

**XIIth NATIONAL SCIENTIFIC AND TECHNICAL CONFERENCE WITH
INTERNATIONAL PARTICIPATION "ECOLOGY AND HEALTH 2018"
June 7th, 2018, Plovdiv, Bulgaria**

On June 7th, 2018, at the House of Science and Technology - Plovdiv, the XIIth National Scientific and Technical Conference with International Participation "Ecology and Health 2018" was held. Main organizers of this biannual forum were the Stephan Angeloff Institute of Microbiology at the Bulgarian Academy of Sciences, the National Society of Environmental Engineering and Environmental Protection and the Non-Profit Association "Territorial Organization of Science and Technology Unions and House of Science and Technique" – Plovdiv.

Scientific presentations were in the field of following thematic areas: Medicine, Environmental Monitoring, Ecological Biotechnology, Food Technologies, Agriculture, Urbanization and Environment, and Varia. They were presented in the form of plenary reports, reports and posters.

The opening of the Conference was with congratulatory addresses to the participants and guests, followed by the plenary session in which four plenary talks were presented: about microbial degradation of cellulose waste (with a perspective for use on board of spacecraft), about innovation and prospects for the circular economy, about nutritional energy and its importance for human health and last talk – about the use of aerospace technologies for environmental monitoring.

Then, the Conference continued its work in thematic sections. The largest number of reports were presented in the section "Ecological biotechnology" - 11 in total. The latest data were presented, including a number of ecological, microbiological, biotechnological and economic aspects of the research activities of scientific teams from Bulgaria and Ukraine. The concept of the most successful Bulgarian project in this area "Clean technologies for sustainable environment – water, waste, energy for the circular economy – Clean & Circle" was also presented.

In the "Food Technologies" section, the participants attended 6 talks and 7 posters addressing current and significant issues of food science and technology and their relationship to consumer health, such as the use of mineral water and its effects on health, comparative analysis of biofood standards, processes for preparation of semi-finished products and dishes typical for Western Rhodopes cuisine, characteristics and antioxidant properties of the extracts of tutsan, sensor analysis of juices of wild berries, organic seaweeds from the Black Sea and possibilities for inclusion in food, effects of polyphenol extracts on probiotic lactic acid bacteria, technological scheme for obtaining enriched carotenoid extracts of the skin of varieties of Bulgarian tomatoes and possibilities for their application as food additives, etc.

Two reports and 38 posters were submitted and given in section "Agriculture". This is the section with the most active attendants at the Conference. Scientific developments and their results in the field of selection, technology, plant protection, biotechnology, etc., of grain and technical crops, perennials, vegetable crops, herbs, etc., were presented. The presented results treat the latest achievements in agriculture and have scientific and applied applicability. The most significant was the participation of the Corn Research Institute in Knezha. Active presence of PhD students and Postdoctoral researchers were registered. For another year developments of the University of Bitola and the Institute for Tobacco in Prilep, Republic of Macedonia (FYROM), were presented at the Conference. The reports and posters provoked deserved interest. A number of supplementary questions were put to the authors concerning the research and comprehensive and competent answers were obtained.

Five talks were presented in the "Environmental Monitoring" section. Three of them were devoted to environmental monitoring using Sentinel 2 satellite data: one to assess the dynamics and condition of forest vegetation in the Vrachanski Balkan Nature Park; second - to assess the current state of the high mountain ecosystems in selected territories of Southwestern Rila Mountain; the third one – on the prospects of applying interim environmental monitoring for biodiversity assessment and conservation, as it is applied to two regions – the wetland in the quarry lakes in the Negovan village, Sofia region and the National Reserve "Blue Beach" near the village of Bozhevtsi, Nature Reserve Sini Bryag near Bozhevtsi village, Stara Zagora region. The other two reports were devoted to the assessment of the natural disasters and ecological problems of the Maldives and to analysis of the early warning systems for natural disasters in the Indian Ocean. These studies were conducted within the framework of the international project CABARET with the participation of Bulgaria



Prof. Hristo Najdenski, Head of the Program Committee, presenting the first plenary report



Group of the participants in the Conference

and it can be mentioned that the report about the eco-problems of the Maldives was with a co-author from this exotic country. The active participation of young researchers is worth noting. The three reports on environmental satellite monitoring were from PhD students trained at the Institute of Space Research and Technology at the Bulgarian Academy of Sciences and the presented studies were parts of their dissertation works. The section meetings featured not only established scientists but also young researchers, PhD students and specialists working in the various scientific fields covered by the Conference topics. The presented scientific papers and posters address issues that are relevant to the public and include the results of fundamental and innovative research. To all presentations a great interest was shown by the audience. Intriguing and comprehensive questions were addressed to the authors and competent answers were received.

For this edition of the Conference, which has already become a tradition, the overall impression of the Programme and Organizing Committees is that there is an increased interest in it and a growing number of participants. It must be emphasized that besides the traditional topics of the Conference there were also new areas of interest from researchers from other specialties, and we hope this will remain in the future. We have clear evidence that the Conference is becoming more and more popular among the scientific collegium.

Prof. Hristo Najdenski
Head of the Program Committee