



DHV CONSULTANTS &  
DELFT HYDRAULICS with  
HALCROW, TAHAL, CES,  
ORG & JPS

**VOLUME 10**  
***HIS ACTIVITIES – GROUNDWATER DOMAIN***

***PROTOCOLS FOR HIS ACTIVITIES***

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## 1 PROTOCOLS FOR VARIOUS HIS ACTIVITIES - GW DOMAIN

Sustainable HIS will require accomplishment of number of tasks beginning with data collection at the appropriate time by all the agencies, followed data computerisation, integration of digital data with the data base, progression in the levels of authentication, integration of data between neighbouring areas and agencies followed by detailed analysis and interpretation using standard procedures.

The protocols that have been agreed upon by all the ground water agencies under the HP is listed:

## 2 DATA COLLECTION

- All observation wells including piezometers without DWLR of the integrated monitoring network shall be monitored for a minimum 4 times a year as per the present practice.
- All piezometers installed with DWLR's shall have a minimum of 6 (six) hourly monitoring for normal areas and hourly monitoring in critical areas. DWLR data downloading frequency shall be monthly.
- Water quality sampling for baseline station shall be done annually and trend station should be carried out 4 times a year and for surveillance monitoring station at least four times a year.
- Observation wells, to continue as monitoring structure for water level and water quality monitoring has to be examined and certified annually and before the onset of monsoon.
- Routine inspection of all monitoring stations have to be carried out annually before the onset of monsoon for planning the maintenance requirements.
- Implementation of the inspection report for operation and maintenance of monitoring stations and equipment shall be carried out before the onset of the monsoon.
- One time dispatch (and record of dispatch) of static database from the District Data Processing Centre (DDPC)/Regional Data Processing Centre (RDPC) shall be completed by 15<sup>th</sup> Jan, 2003.
- Entry of all incremental/dynamic data in the P.C. with the required data entry checks shall be completed by day 7 after return from field.
- Receipt and record of receipt of incremental data coming from DDPCs to SDPC and RDPC to NDC shall be completed within 7 days of data entry.

## 3 VALIDATION

- One time field validation and primary validation of static data shall be completed for all the data in the database by December 2002.
- One time Secondary validation of historical data to be completed by March 2003.
- Hydrogeological (Intra and Inter Agency) validation to be completed with in a period of three months after secondary validation is completed.
- Secondary validation of incremental/ dynamic data shall be completed by day 7 after data entry.
- Dispatch and record of dispatch of incremental data (validated) to higher level data Centre shall be completed within a month after data collection.

## 4 DATA TRANSPORT

- Intra-agency data transport shall be made through economic means of communications such as dial-up Internet connection at district level and ISDN line at state (SDPC/RDPC) and NDC. Bulk data should be transferred through CD-ROMs or tape.

- Inter-agency data transport may be done monthly and through the means as mentioned in above para.
- Inter-agency validation report shall be exchanged 4 times a year
- Joint committee consisting, the Director, State Ground Water Departments & Regional Director, CGWB of the participating State to meet quarterly to discuss the inter-agency validation report.
- Inter State issues of data exchange between concerned state ground water agencies are to be discussed mutually by concerned departmental heads.

## **5 DATA STORAGE/DATA AUDIT**

- Maintaining a system for regular backups and checking for virus every 10 days.
- Regular backup of the data and object (Maps, Reports etc.) shall be taken incrementally on a daily and weekly basis. Complete backup shall be taken monthly, quarterly and annually in triplicate on separate media. One copy of each data set shall be kept at a safer place outside the Data Processing Centre (DPC).
- Synchronisation of database maintained at various level shall be taken monthly.
- Data audit should be conducted quarterly within the agency and annually at the inter-agency level for which audit log shall be transmitted to higher level on monthly basis.
- Bylaws for data security maps/objects to be finalised before finalisation of dissemination policies.

## **6 Data DISSEMINATION**

- Formation and approval of dissemination policy should be done by July 2002.
- Hydrogeological Data User Group (HDUG) shall meet at least twice a year to discuss major issues of data requirement and expansion of data user group.

## **7 TRAINING**

- Training need assessment shall be done annually.
- Training cell in each Agency shall be activated to take up in house training courses utilising the services of TOT's.
- The activities of HIS shall be included in the induction level training courses of CGWB/States.

## **8 MAINTENANCE**

- AMC of the computer and peripherals, water quality lab equipment, DWLRs and other hydrogeological equipment shall be entered into regular basis.

## **9 HIS MANAGEMENT**

- Adequate trained staff as per functions outlined of concerned discipline should be made available.

- Sufficient budgetary provisions should be made in the post project scenario.