The workshop was held on 13-15 March at the State Oceanographic Institute, Roshydromet, Moscow, Russian Federation. The seminar was initiated by Intergovernmental Oceanographic Commission of UNESCO.

The objectives of the workshop were:

• to exchange information and review techniques and technology for making sea level measurements in severe weather regions and conditions;

• to identify the advantages/disadvantages of available sea-level measuring technologies and new technologies required to extend existing capabilities;

• to assess the potential to implement the sea-level network in severe regions to meet the requirements of the Global Sea-Level Observing System.

Sea level measurements often need to be carried out in what can be characterized as harsh or severe environmental conditions. A significant part of the seas on the planet are covered with ice either on permanent or seasonal basis. Many of them, in addition, often experience storms and high waves. Biological/environmental/logistic factors as well as increasing requirements and expectations for performance can add to the challenges of operating a sea level measurement station in these conditions.

The topic of sea level measurements in severe conditions was first addressed by Global Sea Level Observing System (GLOSS) in 1988 at an IOC sponsored workshop in Bidston (UK). The Group of Experts of GLOSS has recommended to revisit the issues and to convene a new workshop which would review inter alia new measurement systems, instrument-protecting technologies, data transmission, GNSS and summarize the gained experience.

The seminar was attended by 13 foreign experts from Australia, the UK, Germany, Canada, Norway, USA, Finland, France and Sweden, as well as specialists from the Russian Federation representing the research institutions of Roshydromet: State Oceanographic Institute, Arctic and Antarctic Research Institute (AARI), Research Institute of hydrometeorological information – World Data Centre (RIHMI-WDC), and Institute of Oceanology of the Russian Academy of Science.
A total of 21 papers were submitted.

The most presentations and discussions at the workshop were focused on the problems of sea level measurements in regions affected by adverse environmental impacts. Such areas mainly include coastal polar regions as well as ice-covered seas during the cold season. The workshop also considered the effects of extreme events such as severe storms and intense swell.

The seminar participants noted the reduction of the observation network in the Arctic and particularly along the Russian coast, as well as the need to develop a plan for the reorganization and re-equipment of the network of sea level observations in the Arctic.

The seminar resulted in recommendations of methodological and technical nature aimed on improving the accuracy of sea level measurements, ensuring the necessary data quality control. A number of presentations by foreign participants included descriptions of technical solutions for the organization of sea level measurement and protection of measuring devices from environmental impact, which are of great interest to Russian specialists and will be the subject of more careful study and analysis.