professional Liability Insurance.

				<p>hereinabove, Bidder shall own all Intellectual Property Rights towards the underlying methodologies, know-how and research and development used in providing such deliverables to Client. 4. Termination at Convenience: Notwithstanding anything contained anywhere in the Agreement, Bidder retains the right to terminate the Agreement without any cause by providing an advance written notice of 30 days to the other party. 5. Indemnification .a. Each party will indemnify, hold harmless and defend the other party, its officers, agents and employees against any and all damages, suits, actions, claims, liabilities, losses, judgments, costs and expenses arising out of or relating to (i) any personal or bodily injury (including death) or property damage caused by the indemnifying party's negligent, unlawful or willful acts or omissions or breach of this Agreement or (ii) infringement of third party intellectual property rights. b. For all indemnification obligations, the indemnified Party will give the indemnifying Party (i) prompt written notice of any actual or alleged Claim; (ii) sole control of the defense and settlement of such Claim; and (iii) all information, reasonable assistance, and authority to fully defend and settle such Claim. The indemnifying Party may not compromise or settle any Claim or consent to the entry of any judgment without the indemnified Party's prior written consent, provided that the indemnified Party will not unreasonably withhold or delay giving consent. 6. Warranty a. Bidder represents and warrants that the Work will be performed in a professional and workmanlike manner b. Bidder's sole liability and Client's sole remedy for Services not meeting the warranty is for Contractor to (i) repair the non-conforming Services; (ii) replace or modify the non-conforming Services with Services conforming substantially to the applicable warranty; or if, in Bidder's sole discretion, (i) and (ii) are not commercially reasonable, then (iii) promptly refund to Client the amount paid for any non-conforming Services. c. Except as otherwise expressly stated herein all Services are provided "AS IS," without any warranty of any kind. Bidder disclaims any other express or implied warranty, including but not limited to the implied warranties of non-infringement, merchantability, and fitness for a particular purpose.</p>	
139		General	Supply of Hardware	<p>Please provide the minimum hardware specifications for all the components to be supplied under the SOW. Is hardware maintenance consultant SOW? If yes, kindly provide the duration and the SLA details.</p>	<p>The consultant is required to procure hardware, connectivity goods based on the requirements of system to fulfil the task and take the responsibility for its maintenance. For details of SLA, please refer to Annexure-II of the RFP Section 5. Consultant need to provide hardware in compliance with the proposed application. The hardware maintenance shall be part of the maintenance as referred in RFP.</p>

ADDENDUM
CENTRAL POLLUTION CONTROL BOARD
HYDROLOGY PROJECT PHASE-II
ICB No: HP II/CPCB-1 /2011-12
Pre Bid Meeting:11th January,2012

Subject: Minutes of the meeting – pre-bid meeting for Consultancy Services for Setting up of GIS based Web Portal on Water Quality
AMENDMENTS TO BID DOCUMENT

Amendment No.	Reference to Section and Para/Clause of Bidding Document	Original Para or Clause in Bidding Document issued	Para or Clause after Amendment/ Additional information to be included in Bidding Document	Existing Clause of Bid Document			Revised Clause		
				Procurement of Hardware-Software-Internet	Quantity	Cost(INR)	Procurement of Hardware-Software-Internet	Quantity	Cost(INR)
1	Page 44 FORM FIN-6	BREAKDOWN OF COSTS FOR PROCUREMENT OF HARDWARE SOFTWARE AND INTERNET LINE	BREAKDOWN OF COSTS FOR PROCUREMENT OF HARDWARE SOFTWARE AND INTERNET LINE	Procurement of Hardware-Software-Internet	Quantity	Cost(INR)	Procurement of Hardware-Software-Internet	Quantity	Cost(INR)
				Operating system license software	One		Operating system license software	Four	
				Data base server software	One		Data base server software	Two	
				Related Data Sets (in addition of CPCB Database on Water Quality)	One				
2.	Page 50 PARA 2.2	DEFINITION OF SCOPE	DEFINITION OF SCOPE	The application should have the capacity to handle 1000 transactions per hour for 100 simultaneously logged in users.			The application should have the capacity to handle 1000 simultaneously logged in users.		
3.	Page No .51/ 2.2	Definition of Scope	Definition of Scope	Kindly clarify whether we need to perform a capacity planning exercise based on requirements, existing and planned infrastructure and then recommend servers numbers and configuration or The number of servers required is the one specified by CPCB under the procurement plan of Hardware and Software.			<u>The numbers of servers required are mention in Form FIN 6. The configuration and capacity of servers will be determined by consultant after development of application .The tentative capacity of servers shall be 5TB and have option of further expansion on need basis.</u>		
4.	Page 60 PARA 2.11 AND PAGE 61-62 PARA 2.13	FINAL DEPLOYMENT AND <i>Maintenance support and Service Level Agreement</i>	FINAL DEPLOYMENT AND <i>Maintenance support and Service Level Agreement</i>	Consultant shall design and implement appropriate Network Architecture such that, its uptime is more than 95% and network connectivity is more than 95%.			Consultant shall design and implement appropriate Network Architecture such that, its uptime is more than 99.5% and network connectivity is more than 99.5% . <u>Internet speed should not be less than 5MBPS with minimum 99.5 % Service Level Agreement.Screen refresh rate should not be more than 3 seconds. Internet band width should be optimized accordingly</u>		

5.	Page 53 Para 1.1	Preparation of Procurement Plan	Preparation of Procurement Plan	The consultant will procure hardware /software/ dataset/ connectivity goods requirements (e.g. servers, computers/ laptops/ handhelds, GIS/ spatial information systems, database, statistical, modelling, web development, and other software, datasets – including remote sensing data, SOI/NRSA datasets, etc.), connectivity requirements in CPCB offices, etc. to fulfil the task. Support for procurement of data sets– including remote sensing data, SOI/NRSA datasets, etc.) will be done by CPCB in the form of official letters/endorsements for consultant.	The consultant will procure hardware, software, connectivity goods requirements (e.g. servers, computer, laptop, handhelds, ArcGIS, Standard statistical tool) in CPCB office to fulfill the task. <u>CPCB will procure and provide all spatial data including remote sensing data from NIC and NRSC.</u>
6.	Page-95 SCC	Taxes & Duties	Taxes & Duties	1.8.3 [c] professional liability insurance, with a minimum coverage of one million INR	1.8.3 (c) professional liability insurance, with a minimum coverage equivalent of <u>the contract value.</u>
7	Page 28;	Form Tech2 B	Form Tech2 B	B - Consultant's Experience Approx. value of the contract (in current US\$ or Euro): Approx. value of the services provided by your firm under the contract (in current US\$ or Euro)	B - Consultant's Experience Approx. value of the contract (in Indian Rupees or current US\$ or Euro): Approx. value of the services provided by your firm under the contract (in Indian Rupees or current US\$ or Euro)
8	Page 47/ 1	Background	Background	Kindly confirm the spatial coverage of the area of interest. We assume it to be 27 states and 6 Union Territories.	The monitoring stations spatial coverage is within 28 states and 6 union territories

REQUEST FOR PROPOSALS

Selection of Consultants

Quality and Cost Based Selection [QCBS]

Lump Sum

The World Bank

May 2004



Updated upto February 2008

CONTENTS

Section 1. Letter of Invitation	1
Section 2. Instructions to Consultants	3
Instructions to Consultants	20
DATA SHEET	20
Section 3. Technical Proposal - Standard Forms	25
Section 4. Financial Proposal - Standard Forms	37
Section 5. Terms of Reference	46
Section 6. Standard Forms of Contract and Annexures	73

REQUEST FOR PROPOSALS
RFP # [CPCB/HP-II/WEB GIS-1/2011-12]

Govt. of India

Hydrology Project-II

Loan No.4749-In

GIS based Web Portal on Water Quality

Section 1. Letter of Invitation

Loan.4749-In

Invitation No. **CPCB/HP-II/WEB GIS-1/2011-12**

Central pollution Control Board, 'Parivesh Bhawan'
East Arjun Nagar, Shahdara, Delhi-110032,
Date 15.12.2011

Dear [*Name of Consultant*]:

1. Government of India has received a loan from the International Bank for Reconstruction and Development (IBRD) toward the cost of Hydrology Project-II and intends to apply a portion of this loan to eligible payments under this Contract for which this Request for Proposals (RFP) is issued.
2. Central Pollution Control Board now invites Proposals to provide the following Consulting Services for setting up of GIS based Web Portal on Water Quality that delivers updated information on water quality in a basin context for improved understanding and decision making. The Water Portal is expected to serve as a one point national node or kiosk for all water quality related information covering surface and ground waters, water withdrawals and wastewater discharges from all states. The consulting services also include procurement of hardware and software indicated in the RFP.

More details on the Services are provided in the attached Terms of Reference.

3. The Request for Proposal [RFP] has been addressed to the following shortlisted consultants:

1. M/s Quantum Asia Pvt. Ltd, India
2. M/s Rolta India Ltd, India
3. M/s NIIT GIS Ltd. India
4. M/s RMSI Pvt. Ltd. India
5. M/s SENES Consultants India Pvt. Ltd. India
6. M/s Tata Consultancy Services Ltd. India

It is not permissible to transfer this invitation to any other firm.

4. A firm will be selected under Quality-and Cost-Based Selection (QCBS) procedures described in this RFP in accordance with the policies of the International Bank for Reconstruction and Development (IBRD) detailed in the Guidelines – Selection and Employment of Consultants by World Bank Borrowers which can be found at the following website: www.worldbank.org/procure.

5. The RFP includes the following documents:

Section 1 - Letter of Invitation

Section 2 – Instruction to Consultants (including Data Sheet)

Section 3 - Technical Proposal - Standard Forms

Section 4 - Financial Proposal - Standard Forms

Section 5 - Terms of Reference

Section 6 – Standard Form of Contract.

6. Please inform us within a week of receipt of this invitation:

- that you received the letter of invitation; and
- whether you will submit a proposal alone or in association with Sub-consultants.

7. A pre-proposal meeting will be held at Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-32 on January 11th 2012 at 11.00 AM for any clarification in respect of this procurement.

Yours sincerely,

Member Secretary
Central Pollution Control Board

Section 2. Instructions to Consultants

Definitions

- (a) “Bank” means the International Bank for Reconstruction and Development, Washington, D.C., U.S.A., or the International Development Association, Washington, D.C., U.S.A.
- (b) “Client” means the agency with which the selected Consultant signs the Contract for the Services.
- (c) “Consultant” means any entity or person that may provide or provides the Services to the Client under the Contract.
- (d) “Contract” means the Contract signed by the Parties and all the attached documents listed in its Clause 1, that are the General Conditions (GC), the Special Conditions (SC), and the Appendices.
- (e) “Data Sheet” means such part of the Instructions to Consultants used to reflect specific country and assignment conditions.
- (f) “Day” means calendar day.
- (g) “Government” means the government of the Client’s country.
- (h) “Instructions to Consultants” (Section 2 of the RFP) means the document which provides shortlisted Consultants with all information needed to prepare their Proposals.
- (i) “LOI” (Section 1 of the RFP) means the Letter of Invitation being sent by the Client to the shortlisted Consultants.
- (j) “Personnel” means professionals and support staff provided by the Consultant or by any Sub-Consultant and assigned to perform the Services or any part thereof; “Foreign Personnel” means such professionals and support staff who at the time of being so provided had their domicile outside the Government’s country; “Local Personnel” means such professionals and support staff who at the time of being so provided had their domicile inside the Government’s country.
- (k) “Proposal” means the Technical Proposal and the Financial Proposal.
- (l) “RFP” means the Request For Proposal to be prepared by the Client for the selection of Consultants, based on the SRFP.
- (m) “SRFP” means the Standard Request for Proposals, which must be used by the Client as a guide for the preparation of the RFP.

- (n) “Services” means the work to be performed by the Consultant pursuant to the Contract.
- (o) “Sub-Consultant” means any person or entity with whom the Consultant subcontracts any part of the Services.
- (p) “Terms of Reference” (TOR) means the document included in the RFP as Section 5 which explains the objectives, scope of work, activities, tasks to be performed, respective responsibilities of the Client and the Consultant, and expected results and deliverables of the assignment.

1. Introduction

- 1.1 The Client named in the Data Sheet will select a consulting firm/organization (the Consultant) from those listed in the Letter of Invitation, in accordance with the method of selection specified in the Data Sheet.
- 1.2 The shortlisted Consultants are invited to submit a Technical Proposal and a Financial Proposal, or a Technical Proposal only, as specified in the Data Sheet, for consulting services required for the assignment named in the Data Sheet. The Proposal will be the basis for contract negotiations and ultimately for a signed Contract with the selected Consultant.
- 1.3 Consultants should familiarize themselves with local conditions and take them into account in preparing their Proposals. To obtain first-hand information on the assignment and local conditions, Consultants are encouraged to visit the Client before submitting a proposal and to attend a pre-proposal conference if one is specified in the Data Sheet. Attending the pre-proposal conference is optional. Consultants should contact the Client’s representative named in the Data Sheet to arrange for their visit or to obtain additional information on the pre-proposal conference. Consultants should ensure that these officials are advised of the visit in adequate time to allow them to make appropriate arrangements.
- 1.4 The Client will timely provide at no cost to the Consultants the inputs and facilities specified in the Data Sheet, assist the firm in obtaining licenses and permits needed to carry out the services, and make available relevant project data and reports.
- 1.5 Consultants shall bear all costs associated with the preparation and submission of their proposals and contract negotiation. The Client is not bound to accept any proposal, and reserves the right to annul the selection process at any time prior to Contract award, without thereby incurring any liability to the

Consultants.

Conflict of Interest

- 1.6 Bank policy requires that Consultants provide professional, objective, and impartial advice and at all times hold the Client's interests paramount, strictly avoid conflicts with other assignments or their own corporate interests and act without any consideration for future work.

- 1.6.1 Without limitation on the generality of the foregoing, Consultants, and any of their affiliates, shall be considered to have a conflict of interest and shall not be recruited, under any of the circumstances set forth below:

Conflicting activities

- (i) A firm that has been engaged by the Client to provide goods, works or services other than consulting services for a project, and any of its affiliates, shall be disqualified from providing consulting services related to those goods, works or services. Conversely, a firm hired to provide consulting services for the preparation or implementation of a project, and any of its affiliates, shall be disqualified from subsequently providing goods or works or services other than consulting services resulting from or directly related to the firm's consulting services for such preparation or implementation. For the purpose of this paragraph, services other than consulting services are defined as those leading to a measurable physical output, for example surveys, exploratory drilling, aerial photography, and satellite imagery.

Conflicting assignments

- (ii) A Consultant (including its Personnel and Sub-Consultants) or any of its affiliates shall not be hired for any assignment that, by its nature, may be in conflict with another assignment of the Consultant to be executed for the same or for another Client. For example, a Consultant hired to prepare engineering design for an infrastructure project shall not be engaged to prepare an independent environmental assessment for the same project, and a Consultant assisting a Client in the privatization of public assets shall not purchase, nor advise purchasers of, such assets. Similarly, a Consultant hired to prepare Terms

of Reference for an assignment should not be hired for the assignment in question.

Conflicting relationships

- (iii) A Consultant (including its Personnel and Sub-Consultants) that has a business or family relationship with a member of the Client's staff who is directly or indirectly involved in any part of (i) the preparation of the Terms of Reference of the assignment, (ii) the selection process for such assignment, or (iii) supervision of the Contract, may not be awarded a Contract, unless the conflict stemming from this relationship has been resolved in a manner acceptable to the Bank throughout the selection process and the execution of the Contract.

1.6.2 Consultants have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of their Client, or that may reasonably be perceived as having this effect. Failure to disclose said situations may lead to the disqualification of the Consultant or the termination of its Contract.

1.6.3 No agency or current employees of the Client shall work as Consultants under their own ministries, departments or agencies. Recruiting former government employees of the Client to work for their former ministries, departments or agencies is acceptable provided no conflict of interest exists. When the Consultant nominates any government employee as Personnel in their technical proposal, such Personnel must have written certification from their government or employer confirming that they are on leave without pay from their official position and allowed to work full-time outside of their previous official position. Such certification shall be provided to the Client by the Consultant as part of his technical proposal.

Unfair Advantage

1.6.4 If a shortlisted Consultant could derive a competitive advantage from having provided consulting services related to the assignment in question, the Client shall make available to all shortlisted Consultants together with this RFP all information that would in that respect give such Consultant any competitive

advantage over competing Consultants.

**Fraud and
Corruption**

1.7 It is the Bank’s policy to require that Borrowers (including beneficiaries of Bank loans), as well as consultants and their agents (whether declared or not), personnel, sub-contractors, sub-consultants, service providers and suppliers, under Bank-financed contracts, observe the highest standard of ethics during the selection and execution of such contracts.¹ In pursuance of this policy, the Bank:

(a) defines, for the purposes of this provision, the terms set forth below as follows:

(i) “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party²;

(ii) “fraudulent practice” is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation³;

(iii) “collusive practices” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party⁴;

(iv) “coercive practices” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party⁵;

(v) “obstructive practice” is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to

¹ In this context, any action taken by a consultant or a sub-consultant to influence the selection process or contract execution for undue advantage is improper.

² “Another party” refers to a public official acting in relation to the selection process or contract execution. In this context “public official” includes World Bank staff and employees of other organizations taking or reviewing selection decisions.

³ A “party” refers to a public official; the terms “benefit” and “obligation” relate to the selection process or contract execution; and the “act or omission” is intended to influence the selection process or contract execution.

⁴ “Parties” refers to participants in the procurement or selection process (including public officials) attempting to establish contract prices at artificial, non competitive levels.

⁵ “Party” refers to a participant in the selection process or contract execution.

investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or

- (bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 1.7.1 below.
- (b) will reject a proposal for award if it determines that the consultant recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- (c) will cancel the portion of the Loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the Loan were engaged in corrupt, fraudulent, collusive, or coercive practices during the selection process or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur; and
- (d) will sanction a firm or an individual at any time, in accordance with prevailing Bank's sanctions procedures^a, including by publicly declaring such firm or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract, and (ii) to be a nominated sub-consultant^b, sub-contractor, supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract.

1.7.1. In further pursuance of this policy, Consultants shall permit the

^a A firm or an individual may be declared ineligible to be awarded a Bank-financed contract upon completion of the Bank's sanctions proceedings as per its sanctions procedures, including inter alia: (i) temporary suspension in connection with an ongoing sanctions proceeding; (ii) cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, and (iii) the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption.

^b A nominated sub-consultant, supplier, or service provider is one which either has been (i) included by the Consultant in its proposal because it brings specific and critical experience and know-how that are accounted for in the technical evaluation of the Consultant's proposal for the particular services; or (ii) appointed by the Client.

Bank to inspect their accounts and records and other documents relating to the submission of proposals and contract performance, and to have them audited by auditors appointed by the Bank.

- 1.8 Consultants, their agents (whether declared or not), personnel, sub-contractors, sub-consultants, service providers and suppliers shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Bank in accordance with the above para. 1.7. Furthermore, the Consultants shall be aware of the provisions on fraud and corruption stated in the specific clauses in the General Conditions of Contract.
- 1.9 Consultants shall furnish information on commissions and gratuities, if any, paid or to be paid to agents relating to this proposal and during execution of the assignment if the Consultant is awarded the Contract, as requested in the Financial Proposal submission form (Section 4).
- Eligibility** 1.10 A firm or an individual sanctioned by the Bank in accordance with the above para. 1.7 (d) or in accordance with the Bank Guidelines On Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants shall be ineligible to be awarded a Bank-financed contract, or to benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall determine.
- Eligibility of Sub-Consultants** 1.11 In case a shortlisted Consultant intends to associate with Consultants who have not been shortlisted and/or individual expert(s), such other Consultants and/or individual expert(s) shall be subject to the eligibility criteria set forth in the Guidelines.
- Origin of Goods and Consulting Services** 1.12 Goods supplied and Consulting Services provided under the Contract may originate from any country except if:
- (i) as a matter of law or official regulation, the Borrower's country prohibits commercial relations with that country; or
 - (ii) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any imports of goods from that country or any payments to persons or entities in that country.
- Only One** 1.13 Shortlisted Consultants may only submit one proposal. If a

- Proposal** Consultant submits or participates in more than one proposal, such proposals shall be disqualified. However, this does not limit the participation of the same Sub-Consultant, including individual experts, to more than one proposal.
- Proposal Validity** 1.14 The Data Sheet indicates how long Consultants’ Proposals must remain valid after the submission date. During this period, Consultants shall maintain the availability of Professional staff nominated in the Proposal. The Client will make its best effort to complete negotiations within this period. Should the need arise, however, the Client may request Consultants to extend the validity period of their proposals. Consultants who agree to such extension shall confirm that they maintain the availability of the Professional staff nominated in the Proposal, or in their confirmation of extension of validity of the Proposal, Consultants could submit new staff in replacement, who would be considered in the final evaluation for contract award. Consultants who do not agree have the right to refuse to extend the validity of their Proposals.
- 2. Clarification and Amendment of RFP Documents** 2.1 Consultants may request a clarification of any of the RFP documents up to the number of days indicated in the Data Sheet before the proposal submission date. Any request for clarification must be sent in writing, or by standard electronic means to the Client’s address indicated in the Data Sheet. The Client will respond in writing, or by standard electronic means and will send written copies of the response (including an explanation of the query but without identifying the source of inquiry) to all Consultants. Should the Client deem it necessary to amend the RFP as a result of a clarification, it shall do so following the procedure under para. 2.2.
- 2.2 At any time before the submission of Proposals, the Client may amend the RFP by issuing an addendum in writing or by standard electronic means. The addendum shall be sent to all Consultants and will be binding on them. Consultants shall acknowledge receipt of all amendments. To give Consultants reasonable time in which to take an amendment into account in their Proposals the Client may, if the amendment is substantial, extend the deadline for the submission of Proposals.
- 3. Preparation of Proposals** 3.1 The Proposal (see para. 1.2), as well as all related correspondence exchanged by the Consultants and the Client, shall be written in the language (s) specified in the Data Sheet.

