Natural and man-caused hazards for critically important objects of infrastructure and particularly dangerous freights and their monitoring by means of remote sensing

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In general the man-caused, natural and terrorist hazards cause more and more influence to socio-economic development and national security providing of Russian Federation.The situation, assembling in this region, is characterized:• emergency situation hazard increasing because of physical aging continuing of industrial infrastructure, the objects of hydro technical and housing systems;• economic loss and fire-killed people amount increasing;• the number and the consequences of the natural emergency situations increasing;• the high level of an accident rate of air, motor-car, railway, water and pipe-line transport keeping on and the risks growth of the particularly dangerous freights transportation;• the biology and chemical hazards accumulation, epidemiological and health condition keeping critical in the country;• an intensification of the terrorist hazards demonstration.The main goal of the state policy in the critical-important objects (CIO) and particularly dangerous freights (PDF) monitoring is the consequent decreasing to acceptable risk level of an negative influence of the man-caused, natural and terrorist factors to CIO and PDF, commonwealth and environment.This goal achievement is provided by Federal monitoring system for critical-important objects and particularly dangerous freights (FMS OF) creation.The main FMS OF destination is an informational-analytical and technical-organizational support of the federal, local, CIO authority and CIO operating organizations activity for preliminary revelation, notification, prediction and parrying hazards for CIO and PDF.The most significant natural hazards are:• hurricanes;• storms;• floods;• droughts;• earthquakes;• volcanoes;• landslide and mudflow.The man-caused hazards are following:• the CIO infrastructure hazards;• an oil products emissions to environment;• the accidents in an oil and gas pipe-lines;• the fires in the buildings• the accidents in the extremely dangerous facilities and objects.• the premeditated sabotage.The possibility of a initial satellite information of the different surface characteristic measurements receiving have to be provided.Those characteristics might be obtained after “raw” satellite data processing. The satellite data could be taken from a receiving station directly or via internet from abroad centers of a satellite data archiving on contractual or mutually beneficial basis.The optical and SAR images of high spatial resolution, based on aircraft or satellite platforms are the most important resources and could be used for observation of a process or in time of an emergency situation or it consequences liquidation.