Session 3: Status and Outlook System: Data Sources and Exchange Methods

Summary of Group Discussion: **Group B**
Notes by: Guna Paudyal
Presented by: Guna Paudyal

1. What meteorological and climatological data are going to be needed to produce the HydroSOS products, and what are the best sources?

Data: Precipitation (snow, rainfall), temperature, evaporation, discharge, water level, pressure, wind, soil moisture, ground water (level, well discharge), reservoir operation, water diversions. Requirement of data frequency will be dictated by the processes and products of HydroSOS (e.g. short term, sub-seasonal or seasonal). However, most data are required in a daily time scale.

- The best data sources are from field observations maintained by NHMS. They are historical and real time dataOther sources of data are form global and regional data centers, such as WMO, GPCC, GRDC

2. What are the best mechanisms for us to collate the real-time and historical hydrologic data required for the HydroSOS?

- Archive data may be obtained through FTP, data portals, URL, or even through other means of digital media.
- Real time data may be obtained from web servers of NHMS.
- In some countries, data may be available in papers, which needs to be digitized.

3. What geospatial data will be required for HydroSOS, and what data are available?

- DEM, soil maps, land use, river cross sections

4. What are the possible ways for sharing of data amongst HydroSOS project partners?

- Met data are more commonly shared. Some countries have restrictions on sharing hydrological data, especially river discharges
- The HydroSOS project may approach the member countries/agencies by:
    o Defining precisely the HydroSoS products
    o Demonstrating benefits of the products
    o Service to society, economic development, environmental protection, saving of lives
    o Giving back the products
    o Assist in digitizing data, if required
- Engage the NHMS throughout the project
- Engage PRs and HAs of member countries

- Increase the band width of GTS to increase the number of stations from the member countries
- Be specific in data requests (not demanding all the database, whether required or not)

5. *What methods could be used for dealing with uncertainty in data and what quality assurance procedures could be used?*

- Promote the use of WMO's Quality Management System with NHMS
- Assist member countries in data QA by developing a standard operating system
- Adopt a strict data QA within the HydroSOS before using in the models.

Summary of Group Discussion: **Group B**
Notes by: Peter Mutai

1. What meteorological and climatological data are going to be needed to produce the HydroSOS products, and what are the best sources?

In order to comprehensively come up with a list of the data requirements, the group is of the view that there is need define clearly the HydroSOS products that will be produced and . The requirements of various models but as a start the real time weather/hydrological observational data and climatological data sets should be requested from the NMHSs and in instances where these data sets are unavailable satellite based data can be used.
The meteorological and climatological data can be obtained from NMHSs.

2. What are the best mechanisms for us to collate the real-time and historical hydrologic data required for the HydroSOS?

Some of the NMHSs have websites where archived data could be accessed and downloaded. For   real-time data, bilateral arrangements can be made to facilitate data collection through Internet ftp.

3. What geospatial data will be required for HydroSOS, and what data are available?

- Soil moisture data
- Land use/cover,
- Topographical data

4. What are the possible ways for sharing of data amongst HydroSOS project partners?

At the onset, It was pointed out that WMO's Resolution 40 & 25 obligates   NMHSs to share data freely.However, currently low volume of data is available on the GTS. In order to encourage data sharing of data for by the NMHSs the following recommendations were suggested:

- There is need to demonstrate the usefulness the of data;
- Provide support for NMHSs in digitizing data that exist on hard copies ;
- WMO should encourage PR and Hydrology Advisors participate in the HydroSOS;
- Involve the NMHSs in the defining the HydroSOS products for their needs;

- Be specific of data requirements in terms of time and space;

5. What methods could be used for dealing with uncertainty in data and what quality assurance procedures could be used?

It was suggested that WMO should encourage NMHSs to comply quality management procedures.