3.2 In preparing their Proposal, Consultants are expected to examine in detail the documents comprising the RFP. Material deficiencies in providing the information requested may result in rejection of a Proposal.

3.3 While preparing the Technical Proposal, Consultants must give particular attention to the following:

(a) If a shortlisted Consultant considers that it may enhance its expertise for the assignment by associating with other Consultants in a joint venture or sub-consultancy, it may associate with either (a) non-shortlisted Consultant(s), or (b) shortlisted Consultants if so indicated in the Data Sheet. A shortlisted Consultant must first obtain the approval of the Client if it wishes to enter into a joint venture with non-shortlisted or shortlisted Consultant(s). In case of association with non-shortlisted Consultant(s), the shortlisted Consultant shall act as association leader. In case of a joint venture, all partners shall be jointly and severally liable and shall indicate who will act as the leader of the joint venture.

(b) The estimated number of Professional staff-months or the budget for executing the assignment shall be shown in the Data Sheet, but not both. However, the Proposal shall be based on the number of Professional staff-months or budget estimated by the Consultants.

For fixed-budget-based assignments, the available budget is given in the Data Sheet, and the Financial Proposal shall not exceed this budget, while the estimated number of Professional staff-months shall not be disclosed.

(c) Alternative professional staff shall not be proposed, and only one curriculum vitae (CV) may be submitted for each position.

Language

(d) Documents to be issued by the Consultants as part of this assignment must be in the language(s) specified in the Reference Paragraph 3.1 of the Data Sheet. If Reference Paragraph 3.1 indicates two languages, the language in which the proposal of the successful Consultant will be submitted shall govern for the purpose of interpretation. It is desirable that the firm's Personnel have a working knowledge of the Client's

national language.

**Technical
Proposal
Format and
Content**

- 3.4 Depending on the nature of the assignment, Consultants are required to submit a Full Technical Proposal (FTP), or a Simplified Technical Proposal (STP). The Data Sheet indicates the format of the Technical Proposal to be submitted. Submission of the wrong type of Technical Proposal will result in the Proposal being deemed non-responsive. The Technical Proposal shall provide the information indicated in the following paras from (a) to (g) using the attached Standard Forms (Section 3). Paragraph (c) (ii) indicates the recommended number of pages for the description of the approach, methodology and work plan of the STP. A page is considered to be one printed side of A4 or letter size paper.
- (a) (i) For the FTP only: a brief description of the Consultants' organization and an outline of recent experience of the Consultants and, in the case of joint venture, for each partner, on assignments of a similar nature is required in Form TECH-2 of Section 3. For each assignment, the outline should indicate the names of Sub-Consultants/ Professional staff who participated, duration of the assignment, contract amount, and Consultant's involvement. Information should be provided only for those assignments for which the Consultant was legally contracted by the client as a corporation or as one of the major firms within a joint venture. Assignments completed by individual Professional staff working privately or through other consulting firms cannot be claimed as the experience of the Consultant, or that of the Consultant's associates, but can be claimed by the Professional staff themselves in their CVs. Consultants should be prepared to substantiate the claimed experience if so requested by the Client.
 - (ii) For the STP the above information is not required and Form TECH-2 of Section 3 shall not be used.
 - (b) (i) For the FTP only: comments and suggestions on the Terms of Reference including workable suggestions that could improve the quality/ effectiveness of the assignment; and on requirements for counterpart staff and facilities including: administrative support, office space, local transportation, equipment, data, etc. to be provided by the Client (Form TECH-3 of

Section 3).

- (ii) For the STP Form TECH-3 of Section 3 shall not be used; the above comments and suggestions, if any, should be incorporated into the description of the approach and methodology (refer to following sub-para. 3.4 (c) (ii)).
 - (c) (i) For the FTP, and STP: a description of the approach, methodology and work plan for performing the assignment covering the following subjects: technical approach and methodology, work plan, and organization and staffing schedule. Guidance on the content of this section of the Technical Proposals is provided under Form TECH-4 of Section 3. The work plan should be consistent with the Work Schedule (Form TECH-8 of Section 3) which will show in the form of a bar chart the timing proposed for each activity.
 - (ii) For the STP only: the description of the approach, methodology and work plan should normally consist of 10 pages, including charts, diagrams, and comments and suggestions, if any, on Terms of Reference and counterpart staff and facilities.
 - (d) The list of the proposed Professional staff team by area of expertise, the position that would be assigned to each staff team member, and their tasks (Form TECH-5 of Section 3).
 - (e) Estimates of the staff input (staff-months of foreign and local professionals) needed to carry out the assignment (Form TECH-7 of Section 3). The staff-months input should be indicated separately for home office and field activities, and for foreign and local Professional staff.
 - (f) CVs of the Professional staff signed by the staff themselves or by the authorized representative of the Professional Staff (Form TECH-6 of Section 3).
 - (g) For the FTP only: a detailed description of the proposed methodology and staffing for training, if the Data Sheet specifies training as a specific component of the assignment.
- 3.5 The Technical Proposal shall not include any financial information. A Technical Proposal containing financial

information may be declared non responsive.

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| Financial Proposals | 3.6 | The Financial Proposal shall be prepared using the attached Standard Forms (Section 4). It shall list all costs associated with the assignment, including (a) remuneration for staff (foreign and local, in the field and at the Consultants' home office), and (b) reimbursable expenses indicated in the Data Sheet. If appropriate, these costs should be broken down by activity and, if appropriate, into foreign and local expenditures. All activities and items described in the Technical Proposal must be priced separately; activities and items described in the Technical Proposal but not priced, shall be assumed to be included in the prices of other activities or items. |
| Taxes | 3.7 | The Consultant may be subject to local taxes (such as: value added or sales tax, social charges or income taxes on nonresident Foreign Personnel, duties, fees, levies) on amounts payable by the Client under the Contract. The Client will state in the Data Sheet if the Consultant is subject to payment of any local taxes. Any such amounts shall not be included in the Financial Proposal as they will not be evaluated, but they will be discussed at contract negotiations, and applicable amounts will be included in the Contract. |
| | 3.8 | Consultants may express the price of their services in a maximum of three freely convertible currencies, singly or in combination. The Client may require Consultants to state the portion of their price representing local cost in the national currency if so indicated in the Data Sheet. |
| | 3.9 | Commissions and gratuities, if any, paid or to be paid by Consultants and related to the assignment will be listed in the Financial Proposal Form FIN-1 of Section 4. |
| 4. Submission, Receipt, and Opening of Proposals | 4.1 | The original proposal (Technical Proposal and, if required, Financial Proposal; see para. 1.2) shall contain no interlineations or overwriting, except as necessary to correct errors made by the Consultants themselves. The person who signed the proposal must initial such corrections. Submission letters for both Technical and Financial Proposals should respectively be in the format of TECH-1 of Section 3, and FIN-1 of Section 4. |
| | 4.2 | An authorized representative of the Consultants shall initial all pages of the original Technical and Financial Proposals. The authorization shall be in the form of a written power of attorney accompanying the Proposal or in any other form |

demonstrating that the representative has been duly authorized to sign. The signed Technical and Financial Proposals shall be marked “ORIGINAL”.

4.3 The Technical Proposal shall be marked “ORIGINAL” or “COPY” as appropriate. The Technical Proposals shall be sent to the addresses referred to in para. 4.5 and in the number of copies indicated in the Data Sheet. All required copies of the Technical Proposal are to be made from the original. If there are discrepancies between the original and the copies of the Technical Proposal, the original governs.

4.4 The original and all copies of the Technical Proposal shall be placed in a sealed envelope clearly marked “TECHNICAL PROPOSAL” Similarly, the original Financial Proposal (if required under the selection method indicated in the Data Sheet) shall be placed in a sealed envelope clearly marked “FINANCIAL PROPOSAL” followed by the Loan/TA number and the name of the assignment, and with a warning “**DO NOT OPEN WITH THE TECHNICAL PROPOSAL.**” The envelopes containing the Technical and Financial Proposals shall be placed into an outer envelope and sealed. This outer envelope shall bear the submission address, reference number and title of the Loan, and be clearly marked “**DO NOT OPEN, EXCEPT IN PRESENCE OF THE OFFICIAL APPOINTED, BEFORE** [*insert the time and date of the submission deadline indicated in the Data Sheet*]”. The Client shall not be responsible for misplacement, losing or premature opening if the outer envelope is not sealed and/or marked as stipulated. This circumstance may be case for Proposal rejection. If the Financial Proposal is not submitted in a separate sealed envelope duly marked as indicated above, this will constitute grounds for declaring the Proposal non-responsive.

4.5 The Proposals must be sent to the address/addresses indicated in the Data Sheet and received by the Client no later than the time and the date indicated in the Data Sheet, or any extension to this date in accordance with para. 2.2. Any proposal received by the Client after the deadline for submission shall be returned unopened.

4.6 The Client shall open the Technical Proposal immediately after the deadline for their submission. The envelopes with the Financial Proposal shall remain sealed and securely stored.

5. Proposal Evaluation

5.1 From the time the Proposals are opened to the time the Contract is awarded, the Consultants should not contact the Client on any matter related to its Technical and/or Financial

Proposal. Any effort by Consultants to influence the Client in the examination, evaluation, ranking of Proposals, and recommendation for award of Contract may result in the rejection of the Consultants' Proposal.

Evaluators of Technical Proposals shall have no access to the Financial Proposals until the technical evaluation is concluded and the Bank issues its "no objection".

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| Evaluation of Technical Proposals | 5.2 | The evaluation committee shall evaluate the Technical Proposals on the basis of their responsiveness to the Terms of Reference, applying the evaluation criteria, sub-criteria, and point system specified in the Data Sheet. Each responsive Proposal will be given a technical score (St). A Proposal shall be rejected at this stage if it does not respond to important aspects of the RFP, and particularly the Terms of Reference or if it fails to achieve the minimum technical score indicated in the Data Sheet. |
| Financial Proposals for QBS | 5.3 | Following the ranking of technical Proposals, when selection is based on quality only (QBS), the first ranked Consultant is invited to negotiate its proposal and the Contract in accordance with the instructions given under para. 6 of these Instructions. |
| Public Opening and Evaluation of Financial Proposals (only for QCBS, FBS, and LCS) | 5.4 | After the technical evaluation is completed and the Bank has issued its no objection (if applicable), the Client shall inform the Consultants who have submitted proposals the technical scores obtained by their Technical Proposals, and shall notify those Consultants whose Proposals did not meet the minimum qualifying mark or were considered non responsive to the RFP and TOR, that their Financial Proposals will be returned unopened after completing the selection process. The Client shall simultaneously notify in writing Consultants that have secured the minimum qualifying mark, the date, time and location for opening the Financial Proposals. The opening date should allow Consultants sufficient time to make arrangements for attending the opening. Consultants' attendance at the opening of Financial Proposals is optional. |
| | 5.5 | Financial Proposals shall be opened publicly in the presence of the Consultants' representatives who choose to attend. The name of the Consultants, and the technical scores of the Consultants shall be read aloud. The Financial Proposal of the Consultants who met the minimum qualifying mark will then be inspected to confirm that they have remained sealed and unopened. These Financial Proposals shall be then opened, and the total prices read aloud and recorded. Copy of the |

record shall be sent to all Consultants and the Bank.

- 5.6 The Evaluation Committee will correct any computational errors. When correcting computational errors, in case of discrepancy between a partial amount and the total amount, or between word and figures the formers will prevail. In addition to the above corrections, as indicated under para. 3.6, activities and items described in the Technical Proposal but not priced, shall be assumed to be included in the prices of other activities or items. In case an activity or line item is quantified in the Financial Proposal differently from the Technical Proposal, (i) if the Time-Based form of contract has been included in the RFP, the Evaluation Committee shall correct the quantification indicated in the Financial Proposal so as to make it consistent with that indicated in the Technical Proposal, apply the relevant unit price included in the Financial Proposal to the corrected quantity and correct the total Proposal cost, (ii) if the Lump-Sum form of contract has been included in the RFP, no corrections are applied to the Financial Proposal in this respect. Prices shall be converted to a single currency using the selling rates of exchange, source and date indicated in the Data Sheet.
- 5.7 In case of QCBS, the lowest evaluated Financial Proposal (Fm) will be given the maximum financial score (Sf) of 100 points. The financial scores (Sf) of the other Financial Proposals will be computed as indicated in the Data Sheet. Proposals will be ranked according to their combined technical (St) and financial (Sf) scores using the weights (T = the weight given to the Technical Proposal; P = the weight given to the Financial Proposal; T + P = 1) indicated in the Data Sheet: $S = St \times T\% + Sf \times P\%$. The firm achieving the highest combined technical and financial score will be invited for negotiations.
- 5.8 In the case of Fixed-Budget Selection, the Client will select the firm that submitted the highest ranked Technical Proposal within the budget. Proposals that exceed the indicated budget will be rejected. In the case of the Least-Cost Selection, the Client will select the lowest proposal among those that passed the minimum technical score. In both cases the evaluated proposal price according to para. 5.6 shall be considered, and the selected firm is invited for negotiations.

6. Negotiations

- 6.1 Negotiations will be held at the date and address indicated in the Data Sheet. The invited Consultant will, as a pre-requisite for attendance at the negotiations, confirm availability of all Professional staff. Failure in satisfying such requirements may

result in the Client proceeding to negotiate with the next-ranked Consultant. Representatives conducting negotiations on behalf of the Consultant must have written authority to negotiate and conclude a Contract.

Technical negotiations

- 6.2 Negotiations will include a discussion of the Technical Proposal, the proposed technical approach and methodology, work plan, and organization and staffing, and any suggestions made by the Consultant to improve the Terms of Reference. The Client and the Consultants will finalize the Terms of Reference, staffing schedule, work schedule, logistics, and reporting. These documents will then be incorporated in the Contract as “Description of Services”. Special attention will be paid to clearly defining the inputs and facilities required from the Client to ensure satisfactory implementation of the assignment. The Client shall prepare minutes of negotiations which will be signed by the Client and the Consultant.

Financial negotiations

- 6.3 If applicable, it is the responsibility of the Consultant, before starting financial negotiations, to contact the local tax authorities to determine the local tax amount to be paid by the Consultant under the Contract. The financial negotiations will include a clarification (if any) of the firm’s tax liability in the Client’s country, and the manner in which it will be reflected in the Contract; and will reflect the agreed technical modifications in the cost of the services. In the cases of QCBS, Fixed-Budget Selection, and the Least-Cost Selection methods, unless there are exceptional reasons, the financial negotiations will involve neither the remuneration rates for staff nor other proposed unit rates. For other methods, Consultants will provide the Client with the information on remuneration rates described in the Appendix attached to Section 4 - Financial Proposal - Standard Forms of this RFP.

Availability of Professional staff/experts

- 6.4 Having selected the Consultant on the basis of, among other things, an evaluation of proposed Professional staff, the Client expects to negotiate a Contract on the basis of the Professional staff named in the Proposal. Before contract negotiations, the Client will require assurances that the Professional staff will be actually available. The Client will not consider substitutions during contract negotiations unless both parties agree that undue delay in the selection process makes such substitution unavoidable or for reasons such as death or medical incapacity. If this is not the case and if it is established that Professional staff were offered in the proposal without confirming their availability, the Consultant may be disqualified. Any proposed substitute shall have equivalent or

better qualifications and experience than the original candidate and be submitted by the Consultant within the period of time specified in the letter of invitation to negotiate.

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| Conclusion of the negotiations | 6.5 | Negotiations will conclude with a review of the draft Contract. To complete negotiations the Client and the Consultant will initial the agreed Contract. If negotiations fail, the Client will invite the Consultant whose Proposal received the second highest score to negotiate a Contract. |
| 7. Award of Contract | 7.1 | After completing negotiations the Client shall award the Contract to the selected Consultant, publish in UNDB on line and in the Development Gateway the award of the Contract, and promptly notify all Consultants who have submitted proposals. After Contract signature, the Client shall return the unopened Financial Proposals to the unsuccessful Consultants. |
| | 7.2 | The Consultant is expected to commence the assignment on the date and at the location specified in the Data Sheet. |
| 8. Confidentiality | 8.1 | Information relating to evaluation of Proposals and recommendations concerning awards shall not be disclosed to the Consultants who submitted the Proposals or to other persons not officially concerned with the process, until the publication of the award of Contract. The undue use by any Consultant of confidential information related to the process may result in the rejection of its Proposal and may be subject to the provisions of the Bank's antifraud and corruption policy. |

Instructions to Consultants

DATA SHEET

Paragraph Reference	
1.1	<p>Name of the Client: Central Pollution Control Board, Delhi 110032 (India)</p> <hr/> <p>Method of selection: Quality and Cost Based Selection [QCBS] Technical 80% Financial 20%</p>
1.2	<p>Financial Proposal to be submitted together with Technical Proposal: Yes ✓</p> <p>Name of the assignment is: GIS based Web Portal on Water Quality</p>
1.3	<p>A pre-proposal conference will be held: Yes ✓ ___ January 11th 2012 at 11.00am. The Client's representative is: Member Secretary Address: Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Shahdara, Delhi-110032 Telephone: 011-22306274 Facsimile: 011-22302188 E-mail: rmbhardwaj@gmail.com</p>
1.4	<p>The Client will provide the following inputs and facilities:</p> <ul style="list-style-type: none"> ▪ CPCB shall facilitate the data collection. All relevant data available with CPCB shall be shared with the Consultant. To collect the data from other sources, letters to concerned authorities will be given by CPCB. ▪ CPCB will extend logistical support to consultant for conducting workshops.
1.14	<p>Proposals must remain valid 90-days after the submission date.</p>

2.1	<p>Clarifications may be requested not later than 5 days before the pre proposal meeting.</p> <p>The address for requesting clarifications is: Central Pollution Control Board, Parivesh Bhawan East Arjun Nagar, Shahdara, Delhi-110032 Telephone:011-22306274 Facsimile: 011-22302188 E-mail:rmbhardwaj@gmail.com</p>
3.1	Proposals shall be submitted in the following language:- English
3.3 (a)	Shortlisted Consultants may associate with other shortlisted Consultants: No
3.3 (b)	The estimated number of professional staff-months required for the assignment is: 96 staff months
3.4	The format of the Technical Proposal to be submitted is: FTP
3.4 (g)	<p>Training is a specific component of this assignment: Yes ✓</p> <p>Consultant shall train CPCB and SPCBs' staff for effective use of the system. Hence consultant shall propose training calendar to cover all functionalities and users across the country. Training component of this Project will include -</p> <ol style="list-style-type: none"> a. Training courses with suitable training material (including e-learning training modules for key areas) b. On-the-job training; Maintenance, hand-holding; making in-house expert availability for fixing of bugs, debottlenecking and improvements c. User satisfaction surveys (CPCB staff, online Public surveys) d. Manuals for software developed and their upkeep e. Supporting Systems administration (backup, security) f. Plan for Institutional sustainability <p>More details are indicated in the Terms of Reference</p>
3.6	<p><i>Applicable Reimbursable expenses in foreign and in local currency.</i></p> <ol style="list-style-type: none"> (1) a per diem allowance in respect of Personnel of the Consultant for every day in which the Personnel shall be absent from the home office and, as applicable, outside the Client's country for purposes of the Services; (2) cost of necessary travel, including transportation of the Personnel by the most appropriate means of transport and the most direct practicable route; (3) cost of office accommodation, investigations and surveys; (4) cost of applicable international or local communications such as the use

