The II GWSWF meeting has been held in MODENA on April 11-12, 2011.

Detailed minutes, Agenda, list of attendees and presentations can be found at: www.gwswf.scar.org.

The first day of the meeting was devoted to recall the main achievements of the GWSWF AG in the period 2008-2010 and to update the principal activities and collaborations of the AG participants. During the second day the meeting was dedicated to the discussions addressed to the formulation of a proposal seeking the SCAR endorsement to transform the AG into an Expert Group (EG, 4 years duration project).
Although some of the GWSWF participants were in favor of proposing to transform the current AG into a Scientific Research Project (SRP), the majority was in favor of an EG claiming that the GWSWF has surely demonstrated its potentialities through collaborations and joint activities but it doesn't yet reach the needed critical mass and the scientific extent to support the proposal of a SRP. After a brief discussion on this everybody agree to proceed for an EG proposal.
A drafted implementation plan was the core of the debate to get ready to submit a first intention to the next SCAR Cross-Linkages meeting (5-6 May 2011, Ottawa, Canada).

The GWSWF agreed to propose an EG with the following **main objectives**:

- Create and maintain distributed networks of specialized GPS/GNSS Ionospheric Scintillation and TEC Monitors particularly at high latitudes.
- Identify and quantify mechanisms that cause scintillation and control interhemispheric differences, asymmetries and commonalities in scintillation occurrence and intensity as a result of the geospace environment conditions.
- Develop ionospheric scintillation climatology, tracking and mitigation models to improve prediction capabilities of space weather.
- Retrieve tropospheric PWV for input to weather forecast models and to develop regional PWV climatology for atmospheric sensing in remote areas.

The objectives will be achieved according to the following **method**:

- Create a data portal to facilitate sharing and utilization of the GNSS/GPS and geophysical databases.
- Pursue joint studies on relevant scientific topics, development of models and mitigation techniques will be planned and coordinated. Annual meetings/workshops will provide forum for discussions and focus the community efforts towards the GWSWF project goals.
- Form working groups to focus on areas such as data formats and archiving, common software development and data handling, quantifying the causes of scintillation and the role of solar wind interaction with the Earth's magnetosphere-ionosphere system, development of scintillation and tropospheric PWV climatology, scintillation forecasting, and tracking and mitigation models.

The proposed EG will be structured according to the following **WGs**:

- WG1- Solar-Terrestrial interactions and ionospheric effects in the current solar-cycle.
    1. Multi-instruments investigation of the upper atmosphere plasma dynamics and scintillation generation (SuperDARN, GNSS, ionosondes, VLF, etc..)

2. Climatology of scintillation, TEC fluctuations, irregularities scale sizes, C/N statistics, etc...

- WG2 - Lower atmosphere delay in GNSS based systems (water vapor reconstruction etc...).
- WG3 - Modelling and models testing.
- WG4 - Data management strategy.
- WG5 - Coordination with other programs inside and outside SCAR (e.g. URSI, CAWSES II, SuperDARN, EISCAT 3D,…)

Proposed **deliverables** of the proposed EG are:

- GNSS data format definition for atmospheric studies (Upper atmosphere and lower atmosphere).
- Maps of ionospheric scintillation over Arctic and Antarctic as function of IMF, Solar activity, season, MLT, etc…
- Maps and vertical profiles of water vapour content.
- Website development, outreach and dissemination of the results.

A detailed description of the EG implementation plan can be found at: www.gwswf.scar.org.

All the participants agreed on the plan and expressed their willingness to submit the proposal during the next OSC in Portland on July 2012.