

AEROSPACE TECHNOLOGIES AGAINST NATURAL DISASTERS



The monograph **AEROSPACE TECHNOLOGIES AGAINST NATURAL DISASTERS** – author Prof. GARO MARDIROSIAN (Sofia, 2026. BAS Publishing House "Prof. Marin Drinov") is dedicated to the possibilities and realization of some of the highest scientific and technological achievements of humanity – aerospace methods and technical equipment in solving the eternal and current problem – the study of natural disasters and ecological catastrophes as a path to successful fight against them.

According to the performance of good practices of international publishing houses, terminological clarifications are made first, then general issues about natural disasters are briefly examined (their physical foundations and the possible consequences they cause), descriptions of the aerospace equipment on board which helps the research is carried out are given,

and the main directions in the fight against natural disasters are commented on, too.

They are successively described – earthquakes, floods, tropical cyclones, volcanic eruptions, tsunamis, dust storms, forest fires, lightning and some others. Their elements that can be most effectively studied with remote sensing are assessed. The goals are: forecasting, determining occurrence and location, monitoring temporal development, establishing negative consequences and damage, monitoring rescue and restoration activities, etc.

The method used by the author is chronologically developed – the method, technical means and acquisition of remote sensing data are presented. Their processing is also included. This is illustrated with elementary theory and practical applications (specific examples are given). Particular attention is paid to Bulgarian achievements in this field.

The book is intended for a wide interdisciplinary readership – scientists and specialists in ecology, geophysics, geography, geology, meteorology and hydrology, aviation and space research, fire and civil protection, military specialists, medical, mountain and other rescue services, insurance workers, engineers of various specialities, studying in civil and military higher educational institutions. Presented in a popular form, this publication expands opportunities to educate specialists and the general public to reduce the negative consequences of natural disasters on the population, infrastructure, and our entire society.

Prof. Boyko Rangelov

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