	<p>of telephone and facsimile required for the purpose of the Services;</p> <p>(5) cost, rental and freight of any instruments or equipment required to be provided by the Consultants for the purposes of the Services;</p> <p>(6) cost of printing and dispatching of the reports to be produced for the Services;</p> <p>(7) other allowances where applicable and provisional or fixed sums (if any);</p> <p>(8) costs for procurement of hardware software and internet line</p> <p>(9) Maintenance support for first year after final deployment of Web Portal and</p> <p>(10) cost of such further items required for purposes of the Services not covered in the foregoing.</p>
3.7	<p>Amounts payable by the Client to the Consultant under the contract to be subject to local taxation: Yes <input checked="" type="checkbox"/></p> <p>The Client will:</p> <ul style="list-style-type: none"> - reimburse the Consultant for indirect local taxes (including service tax) and duties as per SCC 1.8 - Yes. - reimburse the Consultant income tax paid in India on the remuneration for services provided by the non-resident staff of the consultant - No <p>Consultants are requested to consult tax consultants for guidance and indicate the estimated taxes and duties (as stated in ITC 3.7 and SCC 1.8) separately in the financial proposal.</p>
3.8	<p>Consultant to state local cost in the national currency: Yes</p>
4.3	<p>Consultant must submit the original and 5 copies of the Technical Proposal, and the original of the Financial Proposal.</p>
4.5	<p>The Proposal submission address is: Central Pollution Control Board, Parivesh Bhawan' East Arjun Nagar, Shahdara, Delhi-110032 India</p> <p>Proposals must be submitted no later than the following date and time: February 6th 2012 at 15:00 hrs.</p>

5.2 (a)	Criteria, sub-criteria, and point system for the evaluation of Full Technical Proposals are:		<u>Points</u>
	(i)	Specific experience of the Consultants relevant to the assignment:	5
	Total points for criterion (i):		5
	(ii)	Adequacy of the proposed methodology and work plan in responding to the Terms of Reference:	
		a) Technical approach and methodology	30
		b) Work plan	5
		c) Organization and staffing	5
	Total points for criterion (ii):		40
	(iii)	Key professional (staff qualifications and competence for the assignment-refer Para 4.2-Project Team Plan) :	
		a) Team Leader	14
		b) Web Developer	11
		c) GIS specialists	11
		d) Data Base Management Expert	9
	Total points for criterion (iii):		45
		And sub criteria for evaluation of CV as given below: 1) General qualification [20%] 2) Adequacy for the assignment [60%] 3) General Experience [20%] Total weight [100%]	
	(iv)	Suitability of the transfer of knowledge (training) program:	
		a) Experience in conducting Training Program Atleast one project Experience in Training	5
		b) Training Approach and Methodology Training Calendar Preparation	2
		c) Qualification Masters in science and certification in Education Training Experience of working with the same	3
	Total points for criterion (iv):		10
	Total points for the five criteria		100
	The minimum technical score required to pass is 75 points		
5.6	<p>The single currency for price conversions is: Indian Rupees</p> <p>The source of official selling rates is: State Bank of India [SBI] B.C. Selling rate of Exchange.</p> <p>The date of exchange rates is: the last date for submission of proposals indicated in Clause 4.5 of Data Sheet.</p>		
5.7	The formula for determining the financial scores is the following:		

	<p>$S_f = 100 \times F_m / F$, in which S_f is the financial score, F_m is the lowest price and F the price of the proposal under consideration.</p> <p>The weights given to the Technical and Financial Proposals are: $T = 0.80$ and $P = 0.20$</p>
6.1	<p>Expected date and address for contract negotiations: March 20th, 2012. Central Pollution Control Board, Parivesh Bhawan East Arjun Nagar, Shahdara, Delhi-110032 Telephone: 011-22306274 Facsimile: 011-22302188 E-mail: rmbhardwaj@gmail.com</p> <hr/>
7.2	<p>Expected date for commencement of consulting services Two weeks from the date of Contract signature by both parties. at: Central Pollution Control Board, Parivesh Bhawan East Arjun Nagar, Shahdara, Delhi-110032</p>

Section 3. Technical Proposal - Standard Forms

Refer to Reference Paragraph 3.4 of the Data Sheet for format of Technical Proposal to be submitted, and paragraph 3.4 of Section 2 of the RFP for Standard Forms required and number of pages recommended.

- TECH-1 Technical Proposal Submission Form
- TECH-2 Consultant's Organization and Experience
 - A Consultant's Organization
 - B Consultant's Experience
- TECH-3 Comments or Suggestions on the Terms of Reference and on Counterpart Staff and Facilities to be Provided by the Client
 - A On the Terms of Reference
 - B On the Counterpart Staff and Facilities
- TECH-4 Description of the Approach, Methodology and Work Plan for Performing the Assignment
- TECH-5 Team Composition and Task Assignments
- TECH-6 Curriculum Vitae (CV) for Proposed Professional Staff
- TECH-7 Staffing Schedule
- TECH-8 Work Schedule

FORM TECH-1 TECHNICAL PROPOSAL SUBMISSION FORM

[Location, Date]

To: [Name and address of Client]

Dear Sirs:

We, the undersigned, offer to provide the consulting services for [Insert title of assignment] in accordance with your Request for Proposal dated [Insert Date] and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal, and a Financial Proposal sealed under a separate envelope.

We are submitting our Proposal in association with: [Insert a list with full name and address of each associated Consultant]¹ as a Joint Venture confirming joint and several liability or as sub-consultants (*strike out which ever is inapplicable*).

We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification.

If negotiations are held during the period of validity of the Proposal, i.e., before the date indicated in Paragraph Reference 1.12 of the Data Sheet, we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from Contract negotiations.

We undertake, if our Proposal is accepted, to initiate the consulting services related to the assignment not later than the date indicated in Paragraph Reference 7.2 of the Data Sheet.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature [In full and initials]: _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

¹ [Delete in case no association is foreseen.]

FORM TECH-2 CONSULTANT’S ORGANIZATION AND EXPERIENCE

A - Consultant’s Organization

[Provide here a brief (two pages) description of the background and organization of your firm/entity and each associate for this assignment.]

B - Consultant's Experience

[Using the format below, provide information on each assignment for which your firm, and each associate for this assignment, was legally contracted either individually as a corporate entity or as one of the major companies within an association, for carrying out consulting services similar to the ones requested under this assignment. Use 20 pages.]

Assignment name:	Approx. value of the contract (in current US\$ or Euro):
Country: Location within country:	Duration of assignment (months):
Name of Client:	Total N ^o of staff-months of the assignment:
Address:	Approx. value of the services provided by your firm under the contract (in current US\$ or Euro):
Start date (month/year): Completion date (month/year):	N ^o of professional staff-months provided by associated Consultants:
Name of associated Consultants, if any:	Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader):
Narrative description of Project:	
Description of actual services provided by your staff within the assignment:	

Firm's Name: _____

**FORM TECH-3 COMMENTS AND SUGGESTIONS ON THE TERMS OF
REFERENCE AND ON COUNTERPART STAFF AND FACILITIES TO BE PROVIDED
BY THE CLIENT**

A - On the Terms of Reference

[Present and justify here any modifications or improvement to the Terms of Reference you are proposing to improve performance in carrying out the assignment (such as deleting some activity you consider unnecessary, or adding another, or proposing a different phasing of the activities). Such suggestions should be concise and to the point, and incorporated in your Proposal.]

B - On Counterpart Staff and Facilities

[Comment here on counterpart staff and facilities to be provided by the Client according to Paragraph Reference 1.4 of the Data Sheet including: administrative support, office space, local transportation, equipment, data, etc.]

FORM TECH-4 DESCRIPTION OF APPROACH, METHODOLOGY AND WORK PLAN FOR PERFORMING THE ASSIGNMENT

(For small or very simple assignments the Client should omit the following text in Italic)

[Technical approach, methodology and work plan are key components of the Technical Proposal. You are suggested to present your Technical Proposal (50 pages, inclusive of charts and diagrams) divided into the following three chapters:

- a) Technical Approach and Methodology,*
- b) Work Plan, and*
- c) Organization and Staffing,*

a) Technical Approach and Methodology. In this chapter you should explain your understanding of the objectives of the assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output. You should highlight the problems being addressed and their importance, and explain the technical approach you would adopt to address them. You should also explain the methodologies you propose to adopt and highlight the compatibility of those methodologies with the proposed approach.

b) Work Plan. In this chapter you should propose the main activities of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by the Client), and delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and ability to translate them into a feasible working plan. A list of the final documents, including reports, drawings, and tables to be delivered as final output, should be included here. The work plan should be consistent with the Work Schedule of Form 3H.

c) Organization and Staffing. In this chapter you should propose the structure and composition of your team. You should list the main disciplines of the assignment, the key expert responsible, and proposed technical and support staff.]

FORM TECH-5 TEAM COMPOSITION AND TASK ASSIGNMENTS

1. Professional Staff				
Name of Staff	Firm	Area of Expertise	Position Assigned	Task Assigned

2. Support Staff				
Name of Staff	Firm	Area of Expertise	Position Assigned	Task Assigned

FORM TECH-6 CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF

1. Proposed Position *[only one candidate shall be nominated for each position]:* _____

2. Name of Firm *[Insert name of firm proposing the staff]:* _____

3. Name of Staff *[Insert full name]:* _____

4. Date of Birth: _____ **Nationality:** _____

5. Education *[Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment]:* _____

6. Membership of Professional Associations: _____

7. Other Training *[Indicate significant training since degrees under 5 - Education were obtained]:* _____

8. Countries of Work Experience: *[List countries where staff has worked in the last ten years]:* _____

9. Languages *[For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing]:* _____

10. Employment Record *[Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment (see format here below): dates of employment, name of employing organization, positions held.]:*

From [Year]: ____ To [Year]: _____

Employer: _____

Positions held: _____

<p>11. Detailed Tasks Assigned</p> <p><i>[List all tasks to be performed under this assignment]</i></p>	<p>12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned</p> <p><i>[Among the assignments in which the staff has been involved, indicate the following information for those assignments that best illustrate staff capability to handle the tasks listed under point 11.]</i></p> <p>Name of assignment or project: _____</p> <p>Year: _____</p> <p>Location: _____</p> <p>Client: _____</p> <p>Main project features: _____</p> <p>Positions held: _____</p> <p>Activities performed: _____</p>
--	--

13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

_____ Date: _____
[Signature of staff member or authorized representative of the staff] *Day/Month/Year*

Full name of authorized representative: _____

FORM TECH-7 STAFFING SCHEDULE¹

N°	Name of Staff	Staff input (in the form of a bar chart) ²													Total staff-month input			
		1	2	3	4	5	6	7	8	9	10	11	12	n	Home	Field ³	Total	
Foreign																		
1		[Home]																
		[Field]																
2																		
3																		
n																		
													Subtotal					
Local																		
1		[Home]																
		[Field]																
2																		
n																		
													Subtotal					
													Total					

- 1 For Professional Staff the input should be indicated individually; for Support Staff it should be indicated by category (e.g.: draftsmen, clerical staff, etc.).
- 2 Months are counted from the start of the assignment. For each staff indicate separately staff input for home and field work.
- 3 Field work means work carried out at a place other than the Consultant's home office.

Full time input
 Part time input

Section 4. Financial Proposal - Standard Forms

[Comments in brackets [] provide guidance to the shortlisted Consultants for the preparation of their Financial Proposals; they should not appear on the Financial Proposals to be submitted.]

Financial Proposal Standard Forms shall be used for the preparation of the Financial Proposal according to the instructions provided under para. 3.6 of Section 2. Such Forms are to be used whichever is the selection method indicated in para. 4 of the Letter of Invitation.

- FIN-1 Financial Proposal Submission Form
- FIN-2 Summary of Costs
- FIN-3 Breakdown of Costs by Activity
- FIN-4 Breakdown of Remuneration
- FIN-5 Reimbursable expenses
- Fin-6 Breakdown of Costs for Procurement of Hardware, Software and Internet line
- FIN-7 Annual Maintenance Contract

FORM FIN-1 FINANCIAL PROPOSAL SUBMISSION FORM

[Location, Date]

To: [Name and address of Client]

Dear Sirs:

We, the undersigned, offer to provide the consulting services for [Insert title of assignment] in accordance with your Request for Proposal dated [Insert Date] and our Technical Proposal. Our attached Financial Proposal is for the sum of exclusive [Insert amount(s) in words and figures¹]. The amount of the local indirect taxes, as listed in Clause 1.8 of SCC is estimated and shown in the summary separately.

Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal, i.e. before the date indicated in Paragraph Reference 1.12 of the Data Sheet.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act, 1988".

Commissions and gratuities paid or to be paid by us to agents relating to this Proposal and Contract execution, if we are awarded the Contract, are listed below²:

Name and Address of Agents	Amount and Currency	Purpose of Commission or Gratuity
_____	_____	_____
_____	_____	_____
_____	_____	_____

We understand you are not bound to accept any Proposal you receive.

We remain,
Yours sincerely,

Authorized Signature [In full and initials]: _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

¹ Amounts must coincide with the ones indicated under Total Cost of Financial proposal in Form FIN-2.

² If applicable, replace this paragraph with: "No commissions or gratuities have been or are to be paid by us to agents relating to this Proposal and Contract execution."

FORM FIN-2 SUMMARY OF COSTS

Item	Costs			
	<i>[Indicate Foreign Currency # 1]¹</i>	<i>[Indicate Foreign Currency # 2]¹</i>	<i>[Indicate Foreign Currency # 3]¹</i>	<i>[Indicate Local Currency]</i>
1. Total Costs of Financial Proposal ²				
2. Local Indirect Taxes and Duties payable in India, as defined in Clause 1.8 of SCC				
3. Consultancy service tax payable in India				
<i>Total Amount of financial Proposal including taxes</i>				

- 1 Indicate between brackets the name of the foreign currency. Maximum of three currencies; use as many columns as needed, and delete the others.
- 2 Indicate the total costs, net of local indirect taxes, as listed in SCC clause 1.8, and to be paid by the Client in each currency [Taxes are to be indicated in item 2]. Such total costs must coincide with the sum of the relevant Subtotals indicated in all Forms FIN-3 provided with the Proposal.

FORM FIN-3 BREAKDOWN OF COSTS BY ACTIVITY¹

Group of Activities (Phase): ²	Description: ³			
Cost component	Costs			
	[Indicate Foreign Currency # 1] ⁴	[Indicate Foreign Currency # 2] ⁴	[Indicate Foreign Currency # 3] ⁴	[Indicate Local Currency]
Remuneration ⁵				
Reimbursable Expenses ⁵				
Subtotals				
TOTAL				

- 1 Form FIN-3 shall be filled at least for the whole assignment. In case some of the activities require different modes of billing and payment (e.g.: the assignment is phased, and each phase has a different payment schedule), the Consultant shall fill a separate Form FIN-3 for each group of activities. For each currency, the sum of the relevant Subtotals of all Forms FIN-3 provided must coincide with the Total Costs of Financial Proposal indicated in Form FIN-2.
- 2 Names of activities (phase) should be the same as, or correspond to the ones indicated in the second column of Form TECH-8.
- 3 Short description of the activities whose cost breakdown is provided in this Form.
- 4 Indicate between brackets the name of the foreign currency. Use the same columns and currencies of Form FIN-2.
- 5 For each currency, Remuneration and Reimbursable Expenses must respectively coincide with relevant Total Costs indicated in Forms FIN-4, and FIN-5.

FORM FIN-4 BREAKDOWN OF REMUNERATION¹ (LUMP SUM)

. Information to be provided in this Form **shall only be used to establish payments to the Consultant for possible additional services** requested by the Client)

Name ²	Position ³	Staff-month Rate ⁴
Foreign Staff		
		[Home]
		[Field]
Local Staff		

- 1 Form FIN-4 shall be filled in for the same Professional and Support Staff listed in Form TECH-7.
- 2 Professional Staff should be indicated individually; Support Staff should be indicated per category (e.g.: draftsmen, clerical staff).
- 3 Positions of the Professional Staff shall coincide with the ones indicated in Form TECH-5.
- 4 Indicate separately staff-month rate and currency for home and field work for foreign staff.

FORM FIN-5 BREAKDOWN OF REIMBURSABLE EXPENSES

This Form FIN-5 shall only be used when the Lump-Sum Form of Contract has been included in the RFP. **Information to be provided in this Form shall only be used to establish payments to the Consultant for possible additional services requested by the Client)**

N°	Description ¹	Unit	Unit Cost ²
	Per diem allowances	Day	
	International flights ³	Trip	
	Miscellaneous travel expenses	Trip	
	Communication costs between [<i>Insert place</i>] and [<i>Insert place</i>]		
	Drafting, reproduction of reports		
	Equipment, instruments, materials, supplies, etc.		
	Shipment of personal effects	Trip	
	Use of computers, software		
	Laboratory tests.		
	Subcontracts		
	Local transportation costs		
	Office rent, clerical assistance		
	Maintenance support for one year after final deployment of web portal		
	Training of the Client's personnel ⁴		

1 Delete items that are not applicable or add other items according to Paragraph Reference 3.6 of the Data Sheet.

2 Indicate unit cost and currency.

3 Indicate route of each flight, and if the trip is one- or two-ways.

4 Only if the training is a major component of the assignment, defined as such in the TOR.

FORM FIN-6 BREAKDOWN OF COSTS FOR PROCUREMENT OF HARDWARE, SOFTWARE AND INTERNET LINE

S.No	Procurement of Hardware-Software-Internet	Quantity	Cost(INR)
1	Web GIS Hosting Servers with Rack	One	
2	Server –application with Rack	One	
3	Server –Database with Rack	Two	
4	Operating system license software	One	
5	Data base server software	One	
6	Arc GIS server license	One	
7	Computer Desk Top-work station- Compatible for WEB GIS Display	One	
8	Laptop-Compatible for WEB GIS Display	One	
9	Data Card	One	
10	GIS Software with license	One	
11	Other Software for integration-arc editor & geo statistical license	One	
12	Hand Held Display System-arc pad/PDA/Palm Top/Tablet PC	One	
13	Back Up Hard Drive four Tera Byte hot swipe storage	Five	
14	Tape drives	Two	
15	Related Data Sets (in addition of CPCB Database on Water Quality)	One	
16	Display Screen LCD 42”	One	
17	Internet Connectivity Dedicated Line*	One	
Total			

- Internet line will be in the name of CPCB. The cost of hosting internet will be reimbursed to consultant.

FORM FIN-7 ANNUAL MAINTENANCE CONTRACT

		Maximum all-inclusive costs (INR)			
		Post-Maintenance support Period			
Component No.	Component	Y 2	Y 3	Y 4	Sub-total for [insert: currency]
1.	Software Licenses & Updates				
2.	Technical Services				
2.1.	Operating & maintenance staff [to be detailed]				
2.2.	Licenses, Fees Web				
2.3.	[Identify other recurrent costs as may apply]				
	Annual Subtotals:				
	Grand Total				

Section 5. Terms of Reference

Consultancy Services for GIS BASED WEB PORTAL ON WATER QUALITY for Central Pollution Control Board

1.	Background	47
1.1.	Present status of EDB	47
1.2.	Objectives	48
2.	Tasks	49
2.1.	Stocktaking and Initial Consultation.....	49
2.2.	Definition of scope.....	50
2.3.	Definition of Functions	51
2.4.	Systems Requirement Specifications (SRS) Preparation.....	52
2.5.	Preparation of Procurement Plan	53
2.6.	Development of UMIS Framework	54
2.7.	Development of GIS based Web Portal on Water Quality Framework.....	55
2.8.	Development of Financial Management Information System	59
2.9.	Module Integration	60
2.10.	Deployment and Testing of Web Portal.....	60
2.11.	Final Deployment	60
2.12.	Training and Institutional Development	61
2.13.	Warranty, Maintenance and support	61
3.	Deliverables and Timelines.....	62
4.	Role of CPCB.....	63
4.1.	Project Monitoring by CPCB	63
5.	Annexure 1 - Present IT infrastructure (as on 30 th September 2010).....	65

1. *Background*

Ministry of Water Resources (MOWR), Government of India (GOI) has been implementing the Hydrology Project II (HP II) with the assistance of the World Bank. This project extends and promotes sustained and effective use of the Hydrological Information System (HIS) by all potential users concerned with water resources planning and management, both public and private. A longer-term aim of the project would be to assist the Governments at both Central and State levels to address the issues of intra-sectoral demands and overall resource planning and management through the establishment of core hydrological organizations serving all specialized water agencies. The outcome of having an easily accessible HIS and tools for development of decision support system in water sector planning and management in participating agencies would lead to improved overall program of integrated water resource management in India⁶. Finally, the project expects to contribute to improved productivity and cost-effectiveness of water-related investments in thirteen States and eight Central agencies. The project was approved on 24th August 2004.

