**International Academy of Astronautics**

# RESOLUTION

## of Study Group 4.9 «International Aerospace System for Monitoring of Global Geophysical Phenomena and Forecasting of Natural and Man-Caused Disasters»

In 2009 Study Group 4.9 analyzed possibilities of short-term prediction of the natural and man-caused disasters on the base of global geophysical phenomena monitoring data. Results of this analysis allow stating the following.

1. Prediction of birth and evolution of the natural and man-caused phenomena on the Earth takes on more and more urgency. For the period more than 30 years there were 23 mega disasters with 1.8 million fatalities. During the same period natural disasters resulted in damage of 1.53 billion US dollars that is comparable with costs for creation of aerospace system which have to provide short-term prediction of their birth. Alerting of natural and man-caused disasters, weakening of their consequences and readiness for preventing actions is more economically sound than responding to their consequences.

2. At present there is significant technical and methodological backlog in the field of creation and utilize of space facilities for global monitoring of the Earth surface, its lithosphere, atmosphere and ionosphere, aviation and ground facilities for the purpose of posterior forecast of the global natural phenomena and man-caused disasters.

3. There are existent international systems, projects and programs, such as GEOSS, GMES, Sentinel Asia, Charter Disaster and others, which directly deal with monitoring of natural and man-caused disasters. They provide effective services concerning provision of Earth observation data and sharing of disaster information. At the same time, their special feature is dedication to recovery efforts following natural and man-caused disasters and, to a lesser extent, to the short-term forecasting of such events and knowing beforehand of them.

4. To detect short-term signs of earthquakes, tsunami and other global geophysical phenomena and their prediction with high reliability it is necessary to use space, aviation and ground facilities in the frame of united system. In this connection, creation of the International Aerospace System for Monitoring of Global Geophysical Phenomena and Forecasting of Natural and Man-Caused Disasters is one of the most important directions to solve problem of global efficient and short-term prediction of the natural and man-caused disasters.

5. Taking into consideration that the problem of forecasting and preventing natural and man-caused disasters has obvious international character it is necessary joining of efforts of the whole world community to create International Aerospace System for Monitoring of Global Geophysical Phenomena and Forecasting of Natural and Man-Caused Disasters. Realization of this international can be started in the frame of different UN programs such as UN-SPIDER.

With the purpose of further promotion of project to create International Aerospace System for Monitoring of Global Geophysical Phenomena and Forecasting of Natural and Man-Caused Disasters Study Group 4.9 make a following resolution.

1. Approve the draft of address of the IAA to UN “About the International Aerospace System for Monitoring of Global Geophysical Phenomena and Forecasting of Natural and Man-Caused Disasters”.

2. Recommend the draft of address of the IAA to UN “International Aerospace System for Monitoring of Global Geophysical Phenomena and Forecasting of Natural and Man-Caused Disasters” to be examined by Commission 4 “Space System Operation & Utilization” and Board of Trusties.

3. Taking into consideration the results of examination of the draft of address of the IAA to UN by Commission 4 and Board of Trusties, recommend the IAA leaders to ask UN, its core committees, departments and programs to examine key aspects of proposed system creation and utilization in interesting of the whole international society, realization proposed project in the frame of UN programs, and to submit it for examination by concerned UN committees and commissions.

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