# 8. ET-WISC and Task Teams membership and action plans

## 8.4. TT-OM (WIS Operations and Monitoring)

### Terms of reference

The TT-OM contributes to the following areas:

(a) Monitor and support WIS systems, services and their users, responding to issues affecting the smooth and continuous operation of WIS;

(b) Consult with other WIS centres on operational aspects affecting WIS functions, including the implementation of standards and practices as defined in the relevant manuals and guides;

(c) Identify issues associated with operations, practices and procedures and consult with relevant RTHs, expert or task teams as required, including advising on refining of standards and practices;

(d) Provide advice to WIS centres and operators on the practical implementation, maintenance and monitoring of WIS systems and services, including on the application of data representation and codes and the GTS;

(e) Participate in and facilitate the WIS/GTS daily monitoring and in periodic World Weather Watch Monitoring exercises;

(f) Identify implementation and operational issues requiring the urgent consideration of the OPAG on ISS.

**Provisions of the Manual on WIS**.

The Manual on WIS stipulates in item 3.5.10.1 that: “Each GISC shall participate in monitoring the performance of WIS, including monitoring the collection and distribution of data and products intended for global exchanges.

Moreover, each GISC shall report routinely to other GISCs, as well as to the WMO Secretariat, information concerning the status and performance of connectivity to WIS Centres in its area of responsibility, including capacity and technology used”.

In addition, IWM and software-based monitoring shall become part and parcel of data collection and distribution monitoring. Across the activities the focus should be made on service quality reports. Each DCPC and NC shall participate in monitoring the performance of WIS to provide service quality reports.

**The Guide to WMO Information System (WIS)** contains the following major WIS functions:

A6 - - *Manage System Performance;*

A61 *- Non Real-time Performance Monitoring;*

A611 *-Analyse Traffic Trends;*

A612 *- Analyse Performance Against Requirements and SLAs;*

A62 *-Real-Time Performance Monitoring;*

A621 *- Real-time Monitoring of Telecommunication Network;*

A622 *- Real-time Monitoring of Application Content.*

WIS Technical Specification 15 relates to Reporting of Quality of Service and refers to item 4.16 in the Manual on WIS.

**The Manual on WIS - Part II Designation Procedures for WIS Centres** is extended with an addition, item 2.1 - **General** which reads:

“CBS is also developing monitoring procedures to complement the designation procedures of WIS and to ensure ongoing compliance of WIS centres with the agreed standards and practices”.

Therefore, we can assume that monitoring requirements are formulated in a general sense, enabling CBS to develop monitoring procedures.

**Discussion**

To elaborate WIS compliant monitoring procedures, including those for monitoring the Centres at different levels which would carry out WIS monitoring, it is seen appropriate to formulate overall monitoring principles, i.e. a **WIS monitoring concept**.

To align with the requirements, the monitoring should include:

* Monitoring the performance of WIS;
* Monitoring the collection and distribution of data and products; and
* Monitoring the quality of service.

The monitoring should be done in both real-time and non real-time. Conventionally, such monitoring could look like a 4-D cube, in which all aspects are interrelated and time-bound.

The backbone of WIS, supporting its performance, is the core network connected to GISCs to collect and distribute the information globally, providing services to users.

**Monitoring GISC**

Nowadays, when almost all GISCs have been nominated, they are becoming operational gradually and inevitably. However, the lack of definite requirements to the content of reports to be provided by GISCs through operational and non-operational monitoring, does not allow to carry out sensible WIS monitoring.

In this regard, it seems reasonable to formulate monitoring requirements for GISCs and the core network as the first step, which should comprise:

* A list of data for reporting;
* Reporting formats;
* Reporting frequency;
* Reporting procedures.

The Expert Team on WISC should be involved in developing **requirements for GISCs** and the core network monitoring, taking into account the cost effectiveness of monitoring.

Monitoring in the area of responsibility of each GISC would depend mainly on AMDCN organization. Therefore, such monitoring should result in both WIS relevant reports and special reports per each area of responsibility.

WIS performance identifies the user as a key figure to whom WIS information would be both useful and requisite. Accordingly, it is seen appropriate to define which monitoring information should be of paramount importance for users and, hence, be delivered timely.

Current WIS requirements for timely, reliable and secure exchange of alerts and warnings are not supplied with control mechanisms. Efforts are needed to **develop proposals on monitoring the time of tsunami messages delivery via WIS.**

It becomes obvious that GTS and WIS relevant challenges require immediate actions and involvement of experts from various centres. Although some challenges are partly dealt with the operational staff in the centres, in most cases the challenges could be bridged only with the help of administrators or specialists, maintaining technical facilities and software of the centres. Relevantly, contact information on responsible officers in the centres, including email addresses and phone numbers could be collected and displayed on the WMO site. To further analysis and problem handling, the ‘**hotline team’**, comprising the members from the Task Team on Operations and Monitoring, as well as other Expert Team on WIS Centres TaskTeams, for example from the Task Team on GISCs.

### TT-OM Action plan

1. Develop the WIS monitoring general concepts and submit them to ET-WISC approval.
2. Develop draft requirements for GISC and core network monitoring.
3. Prepare proposals on WIS monitoring in the area of responsibility of GISC.
4. Prepare proposals on informing the users of the monitoring results by WIS centres.
5. Prepare proposals on monitoring the time of transmission of emergency messages (Tsunami) through WIS.
6. Establish a team of dynamic response to negative events in WIS.
7. Identify implementation and operational issues requiring the urgent consideration ET-WISC.
8. Provide support to RTH in issues related to GTS operations.
9. Coordinate monitoring of WIS-GTS and analyze the outcomes.