Central Pollution Control Board (CPCB) is one of the eight central Govt. agencies included in the HP II project. CPCB is policy and technical arm of Ministry of Environment and Forests (MOEF) and plays a crucial role in the formulation of standards, laws and regulations, conduct independent assessments, collate and manage national environmental data and provides guidance to the State Pollution Control Board (SPCBs)

Information/data on various environmental parameters are quite often required by various user groups like Government Organisations, Regulatory Agencies, Researchers, Professionals, Industries, Environmental NGOs, Investors and the general public. In order to facilitate quick and easy retrieval of such information, CPCB established a web based database called Environmental Data Bank (EDB). The EDB comprises various modules viz. water quality, air quality, urban pollution, industrial pollution, hazardous waste, etc. Data structures for each of the modules are designed considering the requirements of various target user groups. Data are gathered from different sources including the Central/State Pollution Control Boards. Basic interpretation of data using visualization tools as generation of graphs, making queries by applying filters, preparation of reports etc are provided in the EDB.

1.1. *Present status of EDB*

Currently EDB can be accessed by any user on CPCB website through link (<http://www.cpcb.nic.in/edb.htm>). The online entry of water quality data is performed with respect to 2000 water quality monitoring stations covering 27 states and 6 Union Territories. This data is made available to the public.⁷

Tools provided at EDB are –

- Data entry screens
- Search (by key word)
- Generation of Graphs
- Application of filters for making queries
- Preparation of reports which can be exported to MS Excel™

⁶ <http://www.hydrology-project.gov.in/hp2.htm>

⁷ <http://www.cpcb.nic.in/oldwebsite/Highlights/Highlights05/ch-13.html>

1.1.1 Features of EDB

- This system provides a common platform to all SPCBs and CPCB to add or upload water quality monitoring data
- Provides interface to the users to search and view the data
- Facility is provided to check data and the rejected data is preserved in a separate folder and only accepted data is exported to database on web server, which is in the public domain.
- User can make queries and generate the information in various user-defined formats.
- In public domain, login or registration is not required⁸

1.1.2 Limitations of EDB

- The system is not designed to be GIS based Web Portal on Water Quality, thus the opportunity to carry out spatial analysis is lost.
- The present system does not provide a basin wide map based situation that provides information on wastewater loads, flows and land use etc linking with data on water quality.
- There is no link or facility to conduct statistical analyses of data for more effective interpretation.
- Look and feel of the system needs to be more user friendly, and navigation is not optimum
- Graphs and reports can be more interactive and flexible in the interest of the user
- No proper guidance is provided to user to use the application.
- There is no interactive platform for users to exchange ideas
- Payments made to SPCBs for the supply of data are not integrated with this system. Payments are manually processed. There is no Financial Management Information System (FMIS)

1.2. Objectives

The main purpose of this assignment is to achieve the ultimate goal of setting up of Water Quality Portal that delivers updated information on water quality in a basin context for improved understanding and decision making. The Water Portal is expected to serve as a one point national node or kiosk for all water quality related information covering surface and ground waters, water withdrawals and wastewater discharges. The Portal will also host all relevant documents related to water quality (monitoring and control, wastewater treatment technologies, water quality criteria and standards, water quality and health etc). From the perspective of CPCB as well as SPCBs, the proposed system is expected to facilitate the following top end objectives -

- Achieve compilation and transformation of all existing water quality and associated data at one central server as a structured and dynamic resource
- Help optimize and strengthen water quality monitoring network in terms of station locations, parameters and frequency
- Relate information on wastewater discharges to observed water quality to draw on water quality action plans and set location specific standards and targets
- Provide insight towards establishment of environmental flows
- Hook data from automatic water quality monitoring stations and display on the portal on real time basis; issue warnings (if any) in the event of abnormal situations
- Draw policies on non-point source control such as use of fertilizers / pesticides, river bank land use etc that lead to protection of water quality
- Generate water quality index on on-line basis to understand wholesomeness of water quality
- Stimulate research in the domain of the water quality

⁸ <http://www.cpcb.nic.in/Highlights/2007/157-160.pdf>

In view of the above, the proposed system shall have following features

- GIS based Web Portal on Water Quality interface to spatially view water quality monitoring stations, extract/compare/plot water quality data using spatial tools
- Provide basin wide perspective covering wastewater loads, flows and land use to understand behaviour of water quality and draw on actions
- Conduct statistical analyses (inter-parameter, inter-station etc) for more effective interpretation
- Show on a spatial basis comparison with standards and highlighting the locations, polluted stretches, water bodies with data records that are non-compliant.
- Host or provide access to more sophisticate tools to generate user-defined graphs, make queries and generate customized reports etc
- Host documents/reports and multimedia (e.g. video clips, presentations etc) with search features
- Set up a knowledge networking platform, discussion groups etc to connect users for sharing research in water quality domain
- Include MIS with financials so that payments to SPCBs for supply of water quality data could be handled based on protocol for frequency and parameter analysis charges

In addition to above functional requirements, CPCB proposes to acquire software, data and skills in image processing (remote sensed data) and advanced statistical analyses. These offline applications will complement the online Portal.

The scope of the assignment includes design & development, deployment, implementation, training & support to achieve the top end objectives as well as functional requirements stated above.

2. *Tasks*

Broad milestones in this assignment are System Requirements Specifications (SRS), System Design, System Development, Testing, Deployment, Training and Maintenance. Key tasks from each of these broad milestones are explained as below -

2.1. *Stocktaking and Initial Consultation*

Consultant shall examine, in close discussion with CPCB,

- CPCB policy and action framework on generation, acquisition, processing and sharing of water quality and associated data
- Existing information base related to water quality
- Existing information flow, agencies involved, information use and dissemination
- Data checking and Validation
- Types of queries and reporting requirements (e.g. parliament questions, queries using RTI etc)
- Data demands/requirements from scientific community
- Existing hardware and software, arrangements for upkeep and maintenance
- Staff qualifications, training and outsourcing policy

Consultant shall also review global good practices followed at other similar web portals – and implications thereof for the design of CPCB system.

2.2. *Definition of scope*

Based on the Task 1 of stock taking, consultant shall define a detailed scope of work keeping in view the top-end objectives, system features, proposed functions expected data volume and characteristics. The consultant should assume that an entirely new system of data capture, quality control, storage and retrieval is to be designed and implemented.

The data can be divided into two parts as –

- **Base data** – this will be static in nature. Changes in base data will be occasional
- **Dynamic data** – this will be regularly updated by the CPCB.

Consultant shall consider the database to be built for 50 GB for water quality monitoring. The Consultant will make required projections in terms of data volume and user community to recommend database and GIS based Web Portal on Water Quality software as well as server requirements. The application should have the capacity to handle 1000 transactions per hour for 100 simultaneously logged-in users

Further, consultant shall ensure data security and integrity by scheduling backups, tight user access controls, and encryption techniques. These functions should be controlled by the application itself.

Base data may include following themes – (This list is indicative and not exhaustive)

- Land use (maps)
 - Land use maps
 - Urban centre's (Class I to Class VI)
 - Large & Medium Industries
 - Cluster of Small Scale industries
 - Sewage treatment plants
 - Common effluent treatment plants
 - Transportation maps (road network, railway network)
 - Industrial estates (maps and attributes)
 - Forest cover (Protected Areas, reserved forests etc)
- Administrative Maps
 - National and State Boundaries
 - Districts and Talukas / Tehsil boundaries
- Watershed
 - Major river catchments (primary)
 - Macro watersheds (secondary)
 - Mini watersheds (tertiary)
 - Micro watersheds
 - Water abstraction points on rivers/streams
 - Reservoirs, impoundments, lakes, canal network
- Note: Consultant shall revise the list based on Task 1 of stock taking and understanding user requirements.
- The application shall have language options as Hindi and English for its static content.

Dynamic data includes following

- Water (maps and monitoring data)
 - Surface Water quality monitoring data with stations on map
 - Ground water quality monitoring data with stations on map
 - Continuous monitoring data with stations on map
 - Waste water inventory data
 - Industrial inventory data
- Note: In the segment of dynamic data, the Consultant should note that CPCB will hook real time data transmitted by automatic water quality monitoring stations to the Portal. Users should be able to access this data on real time basis. In the course of next 5 years, 200 automatic water quality monitoring stations are expected all over the country. CPCB will in addition encourage use of PDAs. The scope will therefore involve providing access to the Portal through PDAs by development of applications.

Scope of work also includes the design of web-application user interface to include commonly used web-tools such as discussion forums, FAQs, polls, news and events, picture gallery etc. Further, web application shall be compatible with major browsers such as Internet Explorer, Google Chrome, Fire Fox, Safari etc.

2.3. *Definition of Functions*

Consultant shall document the proposed functions in the web-based application. The proposed system will have online and offline functions under main four sections such as

- **User Management Information System (UMIS)** functions – mainly to handle the users (administrative part of system) and static & dynamic data in the system
- **Geographical Information System (GIS)** functions – to enable spatial analysis from MIS data and map based representations for better and rapid interpretations.
- **Financial Management Information System (FMIS)** functions – to handle data related to payments to SPCBs and / or third party agencies that generate and submit water quality data.
- **Remote Sensing Data Processing (RSDP)** functions – to handle raster⁹ data analysis

Online functions will be made available to all users / group of selective users as per CPCB's requirements. These include mainly data entry, preliminary or screening level data assessment, querying and publishing of the data/results.

Offline functions shall be made available to selective users at CPCB and SPCBs as required. These are intended to enable advanced assessment of data which is not possible online.

Offline tools may include integration with third party applications. RSDP and advanced statistical analyses are examples of such off-line functions. **Figure 1** illustrate online and offline functions for above mentioned four systems within application.

These four sections will be interlinked. For example, RSDP will support GIS based Web Portal on Water Quality to update the land use map in base maps. GIS based Web Portal on Water Quality and UMIS data will be linked to the monitoring station locations. UMIS and FMIS will be linked as the payments under FMIS will be dependent on quality of monitoring data.

Consultant shall prepare and submit a draft **Inception Report** which will include all findings from Task 1, 2 and 3, Consultant shall organize a one day **Workshop**. In this workshop, the

⁹ **Raster data** models incorporate the use of a grid-cell data structure where the geographic area is divided into cells identified by row and column. This data structure is commonly called raster.

Consultant shall present scope, assumptions and analyses made, top level architecture, functions that will be incorporated, additional tools (as appropriate), recommendations on key decisions such as database, GIS, statistical and proposed methodology and broad outline of hardware requirements. After the conduct of the Workshop, the consultant will finalize the Inception report and include workshop proceedings.

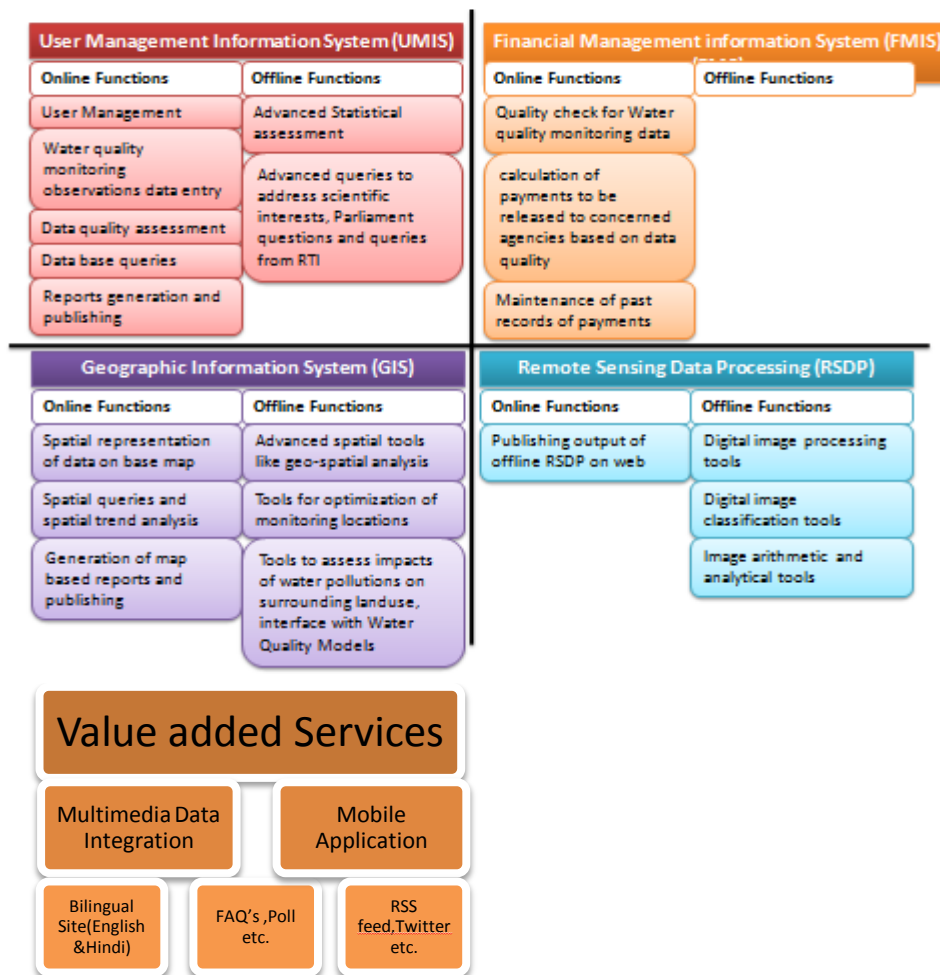


Figure 1 : Illustrative online and offline functions

2.4. Systems Requirement Specifications (SRS) Preparation

The System Requirement Specifications (SRS) document shall be developed to delineate the scope of the system. SRS shall include (but not limited to) –

1. System Structure and flow
 - i. Users Structure, Access rights (such as read, write) and web-security
 - ii. Data Entry and Validations
 - iii. Database Structure

- iv. Information Flow Arrangements
2. User functions (with scenarios and illustrations)
3. User interface design to incorporate user registration and memberships, polls, discussions, uploads and downloads etc.
4. Technical specifications (software platform, database engine, user interface etc) – Consultant shall propose appropriate GIS based Web Portal on Water Quality platform, programming language (ASP / JAVA etc), database (SQL / Oracle etc). Consultant shall provide analysis of alternative for each of the items listed above. Consultant shall use licensed software.
5. SRS shall include details of offline applications e.g. to enable advanced statistical assessment of data. For example, regression analysis of data for multiple location / multiple parameters, time series analysis etc. Result of such assessment shall be published on the Portal. Consultant shall design the linkages between such off-line or desktop applications and proposed web-based application. The Consultant shall propose required tools for the above in the SRS. The third party issue of validation and verification shall be deliberated.

A draft SRS document shall be submitted to CPCB. System design shall be presented in PowerPoint (or equivalent) platform to CPCB. This document will play very important role to communicate the system design to CPCB. The Consultant will incorporate CPCB's feedback and submit the final SRS.

2.5. *Preparation of Procurement Plan*

- Under this task, the Consultant shall identify and indicate the sources for items to be procured for this Project by him. Consultant shall submit detailed plan and cost for procurement of following hardware, software and data by him with time schedule. The consultant will procure hardware /software/ dataset/ connectivity goods requirements (e.g. servers, computers/ laptops/ handhelds, GIS/ spatial information systems, database, statistical, modeling, web development, and other software, datasets – including remote sensing data, SOI/NRSA datasets, etc.), connectivity requirements in CPCB offices, etc. to fulfill the task. The internet services shall be provided by Consultant as a separate line as per the requirement for this activity. The cost on the internet services will be borne by Consultant and the cost can be indicated in the Form Fin.6.

Support for procurement of data sets– including remote sensing data, SOI/NRSA datasets, etc.) will be done by CPCB in the form of official letters/endorsements for consultant. GIS software will be bought/licenced by Consultant based on the requirement in the name of CPCB and will transfer the ownership to CPCB after development of applications. All the hardware and software procured as part of this contract would be the property of the client.

S.No	Procurement of Hardware-Software-Internet	Quantity
1	Web GIS Hosting Servers with Rack	One
2	Server –application with Rack	One
3	Server –Database with Rack	Two
4	Operating system license software	One
5	Data base server software	One
6	Arc GIS server license	One
7	Computer Desk Top-work station- Compatible for WEB GIS Display	One

8	Laptop-Compatible for WEB GIS Display	One
9	Data Card	One
10	GIS Software with license	One
11	Other Software for integration-arc editor & geo statistical license	One
12	Hand Held Display System-arc pad/PDA/Palm Top/Tablet PC	One
13	Back Up Hard Drive four Tera Byte hot swipe storage	Five
14	Tape drives	Two
15	Related Data Sets (in addition of CPCB Database on Water Quality)	One
16	Display Screen LCD 42"	One
17	Internet Connectivity Dedicated Line*	One

* Internet line will be in the name of CPCB. The cost of hosting internet will be reimbursed to consultant.

Present IT infrastructure at CPCB is given in **Annexure 1**.

2.6. *Development of UMIS Framework*

UMIS component of the System shall include following functions -

- a. **Administration Module** – This module will define the users' structure, rights to access the information and overall security of the system and regular data backups. System should be scalable to allow CPCB administrators to add new locations, new users, new reports etc. without any dependency on the Consultant.
- b. **Data Entry Module** – Data entry will be in different ways.
 - a. Online entry – user friendly data entry formats shall be designed
 - b. Inclusion of real-time monitoring station data
 - c. Ability to import from common formats (e.g. spreadsheets)
- c. **Validation** – System should be smart enough to disallow/detect data entry errors, outliers and inconsistencies etc.
- d. **Analysis** – System shall provide various following (but not limited to) tools for data analysis.
 - a. comparison of data with relevant standards,
 - b. Attribute Query Builder,
 - c. Search Engine (within system and Global search)
 - d. Generation of graphs

While designing such functionalities Consultant shall ensure optimum performance by the system in terms of time taken to render the results online

- e. **Query and Reports** – System should able to generate reports from the data and its assessment. The reports will be of two types,
 - a. Pre-defined reports – the structure and items to be included in report will be fixed.
 - b. Customized reports – user can define the fields to be included in report
 Reports shall consist of relevant text, tables, graphs and maps.
- f. **Information Export** – System shall able to export the data and reports to various portable formats such as Excel spreadsheets, PDF etc.

In addition to this Consultant can recommend / suggest tools, functionalities to enhance the system, its performance, look and feel and utility.

2.7. *Development of GIS based Web Portal on Water Quality Framework*

UMIS must be integrated with the Web-GIS. The database structure shall be designed in such way to handle both, spatial and non-spatial data. In GIS based Web Portal on Water Quality component, Consultant shall handle following -

- a. Geodatabase designing and development** – Consultant shall design the Geodatabase structure based on available information. All maps in various formats shall be converted into GIS based Web Portal on Water Quality formats by Consultant. River basin will govern the overarching framework of the Geodatabase. The Geodatabase will be developed for all major, medium, minor river basins, lakes, tanks, ponds, creeks, canals, drains comprising of 2000 monitoring locations in the country which shall be expanded to 2500 by March 2012 indicated in Table 1 and information on water quality parameters being monitored under National water Quality monitoring Programme in Table2. The network expansion is in process and it is likely to attain the level of 5000 monitoring locations during 12th plan period. Thus the scope of addition of information on expanded network may also be considered while framing the database designing and development.

