

No. W- 11011/27/97-TM-II  
Government of India  
Ministry of Drinking Water & Sanitation  
(Water Quality Division)

9th Floor, Paryavaran Bhawan,  
CGO Complex, Lodhi Road  
New Delhi- 110 003  
Dated the 25<sup>th</sup> July, 2013.

The Managing Director  
Tamil Nadu Water Supply and Drainage Board  
Annasalai, Chepauk  
Chennai

Subject:- Release of Funds to Tamil Nadu Water Supply and Drainage Board for updating existing Ground Water prospect maps or Hydro-geo-morphological (HGM) maps.

Please refer to this Ministry's Sanction Order No. 39 of even number dated 29<sup>th</sup> March, 2013 addressed to the Pay & Accounts Officer, MDWS, New Delhi and copy to others including MD, TWAD Board, Chennai conveying sanction for release of Rs.59,67,600/- (Rupees fifty nine lakh sixty seven thousand and six hundred only) to Tamil Nadu Water Supply and Drainage Board, Chennai as second installment funds for preparation/ updating of ground water prospect maps (HGM maps) for entire Tamil Nadu State. **In this regard it is reiterated that the scope of work, approved cost estimates and terms and conditions for the above release of funds will remain as those communicated vide sanction order of even number dated 30.11.2010 which are reproduced below.** The basic purpose of issuing this letter is to re-iterate the terms & conditions and approved cost estimates with regard to preparation of HGM maps.

2. The overall scope of work will be as follows:-

- (a) Procurement of latest digital data (as used by NRSC, Hyderabad for preparation of HGM maps) covering entire Tamil Nadu state;
- (b) Updating of existing groundwater prospect maps (HGM) maps with each individual layer matching with NRSC/ISRO standard;
- (c) Use of database already created by TWAD Board including those generated during Recharge zonation maps;
- (d) Addition of water quality layer of the entire Tamil Nadu State (1.35 lakh sqkm) covering 227 topo sheets and preparation of 210 HGM maps on 1:50,000 scale;
- (e) The entire work shall be done using UTM projection with WGS 84 datum as against polygonic projection with Everest datum. The entire work shall comply to the Guidelines and Manuals of groundwater prospect maps (HGM) maps prepared by NRSC, ISRO, Hyderabad;
- (f) Quality monitoring of Thematic layers/maps prepared shall be initially done by a committee of internal experts of TWAD Board, Anna University (TN State RAC or IRS) and IWS;
- (g) Final Ground Water prospect maps should show micro & mini water sheds clearly so that village water security plans can be prepared within such watersheds.
- (h) NRSC, Hyderabad shall be the peer agency and shall certify that the final maps prepared are upto the standard of NRSC/ISRO;


- (i) NRSC to organize orientation training programme for explaining the NRSC standard methodology for preparation of HGM maps and also train TWAD Board Engineers and Hydro-Geologists on usage of these maps after these are completed;
- (j) Soft copies of final HGM maps shall be made available to the Ministry of Drinking Water and Sanitation and NRSC, Hyderabad for inclusion into the proposed national geo-database;
- (k) TWAD Board to bring out an Atlas of all HGM maps as done for Jharkhand State by NRSC, Hyderabad.
- (l) Output as hard copies, reports and soft copies for archives and for the field use has to be prepared by TWAD Board.
- (m) The timeframe of completion of all HGM maps including vetting by NRSC shall be completed within one year (12 months) from the date of this sanction order.

3. Approved Cost Estimates for the Project under consideration, with scope of work detailed as above.

Sl. No.	Item	Unit Cost	Amount in Rs lakh
1.	<b>Manpower costs for 12 months</b>		
	Manager, GIS (1 NO.)	Rs 50,000 pm	6.00
	Deputy Hydro-Geologist (1No.)	Rs 48,000 pm	5.76
	Asst. Hydro-Geologist (4 Nos.)	Rs 45,000 pm	21.60
	Drafting Officer (1 No.)	Rs 20,000 pm	2.40
	Console Operator (1 No.)	Rs 20,000 pm	2.40
	Asst. Draftsman (1 No.)	Rs 12,000 pm	1.44
	Assistant (1 No.)	Rs 20,000 pm	2.40
	Office Assistant (1 No.)	Rs 10,500 pm	1.26
	Total		43.26
2.	Procurement of Satellite data products as per procedures of NRSC/ISRO for HGM maps		13.00
3.	Preparation of water quality layer using chemical analysis data for 227 toposheets	Rs 10,000 per toposheet	22.70
4.	Costs towards ground verification including TA/DA		15.00
5.	Updating information on the existing hydro-geological characters including seamless mosaic using suitable hardware and software		95.00
6.	Cartographic material, drawing equipments, report preparation, documentation, stationery, etc.		5.00
7.	Costs towards quality checks of all layers of HGM maps	3 times in 12 months time	4.00
8.	Miscellaneous items		0.96

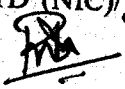
Total		198.92
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4. Release of the funds shall be governed by the following terms and conditions:
- (i) First installment of release of funds shall be made for 40% cost of the total work order value.
  - (ii) Remaining funds will be released in two subsequent installments based on submission of Utilization Certificate and ASA for at least 60% of available funds (including interest), physical and financial progress report.
  - (iii) The last installment of funds shall be released only after final certification of NRSC, Hyderabad for meeting their standards, as NRSC is the peer agency.
  - (iv) All the works shall be completed in a phased manner within one year (12 months) from the date of this sanction order.
  - (v) All the maps should be made available on a web-portal or there should be some other system of access which is equally simple.
  - (vi) Adequate attention needs to be paid to capacity building at the implementation level on how to use and analyze such maps and the methodology of integrating them with other maps, including the revenue maps. The Orientation Workshop as well as the capacity building programme with timelines should be prepared in consultation with NRSC.
  - (vii) TWAD Board shall send information regarding success of utilizing these maps to this Ministry and to NRSC at regular intervals.
  - (viii) NRSC to invite representatives from Central Ground Water Board during the training Workshops Scheduled for TWAD Board engineers.
  - (ix) TWAD Board should obtain all relevant information (ground water quantity and quality) from Central and State Ground Water Boards, and other stakeholders for updating the existing maps for creation of groundwater quality layer.

  
 (P.N. Ashtamoorthy)  
 Consultant

Copy to:-

1. The Pay & Accounts Officer, Ministry of DW&S, Block No.11, 6<sup>th</sup> Floor, CGO Complex Lodhi Road, New Delhi 110003.
2. The Principal Secretary, MA&WS Department, Government of Tamil Nadu, Secretariat, Chennai.
3. The Director, NRSC, Balanagar, Hyderabad – 500037.
4. Dr. S.K. Surbamanian, Head, Hydrogeology Division National Remote Sensing Centre (NRSC), Balanagar, Hyderabad – 500625, Andhra Pradesh.
5. Principal Director of Audit, E&S Ministries, AGCR Building, I.P. Estate, New Delhi.
6. The Chairman, CGWS, Faridabad.
7. Press Information Officer, (M/o Drinking Water & Sanitation), Press Information Bureau, Shastri Bhavan, New Delhi.
8. PS to MOS(IC), MDWS, Krishi Bhavan, New Delhi.
9. PPS to Secretary (DWS)/PS to SS&FA/PS to JS( )/Additional Adviser (PHE)/ Deputy Adviser(DR)/JD(Stat)/ DD(Stat)/ DS(Fin.)/ B&A Section/ IFD / TD (NIC)/ Guard File.

  
 (P.N. Ashtamoorthy)  
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