Table 1:Water Body Wise distribution of Monitoring Stations

River (main stream), Tributaries and Sub-Tributaries, Lake, Ponds, Tanks, Canals, Creeks and Groundwater Stations	Total stations
Baitarni (5) Tributaries- Kusei(1)	6
Brahmani (16) Tributaries- Karo (1), Kharasrota(2), Koel (5), Sankh (1)	25
Brahmaputra (10) Tributaries- Burhidihing (3), Dhansiri (7), Disang (2), Jhanji (1), Subansiri (1), Bhogdoi (1), Bharalu (1), Borak (2), Deepar Bill (1), Digboi (1), Mora Bharali (1), Teesta (5), Dickhu (1), Maney (2), Ranchu (2), Rangit (5), Jai Bharali (1), Kathakal (1), Kharsang (1), Kolong (2), Manas(1), Pagldia (1), Chathe (1), Dzu (1), Kapili(1), Beki(1), Kundli(1), Kushiara(1), Panchnai(1), Sankosh(1), Sonai(1), Kohara(1), Ranga(1), Boginadi(1), Dikhow(1),Kaljani(1), Karola(1)	68
Cauvery (20) Tributaries- Arkavati (1), Amravati (1), Bhawani (5), Kabini (4), Laxmantirtha (1), Shimsa (2), Hemavati (1), Yagachi (1)	36
Ganga (52) Tributaries- Alakananda-Upper Ganga (4), Mandakini-Upper Ganga (1), Ajay (1), Ashwani(1), Barakar (2), Batta(2), Betwa (10), Bhalla (2), Bichia(1), Bihar(1), Bokaro (1), Burhi Gandak(1), Chambal (8), Churni (3), Daha (3), Damodar (12), Dhela (2), Dhous (1), Dwarakeshwar(1), Dwarka(2), Farmer (1), Gandak (3), Giri(3), Gohad (1), Gola (1), Gomti (5), Harbora(1), Hindon (4), Jalangi(1), Johila (1), Kali (West) (2), Kali Nadi (3), Kali sot (1), Kamala(2), Kansu (1), Khan (3), Kichha (1), Kolar (1), Konar (3), Koshi (2), Kosi (Uttarakhand) (1), Kshipra (3), Mahananda (3), Mandakini (Madhya Pradesh) (1), Manusmar(1), Matha Bhangra(1), Mayurakshi(1), Nalkari (1), Nandaur (2), Pabbar(3), Parvati (4), Pilkhar (1), Ramganga (1), Ram Rekha(1), Rapti (2), Rihand (2), Rupanarayan (2), Sai (2), Sankh (1), Sikrana (2), Silabati(1), Sindh (1), Sirsa (1), Saryu-Ghaghra (4), Sone (5), Suswa (1), Tons (Himachal Pradesh) (1), Tons (Madhya Pradesh) (2), Varuna(2), Vindiyadhari(2), Yamuna (27)	233
Godavari (35) Tributaries- Manjara (Manjira) (6), Maner (2), Nira (1), Wainganga (8), Wardha (6), Kolar (1), Kanhan (3), Purna (3), Indravati (2), Sankhani (1), Nakkavagu (1), Vamsadhara (1), Darna (5), Bindusar (1), Penganga (3), Wena (2), Kinnersani (1), Sabari (1)	83
Indus Tributaries- Beas (23), Chenab (1), Jhelum (3), Largi (1), Parvati (3), Ravi (6), Sutlej (22), Tawi (1), Gawkadai (1), Chuntkol (1), Sirsa (3), Swan (1), Baspa (1), Binwa(1), Neugal(1), Siuel(1), Spiti(1), Suketi Khad(1)	72
Krishna (22) Tributaries- Bhadra (3), Bhima (12), Ghataprabha (2), Malprabha (3), Muneru (1), Musi (3), Nira (5), Paleru (1), Tunga (1), Tungabhadra (6), Panchganga (4), Chandrabhaga (2), Kagina(1), Koyna(1), Mula(2), Mutha(4), Mula-Mutha(2), Venna(3), Pawana(6), Indrayani(3), Hundri (1), Kundu (1), Ghod (1), Sina (1), Urmodi(1), Vel (1)	93
Mahi (9) Tributaries- Anas (1), Panam (1), Jammer(1), Malei(1), Shivna(1), Chillar(1)	15
Mahanadi (22) Tributaries- Ib (4), Hasdeo (2), Kathajodi (1), Kharoon (4), Kuakhai (3), Sheonath (3), Birupa (1), Arpa (1), Kelo (2), Bheden(1), Tel(1), Serua(1), Daya(1), Sankha(1)	48
Narmada (21) Tributaries- Chhota Tawa (1), Gour(1), Katni(1), Kunda(1)	25
Pennar (5)	5
Sabarmati (9) Tributaries- Meswa (1), Shedhi (1), Khari (1)	12

Subarnarekha (12) Tributaries- Jumar (1)	13
Tapi (14) Tributaries- Girna (2), Rangavali (1), Denwa(1), Kim(1), Amravati (1), Bori (1), Burai(1), Gomai (1), Hiwara (1), Mor (1), Morna (1), Panzara (1), Pedhi (1), Titur (1), Waghur (1)	30
Medium rivers Ambika (1), Ulhas (3), Ulhas-Bhatsa (3), Ulhas-Kalu (1), Imphal (4), Mandovi (2), Palar (1), Pamba (3), Pariyar (7), Rushikulya (2), Tambiraparani (7), Achankoil (2), Chalakudy (1), Damanganga (14), Ghaggar (19), Kallada (1), Kali-Karnataka (1), Manimala (2), Mindhola (1), Nagavalli (4), Amlakhadi (2), Chaliyar (2), Iiril (2), Kharkhala (1), Karmana (1), Kolak (2), Kundalika (4), Meenachil (1), Muvattupuza (1), Patalganga (7), Umtrew (1), Vamanpuram(1), Zuari(2), Gumti(2), Kalna (1),Valvant (1), Madai (1), Khandepar (2), Asanora (1), Bhadar (1), Neyyar (1), Ithikkara (2), Kadalundy (1), Kuttiyady (1), Mahe (2), Kuppum (1), Neelsvaram (2), Karingoda (1), Chandergiri (1), Chitrapuzha (1), Nambul (2), Ganol (1), Simsang (1), Myntdu (1), Arasalar (1), Kodra (1), Haora (1), Khuga (1), Khujairok (1), Sekmai (1), Markanda (3), Sukna (1), Baleshwar Khadi (1), Netravati (1), Kumardhara (1), Purna (1), Kaveri (1), Dhadar (1), Tlawng (2), Tuirial (2), Talpona (1), Bhogavo(1), Triveni sangam(1), Mapusa(1), Bicholim(1), Chapora(1), Kushawati(1), Sal(2), Meethi(1), Savitri(5), Vashisti(3), Neyyar (1), Mamom (1), Ayroor(1), Pallickal (1), Karuvannurr (1), Puzhackal (1), Keecheri (1), Thirur (1), Kadalundi (1), Kallai (1), Korapuzha (1), Thallassery (1), Ancharakandy(2), Kuppam (1), Ramapuram (1), Peruvamba (1), Kavvai (1), Pullur (1), Mogral (1), Shriya (1), Uppala (1), Manjeswar (1), Korayar (1), Bharathapuzha (2), Kadambayar (2), Gautami-Godavari(2), Coringa(1), Budhabalanga(2), Vanshadhara(2), Kerandi(1), Amba (1), Kan (1), Muchkundi (1), Pehlar (1), Surya (3), Tansa (1), Vaitarna (1)	216
Lakes (117) Hussainsagar (1), Saroornagar (1), Himayatsagar (1), Pulicate (1), Salaulim (1), Kankoria (1), Chandola (1), Ajwah (1), Sursagar (1), Brahamsarovar (1), Sukhna (2), Govindsagar (1), Pongdam (1), Renuka (1), Wuller (1), Dal (1), Ulsoor (1), HebbalaValley (1), Oruvathikotta (1), Sasthamcotta (1), Ashthamudi (1), Paravur (1), Vembanad (1), Periyar (1), Kodumgallor (1), Kayamkula (1), Punnamadakayal (1), Pookotekayal (1), UpperLake (4), LowerLake (1), MultaiLake (1), Loktak (4), Umiam (1), Ward (1), Thadlaskena (1), Osteri (1), Bahour (1), Harike (2), Pichola (1), Udaisagar (1), Ramgarh Jaipur (1), Pushkar (1), Fatehsagar (1), Kalyana (1), Nakki (1), Udthagamadalam (1), Kodaikanal (1), Yercaud (1), Lakshminarayan Baridigh (1), Rudrasagar (1), Ramgarh-UttarPradesh (1), Naini (1), Rabindrasarovar (1), Nalsarovar (1), Bindusaraovar (1), Sahastrling Sarovar (1), Lakhota Talav (1), Narsimehta Talav (1), Nadiad city Lake (1), Ranjitnagar Talav (1), Ankleshwar reservoir (1), Dharoi dam(1), Kuwadava (1), Moticher lake (1), Mayem lake (1), Janunia talav (1), Yashwant sagar (1), Sirpur talav (1), Kali sindh reservoir (1), Periat tank (1), Shahpura (1), Madhav lake (1), Nagchun (1), Karwa dam (1), Khandari reservoir (1), Daloni Beel (1), Mer Beel (1), Govindgarh tank (1), Bilawali talav (1), Bhoothathankettu reservoir (1), Dimna lake (1), Edamalayar reservoir (1), Hazaribagh Meethajhee l(1), Kondacharala- aava lake (1), Laxminarayan Chevuru (1), Malampuzha reservoir (1), Miralam lake (1), Noor Md. Kunta (1), Pazhassi reservoir (1), Ranchi lake (1), Topchachi lake (1), Vembanadu lake (1), Chilka lake (1), Anshupa lake (1), Kawar lake (1), Moti Jheel (1), Samarpur lake (1), Shukra Tal (1), Khaziar lake (1), Riwalsar lake (1), Belboni lake (1), Koch Bihar lake (1), Mirikh lake (1), Saheb bandh (1), Sinchal lake (1), Tarkeshwar lake (3), Delo reservoir (1)	170
Tanks (9) Dharamsagar (1), Bibinagar (1), Kistrapetreddy (1), Goysagar (1), Thol (1), Gandigudem (1), Kajipally Tank(1), Mallapur Tank (1), Premajipet Tank (1)	

Ponds (44) Elangabeel System (1), Lakshadweep (1), Olpad village pond (1), Bishnu Pushkar pukhuri (1), Bor Beel (1), Bor pukhuri(1), Botodriya pond (1), Chand dubi Beel (1), Deepar Beel (1), Dighali pukhuri (1), Dhudia talav (1), Baskandi pond (1), Galabeel (1), Ganga pukhuri (1), Gaurisagar (1), Gopur tank (1), Padum pukhuri (1), Hordai pukhuri (1), Jaipal pukhuri (1), Mahamaya mandir pukhuri (1), Rajadinia pukhuri (1), Raja pukhuri (1), Rajmaw pukhuri (1), Saranbeel (1), Sivasagar tank (1), Subhagya kund (1), Sai Chevuru (1), Asani Kunta (1), Durgam Chevuru (1), Pedda Chevuru (1), Nalla Chevuru (1), Bhadrakali Chevuru (1), Shiv Ganga Pond (1), Padmanabha Swamy Temple Pond (1), Bindusagar (1), Narendra pokhari (1), Markanda pokhari (1), Indradyumna (1), Swetaganga (1), Parvatisagar (1), Tighi Talab (1), Suraj Kund (1), Laxmi Pond (1), Maahil Pond (1)	
Creeks, Canals and Drains Creeks (8), Sea Water (7), Agra Canal (1), Gurgaon Canal (1), Western Yamuna Canal (11), Agartala Canal (1), Cuncolim canal (2), Panoli canal (1), Narmada canal (1), Cumbarjua canal (1), Samarla Kota Canal (1), Tulje Bagh Canal (1), Kharda canal (1), NOAI canal (1), Upper Ganga Canal (1), Taladanda canal(3), Drains (18)	60
Groundwater	490
Total	1700
Additional Stations in Jammu & Kashmir, Karnataka, Maharashtra, Manipur, Nagaland, Punjab, Rajasthan, Tamilnadu and Delhi	300
GRAND TOTAL	2000

Table2-List of Parameters under National Water Quality Monitoring Programme

Core Parameters (9)	Trace Metals (9)
PH	Arsenic, µg/L
Temperature	Cadmium, µg/L
Conductivity, µmhos/cm	Copper, µg/L
Dissolved Oxygen, mg/L	Lead, µg/L
BOD, mg/L	Chromium (Total) , µg/L
Nitrate – N , mg/L	Nickel, µg/L
Nitrite – N, mg/L	Zinc, µg/L
Faecal Coliform, MPN/100 ml	Mercury, µg/L
Total Coliform, MPN/100 ml	Iron (Total) , µg/L
General Parameters (19)	Pesticides (28)
Turbidity, NTU	AlphaBHC, µg/L
Phenolphthalein Alkalinity, as CaCO ₃	BetaBHC, µg/L
Total Alkalinity, as CaCO ₃	GamaBHCLindane, µg/L
Chlorides, mg/L	OP_DDT, µg/L
COD, mg/L	PP_DDT, µg/L
Total Kjeldahl - N, as N mg/L	DDT_DDE_DDD, µg/L
Ammonia - N, as N mg/L	AlphaEndosulphan, µg/L
Hardness, as CaCO ₃	BetaEndosulphan, µg/L
Calcium, as CaCO ₃	Aldrin, µg/L
Sulphate, mg/L	Dieldrin, µg/L
Sodium, mg/L	P_24D, µg/L
Total Dissolved Solids, mg/L	Chloropyriphos, µg/L
Total Fixed Dissolved Solids, mg/L	Corbamat, µg/L

Total suspended Solid, mg/L	MethylParathion, µg/L
Phosphate, mg/L	Anilophos, µg/L
Boron, mg/L	HCH_Alpha_Beta_Delta, µg/L
Magnesium, as CaCO ₃	Isoprofuron, µg/L
Potassium, mg/L	Alachlor, µg/L
Fluoride, mg/L	Atrazine, µg/L
Field Observations (7)	Monochorotophos, µg/L
Weather	Ethion, µg/L
Depth of main stream/depth of water table	Phorate, µg/L
Colour and intensity	Butachlor, µg/L
Odour	Chlorandane, µg/L
Visible effluent discharge	Heptachlor, µg/L
Human activities around station	Hexachlorobenzene, µg/L
Station detail	Phosphamidon, µg/L
Bio-Monitoring (3)	DiomethoateDiazinon, µg/L
Saprobity Index	
Diversity Index	
P/R Ratio	

Consultant shall ensure minimum errors, non-redundancy, uniform projection system etc while digitization, raster vector conversions.

- b. **Integration of MIS data into GIS based Web Portal on Water Quality framework as attribute information** – tabular/ non-spatial information shall be linked to relevant map based data.
- c. **Visualization of spatial data** – System shall provide handle to users to design symbology, create map layouts, insert graphs and images on maps, etc.
- d. **Basic spatial analysis functionalities** – system shall be designed to provide geospatial tools such as overlay, spatial query, buffers, distance, contours etc.
- e. **Output Maps** – System shall generate two types of output maps, predefined layouts and customized layouts.
- f. **Export** – System shall allow exporting spatial information in the formats compatible with Google Maps / Google Earth (kmz files).

2.8. *Development of Financial Management Information System(FMIS)*

Depending on the quantity (samples and parameters) and quality (in terms of consistency and acceptability) of the monitoring data received from SPCBs and other monitoring agencies (particularly continuous automatic water quality monitoring data), payments will be made by CPCB. The system should provide a module to generate payment details and status based on data quantity and quality and maintains the database. FMIS should be able to generate reports as per state, institution, river basin and time period.

CPCB maintains a protocol on disbursement of payment to State Pollution Control Boards (SPCBs). The protocol defines the monitoring schedule for each monitoring locations along with parameters to be monitored. The rates are approved for sampling, contingency, field observation, physico-chemical-bacteriological and micropollutant parameters. The

Development of Financial Management Information System is required to develop a module for payments to be made to State Pollution Control Boards (SPCBs) and the system may be able to modify the inputs of protocol revised from time to time. Besides, FMIS should be capable to handle the payment procedure to any other monitoring agency (say for example to continuous automatic water quality monitoring agency other than SPCBs authorized by CPCB).

2.9. *Module Integration*

All four modules shall be integrated as they are interlinked. Online and offline functions shall be integrated. Consultant shall define formats for outputs of offline functions with development of supporting tools so that they can be used online with minimal efforts.

The Consultant shall ensure the following while developing the overall application -

- a. Code optimization and documentation (within coding)
- b. Use of advanced tools for best performance of the system.
- c. System compatibility with all (widely used) internet browsers (Internet Explorer, Google Chrome, Mozilla Firefox, Safari etc)

Consultant shall be responsible for web-security of the System. Firewall Protection, Antivirus applications Anti-spywares etc. shall be provided by the Consultant.

The codes will meet requirements of Software Quality Assurance (SQA).

Consultant shall give an intermediate presentation to CPCB to demonstrate the development progress through workshops that will be proposed and agreed upon in the Inception report.

2.10. *Deployment and Testing of Web Portal*

Web GIS-based MIS shall be deployed to CPCB's intranet network first for client testing. Feedback received from CPCB during testing period shall be included in the system by the Consultant.

Consultant shall organize a **Workshop over 2 days** to demonstrate the functionalities to users.

2.11. *Final Deployment*

- Consultant shall deploy the System on main server after incorporating all relevant suggestions and recommendation given by CPCB users during testing phase. The internet services shall be provided by Consultant as a separate line as per the requirement. The cost on the internet services will be borne by consultant during installation, commissioning, maintenance and for AMC period. Consultant shall design and implement appropriate Network Architecture such that, its uptime is more than 95% and network connectivity is more than 95%.

Consultant shall provide

- Complete source code of customized modules/parts being developed specially for CPCB.

- Documentation of functions of modules being provided with their operational utility for further software development.
- Full documentation of the design (including Entity Relationship (ER) diagrams, Data flow diagrams, GUI etc.), installation and implementation of the software and user manuals both in hard/soft copies.

2.12. *Training and Institutional Development*

Consultant shall train CPCB staff for effective use of the system. Hence consultant shall propose training calendar to cover all functionalities and users across the country. CPCB will provide logistics support along with training hall facilities for carrying out the training programmes. The consultant will be responsible for providing soft copy /hard copy of training material to CPCB staff. Training component of this Project will include -

- g. Training courses with suitable training material (including e-learning training modules for key areas)
- h. On-the-job training; Maintenance, hand-holding; making in-house expert availability for fixing of bugs, debottlenecking and improvements
- i. User satisfaction surveys (CPCB staff, online Public surveys)
- j. Manuals for software developed and their upkeep
- k. Supporting Systems administration (backup, security)
- l. Plan for Institutional sustainability

2.13. *Maintenance support and Service Level Agreement*

The developed and deployed software and its operation and maintenance shall be the responsibility of consultant. There is a requirement of acceptance test which should be consisted of development, support for maintenance and service level agreement.

The Consultant shall be required to provide support to the installed software and hardware during a twelve month maintenance period from date of final deployment of completed software on the main server. During this period the Consultant shall provide:

- Full-time support (at a location to be agreed, but likely to be within the Client's office) to immediately address any issues that develop
- Hot-line support and advice for users of the system
- Fault rectification – with solutions within one working day for most issues, but within five working days for any problems that cannot be rectified within one working day

A qualified professional in computer science and GIS based Web Portal on Water Quality shall provide support for the entire period under maintenance.

Web GIS-based MIS shall be maintained by Consultant for three years after initial maintenance period under provisions of an Annual Maintenance Contract (service level agreement)

Service Level Agreement

The service level agreement will be signed by consultant with Client as a part of contract to rectify the failure of services with penalty clause, error resolution, back-up support, system security and training to CPCB staff (Annexure-II). The service level agreement incorporate performance and skill ability, initial and action response time, application management services for application modifications and application enhancements. The provisions of the Service Level Agreement also cover software revisions and updates to cope with updates of operating systems, secondary software upgrades and the like.

3. Deliverables and Timelines

No	Task	Deliverable	Timelines
1	Stocktaking and Initial Consultation	Inception report draft * Workshop(1) Inception report final	<i>30 days from zero</i> <i>**</i>
2	Development of Information Framework – Systems Requirement Specifications	SRS Draft * SRS Final	<i>90 days from zero</i> <i>120 days from zero</i>
3	Development of UMIS, FMIS and GIS based Web Portal on Water Quality Frameworks	Intermediate Presentations / Workshop (2)	<i>180 days from zero</i>
5	Procurement of Related Goods	Delivery and installation of procured software/hardware as per SRS Final	<i>210 days from zero</i>
7	Development (coding)	Intermediate Presentations / Workshops as per Inception Report	<i>360 days from zero</i>
8	Deployment and Testing of Web Portal	Access to CPCB user on intranet. Workshop (3)	<i>390 days from zero</i>
9	Final deployment on main Server for web-access and Operational Acceptability	Web-access to all users	<i>420 days from zero</i>
10	Training and Institutional Development	Training Schedule	<i>Support for three years after maintenance period of one year.</i>

No	Task	Deliverable	Timelines
11	Maintenance and support		<i>Support for three years after maintenance period of one year</i>

* Each of the above reports will be first submitted in draft and thereafter finalized after incorporating the comments received from CPCB and the World Bank.

** Zero is the date of awarding the work to Consultant.

4. Role of CPCB

- CPCB shall facilitate the data collection. All relevant data available with CPCB shall be shared with the Consultant. To collect the data from other sources, letters to concerned authorities will be given by CPCB.
- CPCB will extend logistical support to consultant for conducting workshops.
- Support for procurement of data sets– including remote sensing data, SOI/NRSA datasets, etc.) will be done by CPCB in the form of official letters/endorsements for consultant.
- GIS license software will be bought by Consultant based on the requirement in the name of CPCB and will transfer the ownership to CPCB after development of applications. Necessary official endorsement will be done by CPCB.

4.1. Project Monitoring by CPCB

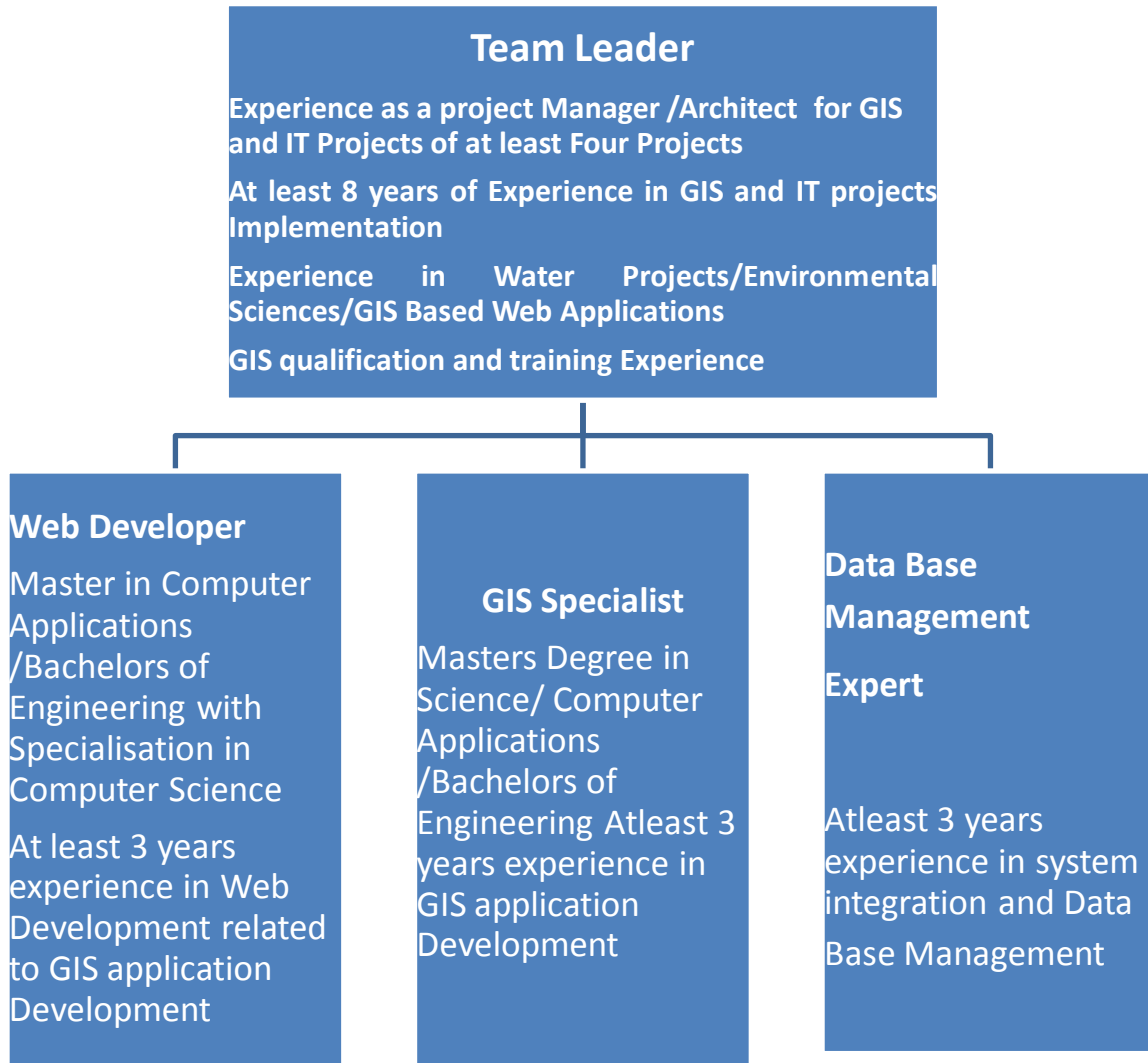
A review Committee will monitor the project progress and outputs. A Review Committee will be formed by CPCB. The committee shall consist of representatives from –

- CPCB
- NIC (National Information Centre)

4.2 Project Team Plan – Minimum qualification and experience requirement

Key professional (staff qualifications and competence for the assignment-refer Project Team Plan) are provided in following graphics.

PROJECT TEAM PLAN



Annexure-I

Present IT infrastructure (as on 30th September 2010)

A)	Server Configurations	Qty	Processor	RAM	Clock	Hard Drive Space
1. LAN Servers						
1.1	Proxy Server	01 No	Quad Core	4 GB	2.6 GHZ	142 GB * (3) Parts
1.2	Antivirus Server	01 No	Quad Core	4 GB	2.6 GHZ	142 GB * (3) Parts
1.3	Patch Server	01 No	Quad Core	4 GB	2.6 GHZ	142 GB * (3) Parts
1.4	File Server	01 No	Quad Core	4 GB	2.6 GHZ	142 GB * (3) Parts
2. Environmental Data Bank (EDB) OPERATION SERVERS						
2.1	Web Server Configuration	01 No	Dual Core	4 GB	2.6 GHZ	72 GB * (3) Parts
2.2	Database Server Configuration	01 No	Dual Core	4 GB	2.6 GHZ	142 GB * (3) Parts
3. Continuous Ambient Water Quality Monitoring Stations (CAWQM)SYSTEM						
3.1	Web Server Configuration	01 No	Dual Core	4 GB	2.6 GHZ	72 GB * (3) Parts
3.2	Database Server Configuration	01 No	Dual Core	4 GB	2.6 GHZ	142 GB * (3) Parts
4	Laboratory Information System (LIMS) SYSTEM					
4.1	Web Server Configuration	01 No	Dual Core	4 GB	2.6 GHZ	72 GB * (3) Parts
4.2	Database Server Configuration	01 No	Dual Core	4 GB	2.6 GHZ	142 GB * (3) Parts
B) Internet Broadband						
1	Head Quarter	2 MBPS				
2	Zonal Office	ISDN\Broadband				
C) UPS						
1	2 NOS. of 10 KVA online	10 KVA – Each				
2	Backup	1 Hour				

No.	Offices	Desktop (in Nos.)	Printer (in Nos.)	Scanner (in Nos.)
1	Delhi (H.O.)	~300 (P-IV)	125 (HP1320 /3400/1100)	06 (Flatbed HP 7400)
2	Bangaluru	20	12	01
3	Bhopal	10	05	01
4	Vadodara	17	09	01
5	Shillong	05	03	03
6	Lucknow	20		03
7	Kolkata	14	02	01
8	Agra (P.O.)	05	04	01

ANNEXURE-II**Service Level Agreement**

for GIS based Web Portal on Water Quality Consultancy and services between
Central Pollution Control Board and Bidder

This agreement made on between CPCB having its office at,
Parivesh Bhawan, East Arjun Nagar, Delhi-110032.
(hereinafter referred to as CPCB) of the first party.

And

Bidder Company organized and registered in India, having its office at
(hereinafter referred to as)

1. OBJECTIVE

The agreement establishes a framework to do GIS based Web Portal on Water Quality Consultancy & Annual Maintenance Services work as defined in the work authorizations to be released by CPCB from time to time.

2. DEFINITIONS

- a. Agreement Co-coordinators: are those who have been authorized by both CPCB and bidder to sign this agreement, its amendments, if any.
- b. Effective date: shall be the date on which the agreement is signed by both the parties and all the necessary approvals have been obtained by the respective parties from their respective competent authorities.
- c. Materials: shall include all data & information designs, in whatever media, both provided by CPCB to bidder and also developed and recorded by bidder or their agents however described in pursuance of this agreement or any work authorization.
- d. Work authorization: shall mean a formal work instruction issued by CPCB to bidder with respect to a specific item to be engineered, implemented and containing all the relevant terms and conditions of that specific item. The term includes all documents, annexure, and correspondence, technical specifications referred to in the work authorization.
- e. Project team: shall consist of all those individuals appointed by CPCB and bidder as authorized persons to deal with any specific work authorization. The project team shall be specific to each work authorization.

3. **SCOPE:** Bidder shall execute the work in co-ordination with the CPCB authorized personnel.

4. **WORK AUTHORIZATION AND SERVICE LEVELS:** For project to be performed by bidder under this agreement, CPCB shall Issue a work authorization to bidder. Bidder shall give notice of acceptance and confirmation of such work authorization to CPCB ("Authorization Acceptance"). Bidder shall execute the project based on the original work authorization.

This Service Level Agreement (SLA) is between CPCB and the Bidder. A SLA summary report will be submitted on the 30th workday of every month. The goal is to deliver 100% availability. This agreement shall be in effect for the entire period of final hosting to maintenance and during annual maintenance contract period

(i) Scheduled Backups:

All Days 12.30 AM-11.30 PM

During maintenance periods 11.30 PM – 12.30 AM

The System will be available in "inquiry" mode during backups and maintenance.

(ii) Service Goals: The System will be available not less than 98% of the agreed production hours. Unscheduled outages will not exceed 1% of the time.

(iii) Measurement Method: The System availability reporting will include both unscheduled and scheduled outages.

(iv) Penalties and reporting:

- a) Penalties for missed services: 10% reduction in billing for 2% missed service unless miss caused by user.
- b) Reporting: Consultant will provide this report by 10 AM every day. Monthly report will summarize service for the Month.
- c) Changes to SLA's may be negotiated between CPCB and bidder based on satisfactory services for one complete year after development.

5. CHANGES:

Changes to a project work authorization shall become effective only when a written authorization alternation is executed by the authorized representative of both the parties.

6. REPORTS:

Bidder agrees to provide to CPCB at agreed frequencies, a written report of the progress of the work being performed under each work authorization, including a detailed description of any anticipated problems (resolved or unresolved), and indication of delay in fixed or tentative schedules.

7. ISSUE ESCALATION:

The parties shall make all reasonable efforts to resolve promptly any issues under this agreement in a mutually agreeable manner. Any issues that arise shall be handled by the project co-coordinators. In the event the project co-coordinators are unable to resolve the issues in a timely manner, the same shall be escalated to the supervisors of the project co-coordinators.

8. TERM AND TERMINATION:

This agreement shall remain in effect for a period upto 30th April 2014 from the date of signing of the agreement, by mutual written agreement, may extend the validity of this agreement for additional periods. CPCB may terminate this agreement for convenience by providing 30 days written notice on mutually agreed terms and conditions with respect to outstanding work authorizations.

9. EXCLUSIVITY AND NON SOLICIT:

During the tenure of this agreement, CPCB shall not offer, solicit, engage, hire or employ any of the employees of bidder, directly or through any third party, either on temporary or permanent basis, without any prior written approval of bidder.

During the tenure of this agreement, bidder shall not develop any direct, indirect relationship with clients/ organizations with whom CPCB has formal agreement(s) for similar services and CPCB has informed bidder about its arrangements with such clients/ organizations, without CPCB's prior authorization. Bidder shall not accept any project for similar services from

government institutions which are being served as clients by CPCB, during the continuance of this agreement, without CPCB's prior authorization, unless such projects are independently bid by bidder against any general and public advertisement issued by such client.

10. COMPENSATION & PAYMENTS:

As compensation for services under any agreed work authorization, bidder will be paid in accordance with the contract. Bidder will raise invoice for payment in accordance to Deliverables and Timelines by month end. CPCB will process payments on receipt of invoice with the actual verification of the work being done.

The payment mentioned in Deliverables and Timelines shall remain valid for a period of project from the date of signing this contract. The payments are valid for work at CPCB/ clients offices in New Delhi only. Any travel/visit, boarding lodging, DA, local conveyance and other expenses to any city other than Delhi, shall be with CPCB's approval and shall be chargeable additionally to CPCB.

Bidder shall submit duly signed project wise monthly pre-receipted bills in triplicate to CPCB along with reimbursement claims duly authorized by CPCB/ client. All payments, subject to deduction of TDS, shall be released within 45 days of submission of complete invoices and documents, if any and within 90 days in the case of the final payment.

11. INDEPENDENT CONTRACTOR:

Bidder shall perform the work contemplated by this agreement as an independent contractor. As such, neither Bidder nor its employees shall be entitled to or claim any benefits or rights afforded to employees of CPCB.

Further, bidder shall pay all wages, salaries and other amounts due to its employees and shall be responsible for all reports, payments, with holdings, and other obligations in respect to such employees. There will not be any employer employee relation between CPCB and the employees of the bidder.

Bidder is the employer of the employees deputed for CPCBs consultancy work. CPCB stands indemnified of any responsibilities bidder may have to such employees. Bidder shall be responsible for the good conduct of its deputed employees, shall ensure that they restrict themselves to the project work alone and use the resources optimally and exclusively for the project work. If any Bidder employee is found violating the above, he/she shall be immediately replaced.

12. NON-DISCLOSURE:

CPCB and Bidder agree that all materials and information gathered in connection with the performance of this agreement, shall be deemed proprietary and confidential

(“Proprietary materials”) on which CPCB will have exclusive rights. Bidder shall use proprietary materials solely for the purpose of discharging its duties hereunder, both during the term of the agreement and also after its expiry. The developer shall suitably bind his employees for total compliance of this clause.

Bidder shall not be bound by the obligation of confidentiality created by this agreement with respect to confidential information which:

- a. Can be shown to be already known at the time of disclosure, or
- b. Is become publically known through no wrongful act of either party, or
- c. Is rightfully received from a third party without similar confidentiality restrictions, or
- d. Is furnished to a third party without similar confidentiality restrictions on the third party, or
- e. Is approved for release by written authorizations of CPCB.
- f. Is required to be released by law or any regulatory orders.

Both parties acknowledge that the restrictions and obligations contained in this agreement are a reasonable and necessary protection of the legitimate interest of each other and third parties, and that any violation of such restrictions or obligations could cause substantial injury.

13. CONFIDENTIAL INFORMATION:

The term “Confidential Information” does not include information which:

- a. Is now, or hereafter becomes, through no act or failure to act on the part of the receiving party, generally known or available in the public domain, or
- b. Is independently known by the receiving party at the time of receiving such information as evidenced by its written and dated records, or
- c. Is hereafter obtained by the receiving party from a third party who was legally entitled to possess and disclose such confidential information, or
- d. Can be proven to have been independently developed by the receiving party, as evidenced by contemporaneous written and dated records, without using any of the disclosing party’s Confidential Information or breaching this Agreement, or
- e. Is the subject of written permission to disclose provided by disclosing party.

14. COMPLIANCE WITH LAWS AND REGULATIONS:

Each party shall comply with and ensure that they shall comply with national and state laws, ordinances, statutes, rules and regulations including but not restricted to safety and security regulations but also in respect of the employees employed by the Bidder.

Bidder will be duty bound and responsible for the compliances under the provisions of laws such as Employees Provident Fund Act, ESI Act, Payment of the Bonus Act, Payment of Gratuity Act etc. Similarly Bidder will have to deduct all statutory deductions for the employees employed by it and will comply with the necessary compliances under the relevant laws.

15. ANNOUNCEMENTS:

Any publication, advertisement, press release or other type of announcement made or rowing out of this agreement shall be subject to CPCB’s prior written approval.

16. REPRESENTATIONS, COVENANTS & WARRANTIES:

Both parties hereby warrant, covenant and represent the following:

- a. That they are legally authorized to enter in to this agreement and that they have all requisite licenses, permits and the like to perform services under the agreement.
- b. That the development services do not and will not infringe any patents, copyrights, trademarks or other intellectual property rights (including trade secrets), privacy or other rights of any third party, nor has any claim (whether or not embodied in an action, past or present) of such infringement been threatened or asserted, nor is such a claim pending against them (or, to any entity from which such rights have been obtained).
- c. That there is no conflict of interest between other consulting agreements or other employment (whether past or present), if any, and the activities to be performed hereunder. Each party hereby undertakes to advise the other party promptly in writing if a conflict of interest arises in the future, and commits to resolve the conflict in the interest of the alliance.

17. GOVERNING LAW:

This agreement and the legal relations of the parties shall be governed by the laws of India.

18. COMPLETE AGREEMENT:

This agreement constitutes the entire agreement between the parties with respect to its subject matter and supersedes all prior understanding, proposals, negotiations and communications, oral or written, between the parties or their representatives. This agreement may not be modified except in writing and signed by the duly authorized representatives of the parties hereto. Any term or condition not specifically covered under this agreement shall be a matter of mutual discussion and agreement.

19. SEVERABILITY:

Should any provision of this agreement become invalid, illegal or unenforceable in any respect, such provision shall be severed and the parties specifically intend that the remaining provisions shall continue as valid, legal and enforceable, and these provisions shall be integrated and interpreted in such a way as to give them maximum enforceability and validity under the applicable law, while retaining the original intent of the parties with respect to such provisions.

20. FORCE MAJURE:

Either party will endeavor to fulfill the above commitments to the best of their ability. However, Bidder will not be responsible for non-fulfillment of contracted commitments due to forces and factors beyond its control which are not restricted to acts of God like fire, floods, earthquakes etc. civil disturbances, strikes, sabotage etc.

21. INDEMNITY:

Bidder shall at all times Indemnify CPCB or CPCB clients, being unlimited with the time, against all claims which may be made in respect of the manpower deployment etc. The manpower so deployed by Bidder will be their employees and cannot claim any employment obligations on CPCB or CPCB clients.

22. ARBITRATION:

On all aspects where the above clauses of agreements are silent, for special cases of deviation from these clauses, the decision mutually agreed upon relating to or arising out of agreement, such dispute should be resolved amicably by mutual consultation. Arbitration, if required for which will be effected by Chairman, CPCB in accordance with Arbitration and Conciliation Act 1996, which will be binding on both parties.

23. GENERAL:

One-person month shall normally constitute 22 person days as the case may be in each month with each working day consisting of 8 working hours (5 days per week).

Bidder shall provide necessary hardware, software and infrastructure at site. Bidder shall mobilize and place the resources on a project within two weeks of placing of work order by CPCB. Beyond two weeks, a penalty of Rs. 500/- per day per person shall be levied for 15 working days. Beyond one month, CPCB shall be free to cancel the work order and get the work done through alternate sources at the risk and cost of Bidder.

IN WITNESS WHEREOF, the parties have caused this agreement to be executed by their duly authorized representatives.

<p>By BIDDER</p> <p>Signature</p> <p>Title</p> <p>Date</p>	<p>By J.S.KAMYOTRA</p> <p>Signature</p> <p>Title MEMBER SECRETARY</p> <p>CENTRAL POLLUTION CONTROL BOARD,PARIVESH BHAWAN,EAST ARJUN NAGAR,DELHI</p> <p>Date</p>
<p>Signature of Witnesses:</p>	
<p>Witness 1:</p> <p>Witness 2:</p>	<p>Name:</p> <p>Signature:</p> <p>Name:</p> <p>Signature:</p>

Section 6. Standard Forms of Contract and Annexures

STANDARD FORM OF CONTRACT

Consultants' Services

Lump Sum

CONTRACT FOR CONSULTANTS' SERVICES

Lump-Sum

between

[name of the Client]

and

[name of the Consultant]

Dated: _____

I. Form of Contract

LUMP-SUM

(All notes should be deleted in final text)

This CONTRACT (hereinafter called the “Contract”) is made the *[day]* day of the month of *[month]*, *[year]*, between, on the one hand, *[name of client]* (hereinafter called the “Client”) and, on the other hand, *[name of Consultant]* (hereinafter called the “Consultant”).

*[Note: If the Consultant consist of more than one entity, the above should be partially amended to read as follows: “...(hereinafter called the “Client”) and, on the other hand, a joint venture/consortium/association consisting of the following entities, each of which will be jointly and severally liable to the Client for all the Consultant’s obligations under this Contract, namely, *[name of Consultant]* and *[name of Consultant]* (hereinafter called the “Consultant”).]*

WHEREAS

- (a) the Client has requested the Consultant to provide certain consulting services as defined in this Contract (hereinafter called the “Services”);
- (b) the Consultant, having represented to the Client that it has the required professional skills, and personnel and technical resources, has agreed to provide the Services on the terms and conditions set forth in this Contract;
- (c) the Client has received *[or has applied for]* a loan from the International Bank for Reconstruction and Development (hereinafter called the “Bank”) *[or a credit from the International Development Association (hereinafter called the “Association”)]* towards the cost of the Services and intends to apply a portion of the proceeds of this loan *[or credit]* to eligible payments under this Contract, it being understood (i) that payments by the Bank *[or Association]* will be made only at the request of the Client and upon approval by the Bank *[or Association]*, (ii) that such payments will be subject, in all respects, to the terms and conditions of the agreement providing for the loan *[or credit]*, and (iii) that no party other than the Client shall derive any rights from the agreement providing for the loan *[or credit]* or have any claim to the loan *[or credit]* proceeds;

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of this Contract:
 - (a) The General Conditions of Contract;
 - (b) The Special Conditions of Contract;
 - (c) The following Appendices: *[Note: If any of these Appendices are not used, the words “Not Used” should be inserted below next to the title of the Appendix]*

Appendix A: Description of Services	___	(Not used)
Appendix B: Reporting Requirements	___	(Not used)
Appendix C: Key Personnel and Sub-Consultants	___	(Not used)
Appendix D: Breakdown of Contract Price in Foreign Currency	___	(Not used)
Appendix E: Breakdown of Contract Price in Local Currency	___	(Not used)
Appendix F: Services and Facilities Provided by the Client	___	(Not used)
Appendix G: Form of Advance Payment Guarantee	___	(Not used)

2. The mutual rights and obligations of the Client and the Consultant shall be as set forth in the Contract, in particular:
- (a) the Consultants shall carry out the Services in accordance with the provisions of the Contract; and
 - (b) the Client shall make payments to the Consultants in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of *[name of Client]*

[Authorized Representative]

For and on behalf of *[name of Consultant]*

[Authorized Representative]

[Note: *If the Consultant consists of more than one entity, all these entities should appear as signatories, e.g., in the following manner:]*

For and on behalf of each of the Members of the Consultant

[name of member]

[Authorized Representative]

[name of member]

[Authorized Representative]

II. General Conditions of Contract

1. GENERAL PROVISIONS

1.1 Definitions

Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

- (a) “Applicable Law” means the laws and any other instruments having the force of law in the Government’s country, or in such other country as may be specified in the Special Conditions of Contract (SC), as they may be issued and in force from time to time.
- (b) “Bank” means the International Bank for Reconstruction and Development, Washington, D.C., U.S.A., or the International Development Association, Washington, D.C., U.S.A.
- (c) “Consultant” means any private or public entity that will provide the Services to the Client under the Contract.
- (d) “Contract” means the Contract signed by the Parties and all the attached documents listed in its Clause 1, that is these General Conditions (GC), the Special Conditions (SC), and the Appendices.
- (e) “Contract Price” means the price to be paid for the performance of the Services, in accordance with Clause 6;
- (f) “Effective Date” means the date on which this Contract comes into force and effect pursuant to Clause GC 2.1.
- (g) “Foreign Currency” means any currency other than the currency of the Client’s country.
- (h) “GC” means these General Conditions of Contract.
- (i) “Government” means the Government of the Client’s country.
- (j) “Local Currency” means the currency of the Client’s country.
- (k) “Member” means any of the entities that make up the joint venture/consortium/association, and “Members” means all these entities.
- (l) “Party” means the Client or the Consultant, as the case may be, and “Parties” means both of them.
- (m) “Personnel” means persons hired by the Consultant or by any Sub-Consultants and assigned to the performance of the Services or any part thereof.
- (n) “SC” means the Special Conditions of Contract by which the GC

may be amended or supplemented.

- (o) “Services” means the work to be performed by the Consultant pursuant to this Contract, as described in Appendix A hereto.
- (p) “Sub-Consultants” means any person or entity to whom/which the Consultant subcontracts any part of the Services.
- (q) “In writing” means communicated in written form with proof of receipt.

1.2 Law Governing Contract

This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.

1.3 Language

This Contract has been executed in the language specified in the SC, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

1.4 Notices

1.4.1

Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent to such Party at the address specified in the SC.

1.4.2

A Party may change its address for notice hereunder by giving the other Party notice in writing of such change to the address specified in the SC.

1.5 Location

The Services shall be performed at such locations as are specified in Appendix A hereto and, where the location of a particular task is not so specified, at such locations, whether in the Government’s country or elsewhere, as the Client may approve.

1.6 Authority of Member in Charge

In case the Consultant consists of a joint venture/ consortium/ association of more than one entity, the Members hereby authorize the entity specified in the SC to act on their behalf in exercising all the Consultant’s rights and obligations towards the Client under this Contract, including without limitation the receiving of instructions and payments from the Client.

1.7 Authorized Representatives

Any action required or permitted to be taken, and any document required or permitted to be executed under this Contract by the Client or the Consultant may be taken or executed by the officials specified in the SC.

1.8 Taxes and Duties The Consultant, Sub-Consultants, and their Personnel shall pay such indirect taxes, duties, fees, and other impositions levied under the Applicable Law as specified in the SC, the amount of which is deemed to have been included in the Contract Price.

1.9 Fraud and Corruption If the Client determines that the Consultant and/or its Personnel, sub-contractors, sub-consultants, services providers and suppliers has engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices, in competing for or in executing the Contract, then the Client may, after giving 14 days notice to the Consultant, terminate the Consultant's employment under the Contract, and the provisions of Clause 2 shall apply as if such expulsion had been made under Sub-Clause 2.6.1(c).

Should any personnel of the Consultant be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Contract, then that personnel shall be removed in accordance with Sub-Clause 4.2.

1.9.1 Definitions For the purposes of this Sub-Clause, the terms set-forth below are defined as follows:

- (i) “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party¹⁰;
- (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation¹¹;
- (iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party¹²;
- (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party¹³;
- (v) “obstructive practice” is
 - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false

¹⁰ “Another party” refers to a public official acting in relation to the selection process or contract execution. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

¹¹ A “party” refers to a public official; the terms “benefit” and “obligation” relate to the selection process or contract execution; and the “act or omission” is intended to influence the selection process or contract execution.

¹² “Parties” refers to participants in the selection process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

¹³ A “party” refers to a participant in the selection process or contract execution.

statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

(bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Clause 3.8.

1.9.2 Measures to be Taken (vi) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan were engaged in corrupt, fraudulent, collusive or coercive practices during the selection process or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to remedy the situation;

(vii) will sanction a Consultant, including declaring the Consultant ineligible, either indefinitely or for a stated period of time, to be awarded a Bank-financed contract if it at any time determines that the Consultant has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a Bank-financed contract;

1.9.3 Commissions and Fees The Client will require the successful Consultants to disclose any commissions or fees that may have been paid or are to be paid to agents, representatives, or commission agents with respect to the selection process or execution of the contract. The information disclosed must include at least the name and address of the agent, representative, or commission agent, the amount and currency, and the purpose of the commission or fee.

2. COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF CONTRACT

2.1 Effectiveness of Contract This Contract shall come into effect on the date the Contract is signed by both parties or such other later date as may be stated in the SC. The date the Contract comes into effect is defined as the Effective Date.

2.2 Commencement of Services The Consultant shall begin carrying out the Services not later than the number of days after the Effective Date specified in the SC.

2.3 Expiration of Contract Unless terminated earlier pursuant to Clause GC 2.6 hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SC.

2.4 Modifications Any modification or variation of the terms and conditions of this

or Variations Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any proposals for modification or variation made by the other Party.

2.5 Force Majeure

2.5.1 Definition For the purposes of this Contract, “Force Majeure” means an event which is beyond the reasonable control of a Party and which makes a Party’s performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.

2.5.2 No Breach of Contract The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.

2.5.3 Extension of Time Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

2.5.4 Payments During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultant shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.

2.6 Termination

2.6.1 By the Client The Client may terminate this Contract in case of the occurrence of any of the events specified in paragraphs (a) through (f) of this Clause GC 2.6.1. In such an occurrence the Client shall give a not less than thirty (30) days’ written notice of termination to the Consultant, and sixty (60) days’ in the case of the event referred to in (e).

- (a) If the Consultant does not remedy a failure in the performance of their obligations under the Contract, within thirty (30) days after being notified or within any further period as the Client may have subsequently approved in writing.
- (b) If the Consultant becomes insolvent or bankrupt.
- (c) If the Consultant, in the judgment of the Client has engaged in

corrupt or fraudulent practices in competing for or in executing the Contract.

- (d) If, as the result of Force Majeure, the Consultant are unable to perform a material portion of the Services for a period of not less than sixty (60) days.
- (e) If the Client, in its sole discretion and for any reason whatsoever, decides to terminate this Contract.
- (f) If the Consultant fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause GC 8 hereof.

2.6.2 By the Consultant

The Consultants may terminate this Contract, by not less than thirty (30) days' written notice to the Client, such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (c) of this Clause GC 2.6.2:

- (a) If the Client fails to pay any money due to the Consultant pursuant to this Contract and not subject to dispute pursuant to Clause GC 7 hereof within forty-five (45) days after receiving written notice from the Consultant that such payment is overdue.
- (b) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60) days.
- (c) If the Client fails to comply with any final decision reached as a result of arbitration pursuant to Clause GC 8 hereof.

2.6.3 Payment upon Termination

Upon termination of this Contract pursuant to Clauses GC 2.6.1 or GC 2.6.2, the Client shall make the following payments to the Consultant:

- (a) payment pursuant to Clause GC 6 for Services satisfactorily performed prior to the effective date of termination;
- (b) except in the case of termination pursuant to paragraphs (a) through (c), and (f) of Clause GC 2.6.1, reimbursement of any reasonable cost incident to the prompt and orderly termination of the Contract, including the cost of the return travel of the Personnel and their eligible dependents.

3. OBLIGATIONS OF THE CONSULTANT

3.1 General

3.1.1 Standard of

The Consultant shall perform the Services and carry out their obligations hereunder with all due diligence, efficiency and economy, in accordance

- Performance** with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Consultant shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with Sub-Consultants or third Parties.
- 3.2 Conflict of Interests** The Consultant shall hold the Client's interests paramount, without any consideration for future work, and strictly avoid conflict with other assignments or their own corporate interests.
- 3.2.1 Consultants not to Benefit from Commissions, Discounts, etc.** The payment of the Consultant pursuant to Clause GC 6 shall constitute the Consultant's only payment in connection with this Contract or the Services, and the Consultant shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Consultant shall use their best efforts to ensure that the Personnel, any Sub-Consultants, and agents of either of them similarly shall not receive any such additional payment.
- 3.2.2 Consultant and Affiliates not to be Otherwise Interested in Project** The Consultant agrees that, during the term of this Contract and after its termination, the Consultant and any entity affiliated with the Consultant, as well as any Sub-Consultants and any entity affiliated with such Sub-Consultants, shall be disqualified from providing goods, works or services (other than consulting services) resulting from or directly related to the Consultant's Services for the preparation or implementation of the project.
- 3.2.3 Prohibition of Conflicting Activities** The Consultant shall not engage, and shall cause their Personnel as well as their Sub-Consultants and their Personnel not to engage, either directly or indirectly, in any business or professional activities which would conflict with the activities assigned to them under this Contract.
- 3.3 Confidentiality** Except with the prior written consent of the Client, the Consultant and the Personnel shall not at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall the Consultant and the Personnel make public the recommendations formulated in the course of, or as a result of, the Services.
- 3.4 Insurance to be Taken Out by the Consultant** The Consultant (a) shall take out and maintain, and shall cause any Sub-Consultants to take out and maintain, at their (or the Sub-Consultants', as the case may be) own cost but on terms and conditions approved by the Client, insurance against the risks, and for the coverage, as shall be specified in the SC; and (b) at the Client's request, shall provide evidence to the Client showing that such insurance has been taken out and maintained and that the current premiums have been paid.

- 3.5 Consultant's Actions Requiring Client's Prior Approval** The Consultant shall obtain the Client's prior approval in writing before taking any of the following actions:
- (a) entering into a subcontract for the performance of any part of the Services,
 - (b) appointing such members of the Personnel not listed by name in Appendix C, and
 - (c) any other action that may be specified in the SC.
- 3.6 Reporting Obligations**
- (a) The Consultant shall submit to the Client the reports and documents specified in Appendix B hereto, in the form, in the numbers and within the time periods set forth in the said Appendix.
 - (b) Final reports shall be delivered in CD ROM in addition to the hard copies specified in said Appendix.
- 3.7 Documents Prepared by the Consultant to be the Property of the Client**
- (a) All plans, drawings, specifications, designs, reports, other documents and software submitted by the Consultant under this Contract shall become and remain the property of the Client, and the Consultant shall, not later than upon termination or expiration of this Contract, deliver all such documents to the Client, together with a detailed inventory thereof.
 - (b) The Consultant may retain a copy of such documents and software. Restrictions about the future use of these documents, if any, shall be specified in the SC.
- 3.8 Accounting, Inspection and Auditing**
- 3.8.1 The Consultant shall keep, and shall cause its Sub-consultants to keep, accurate and systematic accounts and records in respect of the Contract, in accordance with internationally accepted accounting principles and in such form and detail as will clearly identify relevant time changes and costs.
- 3.8.2 The Consultant shall permit, and shall cause its Sub-consultants to permit, the Bank and/or persons appointed by the Bank to inspect its accounts and records relating to the performance of the Contract and the submission of the Proposal to provide the Services, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Consultant's attention is drawn to Clause 1.9.1 which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Clause 3.8 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures.).

4. CONSULTANT'S PERSONNEL

- 4.1 Description of Personnel** The Consultant shall employ and provide such qualified and experienced Personnel and Sub-Consultants as are required to carry out the Services. The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Consultant's Key Personnel are described in Appendix C. The Key Personnel and Sub-Consultants listed by title as well as by name in Appendix C are hereby approved by the Client.
- 4.2 Removal and/or Replacement of Personnel**
- (a) Except as the Client may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Consultant, such as retirement, death, medical incapacity, among others, it becomes necessary to replace any of the Key Personnel, the Consultant shall provide as a replacement a person of equivalent or better qualifications.
 - (b) If the Client finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Consultant shall, at the Client's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Client.
 - (c) The Consultant shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.

5. OBLIGATIONS OF THE CLIENT

- 5.1 Assistance and Exemptions** The Client shall use its best efforts to ensure that the Government shall provide the Consultant such assistance and exemptions as specified in the SC.
- 5.2 Change in the Applicable Law Related to Taxes and Duties** If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost incurred by the Consultant in performing the Services, then the remuneration and reimbursable expenses otherwise payable to the Consultant under this Contract shall be increased or decreased accordingly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred to in Clauses GC 6.2 (a) or (b), as the case may be.
- 5.3 Services and** The Client shall make available free of charge to the Consultant the

Facilities Services and Facilities listed under Appendix F.

6. PAYMENTS TO THE CONSULTANT

- 6.1 Lump-Sum Payment** The total payment due to the Consultant shall not exceed the Contract Price which is an all inclusive fixed lump-sum covering all costs required to carry out the Services described in Appendix A. Except as provided in Clause 5.2, the Contract Price may only be increased above the amounts stated in Clause 6.2 if the Parties have agreed to additional payments in accordance with Clause 2.4.
- 6.2 Contract Price** (a) The price payable in foreign currency/currencies is set forth in the SC.
(b) The price payable in local currency is set forth in the SC.
- 6.3 Payment for Additional Services** For the purpose of determining the remuneration due for additional services as may be agreed under Clause 2.4, a breakdown of the lump-sum price is provided in Appendices D and E.
- 6.4 Terms and Conditions of Payment** Payments will be made to the account of the Consultant and according to the payment schedule stated in the SC. Unless otherwise stated in the SC, the first payment shall be made against the provision by the Consultant of an advance payment guarantee for the same amount, and shall be valid for the period stated in the SC. Such guarantee shall be in the form set forth in Appendix G hereto, or in such other form, as the Client shall have approved in writing. Any other payment shall be made after the conditions listed in the SC for such payment have been met, and the Consultant has submitted an invoice to the Client specifying the amount due.
- 6.5 Interest on Delayed Payments** If the Client has delayed payments beyond fifteen (15) days after the due date stated in the Clause SC 6.4, interest shall be paid to the Consultant for each day of delay at the rate stated in the SC.

7. GOOD FAITH

- 7.1 Good Faith** The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this Contract.

8. SETTLEMENT OF DISPUTES

- 8.1 Amicable Settlement** The Parties agree that the avoidance or early resolution of disputes is crucial for a smooth execution of the Contract and the success of the

assignment. The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.

**8.2 Dispute
Resolution**

Any dispute between the Parties as to matters arising pursuant to this Contract that cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party's request for such amicable settlement may be submitted by either Party for settlement in accordance with the provisions specified in the SC.

III. Special Conditions of Contract

(Clauses in brackets { } are optional; all notes should be deleted in final text)

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
{1.1(a)}	{The words “in the Government’s country” are amended to read “in India”.
1.3	The language is : English
1.4	<p>The addresses are:</p> <p>Client: Central Pollution Control Board,Parivesh Bhawan, East Arjun Nagar,Delhi-110032 (india)_____</p> <p>Attention: Member Secretary_____</p> <p>Facsimile: 91-11-22302188_____</p> <p>E-mail: rmbhardwaj@gmail.com_____</p> <p>Consultant: _____</p> <p>_____</p> <p>Attention: _____</p> <p>Facsimile: _____</p> <p>E-mail: _____</p>

{1.6}	<p>{The Member in Charge is <i>[insert name of member]</i>}</p> <p><i>Note: If the Consultant consists of a joint venture/ consortium/ association of more than one entity, the name of the entity whose address is specified in Clause SC 1.6 should be inserted here. If the Consultant consists only of one entity, this Clause SC 1.8 should be deleted from the SC.</i></p>
1.7	<p>The Authorized Representatives are:</p> <p>For the Client: Member Secretary Central Pollution Control Board_</p> <p>For the Consultant: _____</p>
1.8 1.8.1	<p><u>For domestic consultants/sub-consultants / personnel and foreign consultants/personnel who are permanent residents in India</u></p> <p>The consultants, sub-consultants and the Personnel shall pay the taxes, taxes, duties, fees, levies and other impositions levied under the existing, amended or enacted laws during life of this contract and the client shall perform such duties in this regard to the deduction of such taxes (<i>tax deduction at source – TDS</i>) as may be lawfully imposed.</p> <p>1.8.2<u>For Foreign Consultancy Firms only</u></p> <p>The Client warrants that the Client shall reimburse the Consultant, the Sub-consultant and the Personnel for any <u>indirect taxes</u>, duties, fees levies and other impositions imposed, under the Applicable law payable in India on the Consultants, sub consultants and the Personnel on production of documentary evidence , in respect of.</p> <ol style="list-style-type: none"> a. Any equipment, materials and supplies brought into the India by the Consultant or Sub-Consultants for the purpose of carrying out the Services and which, after having been brought into such territories, will be subsequently withdrawn there from by them; b. Any equipment imported for the purpose of carrying out the Services and paid for out of funds provided by the Client and which is treated as property of the Client; c. Any property brought into India by the Consultant, any Sub-Consultants or the Personnel (Other than nationals or permanent residents of India), or the eligible dependents of such Personnel for their personal use and which will subsequently be withdrawn there from by them upon their respective departure from the India, provided that:

	<p>i. The Consultant, sub-Consultants and personnel, and their eligible dependents, shall follow the usual customs procedures of the India in importing property into India.</p> <p>ii. If the Consultant, sub-Consultant or personnel, or their eligible dependents, do not with draw but dispose of any property in India upon which customs duties and taxes have been exempted, the Consultant, Sub-consultant or personnel, as the case may be, (i) shall bear such customs duties and taxes in conformity with the regulations of India, or (ii) shall reimburse them to the Client if they were paid by the Client at the time the property in question was brought into India.</p> <p>1.8.3 The client shall reimburse Service Tax payable in India as per Applicable Law. The consultant shall register itself for service tax with appropriate authority in India and shall provide the registration number to the client. Tax will be deducted at source as per the prevailing Income Tax Rules.</p>
	<p>(1) the Consultant, Sub-Consultants and Personnel, and their eligible dependents, shall follow the usual customs procedures of the Government’s country in importing property into the Government’s country; and</p> <p>(2) if the Consultant, Sub-Consultants or Personnel, or their eligible dependents, do not withdraw but dispose of any property in the Government’s country upon which customs duties and taxes have been exempted, the Consultant, Sub-Consultants or Personnel, as the case may be, (i) shall bear such customs duties and taxes in conformity with the regulations of the Government’s country, or (ii) shall reimburse them to the Client if they were paid by the Client at the time the property in question was brought into the Government’s country.</p>
{2.1}	<p>The Effective Conditions are the following: Signature of Contract</p>
2.2	<p>The date for the commencement of Services is two weeks from contract signature.</p>
2.3	<p>The time period shall be fourteen months for software development PLUS twelve months maintenance support PLUS three years AMC <i>or</i> such other period as the parties may agree in writing.</p>
3.4	<p>The risks and the coverage shall be as follows:</p> <p>(a) Third Party motor vehicle liability insurance in respect of motor vehicles</p>

	<p>operated in the Government’s country by the Consultant or its Personnel or any Sub-Consultants or their Personnel, with a minimum coverage as per Motor Vehicles Act 1988;</p> <p>(b) Third Party liability insurance, with a minimum coverage of five hundred thousand INR;</p> <p>(c) professional liability insurance, with a minimum coverage of One million INR;</p> <p>(d) employer’s liability and workers’ compensation insurance in respect of the Personnel of the Consultant and of any Sub-Consultants, in accordance with the relevant provisions of the Applicable Law, as well as, with respect to such Personnel, any such life, health, accident, travel or other insurance as may be appropriate; and</p> <p>(e) insurance against loss of or damage to (i) equipment purchased in whole or in part with funds provided under this Contract, (ii) the Consultant’s property used in the performance of the Services, and (iii) any documents prepared by the Consultant in the performance of the Services.</p>
3.7 (b)	The Consultant shall not use these documents and software for purposes unrelated to this Contract without the prior written approval of the Client.
5.1	“Not Applicable.”
6.2(a)	The amount in foreign currency or currencies is <i>[insert amount]</i> .
6.2(b)	The amount in local currency is <i>[insert amount]</i> .

<p>6.4(a)</p>	<p>The accounts are:</p> <p style="padding-left: 40px;">for foreign currency or currencies: <i>[insert account]</i></p> <p style="padding-left: 40px;">for local currency: INR <i>[insert account]</i></p> <p>Payments shall be made according to the following schedule:</p> <ul style="list-style-type: none"> (a) Twenty (20) percent of the Contract Price shall be paid on Stocktaking, Initial Consultation and submission of Inception report draft along with Bank Guarantee for the same (wording provided in Appendix) . (b) Ten (10) percent of the lump-sum amount shall be paid upon Development of Information Framework – Systems Requirement Specifications. (c) Ten (10) percent of the lump-sum amount shall be paid upon Development of UMIS, FMIS and GIS based Web Portal on Water Quality Frameworks and presentation. (d) Ten (10) percent of the lump-sum amount shall be paid upon Presentation of Delivery and installation of Procured software/hardware and Related Goods as per SRS Final (e) Ten (10) percent of the lump-sum amount shall be paid upon Deployment, Testing of Web Portal and access to CPCB user on intranet . (f) Ten (10) percent of the lump-sum amount shall be paid upon Final deployment on main Server for web-access to all user and approval of the final report. (g) Five (5) percent of the lump-sum amount shall be paid every year upon Training and Institutional Development and approval of the final report on training for three years after maintenance period of one year. (h) Five (5) percent of the lump-sum amount shall be paid every year for three years upon completion of the maintenance period, and signature of contract for AMC (i) The demand guarantee shall be released when the total payments reach fifty (50) percent of the lump-sum amount.
	<p>Payment shall be made within <u>45</u> days of receipt of the invoice and the relevant documents specified in Clause 6.4, and within <u>90</u> days in the case of the final payment.</p> <p>The interest rate is: London Inter-Bank On-Lending Rate [LIBOR] plus 2% for foreign currency; and 5% for local currency.</p>

8.2	<p>Disputes shall be settled by arbitration in accordance with the following provisions:</p> <p>Dispute Settlement</p> <p>8.2 (i) Any dispute, controversy, or claim arising out of or relating to this contract, or the breach, termination or invalidity thereof shall be settled by arbitration in accordance with following provisions:</p> <p>8.2 (ii) Each dispute submitted by a Party to arbitration shall be heard by a sole arbitrator or an arbitration panel composed of three arbitrators, in accordance with the following provisions:</p> <p>(a) Where the Parties agree that the dispute concerns a technical matter, they may agree to appoint a sole arbitrator or, failing agreement on the identity of such sole arbitrator within thirty (30) days after receipt by the other Party of the proposal of a name for such an appointment by the Party who initiated the proceedings, either Party may apply to the President, Institution of Engineers India*, New Delhi, for a list of not fewer than five nominees and, on receipt of such list, the Parties shall alternately strike names therefrom, and the last remaining nominee on the list shall be the sole arbitrator for the matter in dispute. If the last remaining nominee has not been determined in this manner within sixty (60) days of the date of the list, the President, Institution of Engineers India*, New Delhi, shall appoint, upon the request of either Party and from such list or otherwise, a sole arbitrator for the matter in dispute.</p> <p>(b) Where the Parties do not agree that the dispute concerns a technical matter, the Client and the Consultants shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the arbitrators named by the Parties do not succeed in appointing a third arbitrator within thirty (30) days after the latter of the two arbitrators named by the Parties has been appointed, the third arbitrator shall, at the request of either Party, be appointed by Secretary, the Indian Council of Arbitration, New Delhi.</p> <p>(c) If, in a dispute subject to Clause 7.2 (ii) (b), one Party fails to appoint its arbitrator within thirty (30) days after the other Party has appointed its arbitrator, the Party which has named an arbitrator may apply to the Secretary, Indian Council of Arbitration, New Delhi, to appoint a sole arbitrator for the matter in dispute, and the arbitrator appointed pursuant to such application shall be the sole arbitrator for that dispute.</p> <hr/> <p>* <i>Insert President Indian Roads Congress (for Roads and Bridge Works) or any other appropriate Institution (for other type of consultancies).</i></p>
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8.3 Rules of Procedure

Arbitration proceedings shall be conducted in accordance with procedure of the Arbitration & Conciliation Act 1996, of India unless the Consultant is a foreign national/firm, where arbitration proceedings shall be conducted in accordance with the rules of procedure for arbitration of the United Nations Commission on International Trade Law (UNCITRAL) as in force on the date of this Contract.

8.4 Substitute Arbitrators

If for any reason an arbitrator is unable to perform his function, a substitute shall be appointed in the same manner as the original arbitrator.

8.5 Qualifications of Arbitrators

The sole arbitrator or the third arbitrator appointed pursuant to paragraphs (a) through (c) of Clause 7.2 (ii) hereof shall be an internationally recognized legal or technical expert with extensive experience in relation to the matter in dispute.

8.6 Miscellaneous

In any arbitration proceeding hereunder:

- (a) proceedings shall, unless otherwise agreed by the Parties, be held in Delhi.
- (b) the English language shall be the official language for all purposes;
- (c) the decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.

IV. Appendices

Appendix A

Description of the Services

[Give detailed descriptions of the Services to be provided; dates for completion of various tasks, place of performance for different tasks; specific tasks to be approved by Client, etc.]

Appendix B

Reporting Requirements

[List format, frequency and contents of reports; persons to receive them; dates of submission, number of copies, etc. If no reports are to be submitted, state here "Not applicable".]

Appendix C**Key Personnel and Sub-consultants****(Refer Clause 4.1 of the Contract)**

- List under:*
- C-1 Titles [and names, if already available], detailed job descriptions and minimum qualifications and experience of Personnel to be assigned to work in India, and staff-months for each.*
 - C-2 Same as C-1 for Key foreign Personnel to be assigned to work outside India.*
 - C-3 List of approved Sub-consultants [if already available]; same information with respect to their Personnel as in C-1 or C-2.*
 - C-4 Same information as C-1 for Key local Personnel.*

Appendix D

Breakdown of Contract Price in Foreign Currency

List here the elements of cost used to arrive at the breakdown of the lump sum price — foreign currency portion:

- 1. Monthly rates for Personnel (Key Personnel and other Personnel).*
- 2. Reimbursable expenditures.*

This appendix will exclusively be used for determining remuneration for additional services.

Appendix E

Breakdown of Contract Price in Local Currency

List here the elements of cost used to arrive at the breakdown of the lump sum price — local currency portion:

- 1. Monthly rates for Personnel (Key Personnel and other Personnel).*
- 2. Reimbursable expenditures.*

This appendix will exclusively be used for determining remuneration for additional services.

Appendix F

Services and Facilities Provided by the Client

***Note:** List here the services and facilities to be made available to the Consultants by the Client.*

Bank Guarantee for Advance Payment

[To be stamped in accordance with Stamp Act, if any, of the Country of Issuing Bank]

_____ *[Bank's Name, and Address of Issuing Branch or Office]*

Beneficiary: _____ *[Name and Address of Client]*

Date: _____

ADVANCE PAYMENT GUARANTEE No.: _____

We have been informed that *[name of Consulting Firm]* (hereinafter called "the Consultants") has entered into Contract No. *[reference number of the contract]* dated *[insert date]* with you, for the provision of *[brief description of Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum of *[amount in figures]* (*[amount in words]*) is to be made against an advance payment guarantee.

At the request of the Consultants, we *[name of Bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[amount in figures]* (*[amount in words]*)¹ upon receipt by us of your first demand in writing accompanied by a written statement stating that the Consultants are in breach of their obligation under the Contract because the Consultants have used the advance payment for purposes other than toward providing the Services under the Contract.

It is a condition for any claim and payment under this guarantee to be made that the advance payment referred to above must have been received by the Consultants on their account number _____ at *[name and address of Bank]*.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Consultants as indicated in copies of certified monthly statements which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of the monthly payment certificate indicating that the Consultants have made full repayment of the amount of the advance payment, or on the ___ day of _____, 2___,²

¹ The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Client.

² Insert the expected expiration date. In the event of an extension of the time for completion of the Contract, the Client would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Client might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Client's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

[signature(s)]

Note: All italicized text is for indicative purposes only to assist in preparing this form and shall be deleted from the final product.

The date will be fixed as indicated in Clause 6.4 of S.C.C.

The stamp papers of appropriate value shall be purchased in the name of bank which issues the 'Bank Guarantee'.

The Bank Guarantee shall be issued either by a bank (Nationalized/Scheduled) located in India or a foreign bank through a correspondent bank (scheduled) located in India or directly by a foreign bank which has been determined in advance to be acceptable to the Client.



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
(पर्यावरण एवं वन मंत्रालय, भारत सरकार)
(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

Letter of Invitation
Loan.4749-In

Invitation No. CPCB/HP-II/WEB GIS-1/2011-12

Date 15.12.2011

M/s. Tata Consultancy Services Limited,
PTI Building, 4 Parliament Street,
New Delhi- 110001

1. Government of India has received a loan from the International Bank for Reconstruction and Development (IBRD) toward the cost of Hydrology Project-II and intends to apply a portion of this loan to eligible payments under this Contract for which this Request for Proposals (RFP) is issued.

2. Central Pollution Control Board now invites Proposals to provide the following Consulting Services for setting up of GIS based Web Portal on Water Quality that delivers updated information on water quality in a basin context for improved understanding and decision making. The Water Portal is expected to serve as a one point national node or kiosk for all water quality related information covering surface and ground waters, water withdrawals and wastewater discharges from all states. The consulting services also include procurement of hardware and software indicated in the RFP.

More details on the Services are provided in the attached Terms of Reference.

3. The Request for Proposal [RFP] has been addressed to the following shortlisted consultants:

1. M/S Quantum Asia Pvt. Ltd, India
2. M/S Rolta India Ltd, India
3. M/S NIIT GIS Ltd. India
4. M/S RMSI Pvt. Ltd. India
5. M/S SENES Consultants India Pvt. Ltd. India
6. M/S Tata Consultancy Services Ltd. India

It is not permissible to transfer this invitation to any other firm.

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032

'Parivesh Bhawan', East Arjun Nagar, Delhi - 110032

दूरभाष/Tel. : 43102030, फ़ैक्स/Fax : 22305793, 22307078, 22307079, 22301932, 22304948

ई-मेल/e-mail : cpcb@nic.in वेबसाइट/Website : www.cpcb.nic.in



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
(पर्यावरण एवं वन मंत्रालय, भारत सरकार)
(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

4. A firm will be selected under Quality-and Cost-Based Selection (QCBS) procedures described in this RFP in accordance with the policies of the International Bank for Reconstruction and Development (IBRD) detailed in the Guidelines - Selection and Employment of Consultants by World Bank Borrowers which can be found at the following website: www.worldbank.org/procure.
5. The RFP includes the following documents:
 - Section 1 - Letter of Invitation
 - Section 2 - Instruction to Consultants (including Data Sheet)
 - Section 3 - Technical Proposal - Standard Forms
 - Section 4 - Financial Proposal - Standard Forms
 - Section 5 - Terms of Reference
 - Section 6 - Standard Form of Contract.
6. Please inform us within a week of receipt of this invitation:
 - that you received the letter of invitation; and
 - whether you will submit a proposal alone or in association with Sub-consultants.
7. A pre-proposal meeting will be held at Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-32 on January 11th 2012 at 11.00 AM for any clarification in respect of this procurement.

Yours sincerely,

(J.S.Kamyotra)
Member Secretary

Encl.: RFP and TOR



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
(पर्यावरण एवं वन मंत्रालय, भारत सरकार)
(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

Letter of Invitation
Loan.4749-In

Invitation No. CPCB/HP-II/WEB GIS-1/2011-12

Date 15.12.2011

M/s. SENES Consultants India Private Ltd.,
MBL House, DD- 18/8, 5th Floor, Sector- 1,
Salt Lake, Kolkata

1. Government of India has received a loan from the International Bank for Reconstruction and Development (IBRD) toward the cost of Hydrology Project-II and intends to apply a portion of this loan to eligible payments under this Contract for which this Request for Proposals (RFP) is issued.

2. Central Pollution Control Board now invites Proposals to provide the following Consulting Services for setting up of GIS based Web Portal on Water Quality that delivers updated information on water quality in a basin context for improved understanding and decision making. The Water Portal is expected to serve as a one point national node or kiosk for all water quality related information covering surface and ground waters, water withdrawals and wastewater discharges from all states. The consulting services also include procurement of hardware and software indicated in the RFP.

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5. M/S SENES Consultants India Pvt. Ltd. India
6. M/S Tata Consultancy Services Ltd. India

It is not permissible to transfer this invitation to any other firm.

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032

'Parivesh Bhawan', East Arjun Nagar, Delhi - 110032

दूरभाष/Tel. : 43102030, फ़ैक्स/Fax : 22305793, 22307078, 22307079, 22301932, 22304948

ई-मेल/e-mail : cpcb@nic.in वेबसाइट/Website : www.cpcb.nic.in



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
(पर्यावरण एवं वन मंत्रालय, भारत सरकार)
(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

4. A firm will be selected under Quality-and Cost-Based Selection (QCBS) procedures described in this RFP in accordance with the policies of the International Bank for Reconstruction and Development (IBRD) detailed in the Guidelines - Selection and Employment of Consultants by World Bank Borrowers which can be found at the following website: www.worldbank.org/procure.
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 - Section 4 - Financial Proposal - Standard Forms
 - Section 5 - Terms of Reference
 - Section 6 - Standard Form of Contract.
6. Please inform us within a week of receipt of this invitation:
 - that you received the letter of invitation; and
 - whether you will submit a proposal alone or in association with Sub-consultants.
7. A pre-proposal meeting will be held at Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-32 on January 11th 2012 at 11.00 AM for any clarification in respect of this procurement.

Yours sincerely,

(J.S.Kamyotra)
Member Secretary

Encl.: RFP and TOR



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
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(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

Letter of Invitation
Loan.4749-In

Invitation No. CPCB/HP-II/WEB GIS-1/2011-12

Date 15.12.2011

M/s. Rolta India Limited,
Rolta Corporate Park, 187, Udyog Vihar, Phase-I,
Gurgaon- 122016

1. Government of India has received a loan from the International Bank for Reconstruction and Development (IBRD) toward the cost of Hydrology Project-II and intends to apply a portion of this loan to eligible payments under this Contract for which this Request for Proposals (RFP) is issued.

2. Central Pollution Control Board now invites Proposals to provide the following Consulting Services for setting up of GIS based Web Portal on Water Quality that delivers updated information on water quality in a basin context for improved understanding and decision making. The Water Portal is expected to serve as a one point national node or kiosk for all water quality related information covering surface and ground waters, water withdrawals and wastewater discharges from all states. The consulting services also include procurement of hardware and software indicated in the RFP.

More details on the Services are provided in the attached Terms of Reference.

3. The Request for Proposal [RFP] has been addressed to the following shortlisted consultants:

1. M/S Quantum Asia Pvt. Ltd, India
2. M/S Rolta India Ltd, India
3. M/S NIIT GIS Ltd. India
4. M/S RMSI Pvt. Ltd. India
5. M/S SENES Consultants India Pvt. Ltd. India
6. M/S Tata Consultancy Services Ltd. India

It is not permissible to transfer this invitation to any other firm.

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032

'Parivesh Bhawan', East Arjun Nagar, Delhi - 110032

दूरभाष/Tel. : 43102030, फ़ैक्स/Fax : 22305793, 22307078, 22307079, 22301932, 22304948

ई-मेल/e-mail : cpcb@nic.in वेबसाईट/Website : www.cpcb.nic.in



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
(पर्यावरण एवं वन मंत्रालय, भारत सरकार)
(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

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Yours sincerely,

(J.S.Kamyotra)
Member Secretary

Encl.: RFP and TOR



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
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(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

Letter of Invitation
Loan.4749-In

Invitation No. CPCB/HP-II/WEB GIS-1/2011-12

Date 15.12.2011

M/s. RMSI Private Limited,
A-7, Sector- 16,
Noida-201301

1. Government of India has received a loan from the International Bank for Reconstruction and Development (IBRD) toward the cost of Hydrology Project-II and intends to apply a portion of this loan to eligible payments under this Contract for which this Request for Proposals (RFP) is issued.

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2. M/S Rolta India Ltd, India
3. M/S NIIT GIS Ltd. India
4. M/S RMSI Pvt. Ltd. India
5. M/S SENES Consultants India Pvt. Ltd. India
6. M/S Tata Consultancy Services Ltd. India

It is not permissible to transfer this invitation to any other firm.

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032

'Parivesh Bhawan', East Arjun Nagar, Delhi - 110032

दूरभाष/Tel. : 43102030, फ़ैक्स/Fax : 22305793, 22307078, 22307079, 22301932, 22304948

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केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
(पर्यावरण एवं वन मंत्रालय, भारत सरकार)
(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

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Yours sincerely,

(J.S.Kamyotra)
Member Secretary

Encl.: RFP and TOR



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
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(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

Letter of Invitation
Loan.4749-In

Invitation No. CPCB/HP-II/WEB GIS-1/2011-12

Date 15.12.2011

M/s. Quantum Asia Private Limited,
34/A, Khanamet, Hi Tech City Rly Station Road,
Madhapur, Hyderabad-500081

1. Government of India has received a loan from the International Bank for Reconstruction and Development (IBRD) toward the cost of Hydrology Project-II and intends to apply a portion of this loan to eligible payments under this Contract for which this Request for Proposals (RFP) is issued.

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4. M/S RMSI Pvt. Ltd. India
5. M/S SENES Consultants India Pvt. Ltd. India
6. M/S Tata Consultancy Services Ltd. India

It is not permissible to transfer this invitation to any other firm.

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032

'Parivesh Bhawan', East Arjun Nagar, Delhi - 110032

दूरभाष/Tel. : 43102030, फ़ैक्स/Fax : 22305793, 22307078, 22307079, 22301932, 22304948

ई-मेल/e-mail : cpcb@nic.in वेबसाइट/Website : www.cpcb.nic.in



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
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Yours sincerely,

(J.S.Kamyotra)
Member Secretary

Encl.: RFP and TOR



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(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

Letter of Invitation
Loan.4749-In

Invitation No. CPCB/HP-II/WEB GIS-1/2011-12

Date 15.12.2011

M/s. NIIT GIS Ltd., B 1/H 9, Colosseum,
Mohan Co-operative Industrial Area,
Mathura Road, New Delhi- 110044

1. Government of India has received a loan from the International Bank for Reconstruction and Development (IBRD) toward the cost of Hydrology Project-II and intends to apply a portion of this loan to eligible payments under this Contract for which this Request for Proposals (RFP) is issued.

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'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032

'Parivesh Bhawan', East Arjun Nagar, Delhi - 110032

दूरभाष/Tel. : 43102030, फ़ैक्स/Fax : 22305793, 22307078, 22307079, 22301932, 22304948

ई-मेल/e-mail : cpcb@nic.in वेबसाइट/Website : www.cpcb.nic.in



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
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Yours sincerely,

(J.S.Kamyotra)
Member Secretary

Encl.: RFP and TOR

CENTRAL POLLUTION CONTROL BOARD

Request for Expression of Interest

Govt. of India
Hydrology project-II
GIS based Web Portal on Water Quality
Loan No. 4749-IN

1. This Request for Expressions of Interest follows the general procurement notice for this project that appeared in *Development Business* on July 24, 2004.
2. The *Govt. of India* has received a loan from the *International Bank for Reconstruction and Development* and intends to apply part of the proceeds of this loan to payments under the contract for GIS Based Web Portal on water Quality under Hydrology Project-II.
3. The Services include, the setting up of GIS based Web Portal on water Quality that delivers updated information on water quality in a basin context for improved understanding and decision making. The Water Portal is expected to serve as a one point national node or kiosk for all water quality related information covering surface and ground waters, water withdrawals and wastewater discharges from all states. The project will be implemented under Central Pollution Control Board over a period of 13 months with 3 years of maintenance and support thereafter. The tentative cost of the project is Rs. 15 Million (Rupees Fifteen million only).
4. The Central pollution Control Board now invites eligible consultants to indicate their interest in providing the Services. Interested consultants must provide information indicating that they are qualified to perform the Services (brochures, description of similar assignments, experience in similar conditions, availability of appropriate skills among staff, etc.). Consultants may associate to enhance their qualifications. The association may take the form of a joint venture (with joint & several liability) or of a sub-consultancy.
5. A consultant will be selected in accordance with the procedures set out in the World Bank's Guidelines: *Selection and Employment of Consultants by Bank Borrowers*, May 2004, revised Oct 2006, revised May 2010.
6. Interested Consultants may obtain further information and at the address given below from 1100h to 1600h.
7. Expression of interest must be delivered to the address below by no later than (15 th April, 2011).

Member Secretary,
Central Pollution Control Board,
Parivesh Bhawan , East Arjun Nagar, Shahdara.
Delhi-110032 (India).
(www.cpcb.nic.in)
Fax No-011- 22302188