
CONTENTS

ECOLOGY AND PRODUCTION	7
Bondar O., Ryzhenko N., Chetverykov V., Koval S., Rossokha A. Formation and emission of POPs in ferrous and non-ferrous metallurgy of Ukraine.	7
Vasilieva L., Shevchuk L., Herasymchuk O. Preconditions for the emergence of emergency situations of a natural and technological nature in Zhytomyr oblast.	14
Kireitseva H., Khomenko S., Ustymenko V., Andreieva O., Paliy O. Enterprise sustainability reporting as a tool for developing environmental responsibility.	18
Shybanova A., Ruda M., Dzhumelia E., Panchuk P. Restoration of the soil cover and plant communities of the post-technological landscapes of the sulphur quarry.	25
ECOLOGY OF WATER RESOURCES	33
Valerko R., Herasymchuk L., Patseva I., Pokshevnytska T., Lukianova V. Environmental safety of drinking water supply in rural settlement areas.	33
Dombrovskiy K., Yeremenko T. Assessment of the ecosystem components of recreational and fishery ponds.	39
Kopylov V., Popovych V. Analysis of physical and chemical investigations of the hydrographic network of the Styr river within the city of Lutsk.	44
Sukhodolska I., Kovalova I. The content of nitrogen compounds in the water of river Stubelka and its effect on phytoplankton.	50
Ulytsky O., Pashkevich L. Use of <i>Chlorella vulgaris</i> Polikarp microalgae strain for purification of freshwaters from technological pollution.	58
ENVIRONMENTAL MONITORING	68
Vasenko O., Ievleva O., Milanic G., Bogko T., Melnikov A., Klochko T. Results of integrated ecological monitoring of the environment of the Ukrainian part of the Danube delta in 2022.	68
Vasenko O., Karliuk A., Cherba O. Current state of the environmental monitoring system in Ukraine.	73
ECOLOGY AND ECONOMICS OF NATURAL RESOURCE USE	78
Melnyk-Shamrai V., Shamrai V., Patseva I., Patsev I. Land structure as a land resource management tool in the conditions of ecologization of land use.	78
Rudenko S., Rudenko V. Nature-resource potential of natural regions of Ukraine in present-day figures.	84
BIOLOGICAL SAFETY	90
Bobrova M., Holodaieva O. Features of changes in the state of the prooxidant-antioxidant system of seed tissues <i>Zea mays L.</i> , depending on the duration of storage.	90
Vradii O. Intensity of heavy metal contamination of fodder grain obtained in the conditions of the Right Bank Forest Steppe.	95
Gryshko V., Lysenko O., Akhmedova V. The effect of cadmium, nickel, chromium and zinc ions on the stability of maize hybrids at the beginning of the juvenile stage of plant development.	100
Ilna V., Nikitin P. Dynamics of biogeochemical element removal from areas under grain and legume crops in the Odesa region.	107
Liashenko O., Khromykh N., Lykholat Yu. Resource potential of the genus <i>Sorbus L.</i> plants as source of metabolites with anti-inflammatory activity.	113
ECOLOGICAL SAFETY	117
Mykytas D., Bilous M., Polushkin Yu., Ivashchenko T., Hunko S., Rets Ye. Establishment of a system of environmental protection from radioactively contaminated materials (on the example of former PCHP).	117
Natyazhnyi Ya., Lapinskyi A. Ecological aspects of the application of polyhexamethylene guanidine succinate.	126

Sierikova O. Increasing the environmental safety level of poisonous and flammable liquid storage tanks under seismic loads.	130
ENVIRONMENTAL IMPLICATION OF MILITARY ACTIONS	136
Dyniak O., Koshliakova I. Potential danger to the environment and population from petrochemical pollution of the geological environment as a result of military operations	136
Spriahailo O., Bezsmertna O., Gavrilyuk M., Ilyuha O., Osypenko V., Spriahailo O., Shevchyk V. First steps towards assessing the impact of warfare on the state of nature reserve fund objects and their biodiversity.	142
CLIMATE CHANGE	148
Hrabko N., Safranov T. Bioclimatic conditions for the cold period of the year in Odesa territory.	148
Patseva I., Kahukina A., Lunova O. Climate change trends in the Zhytomyr region.	156
Pichura V., Potravka L. Spatio-temporal patterns of the formation of climate conditions in the Sluch river basin.	160
PRESERVATION OF BIOLOGICAL AND LANDSCAPE DIVERSITY	170
Beznosko I., Mudrak O., Havryliuk L., Gorgan T. Exometalobite of the varieties of cultural plants in allelopathic relationships with micromycetes of <i>Fusarium</i> Link Genus.....	170
Hetman P., Fitsailo T. Ecology of roadside protective shelterbelts of Kirovohrad region.	175
Hulai V. The influence of beetles of the species <i>Cerambyx cerdo</i> on the state of preservation of the objects of the nature reserve fund of the city of Znamyanka, Kirovohrad region	180
Ivanets O. Faunistic characteristics and taxonomic structure of rotifers (<i>Rotifera</i> : <i>Rotatoria</i>) of peat swamps of Galicia in the research of Ludwig Kozar	183
Krasovsky V., Chernyak T. <i>Prunus dulcis</i> (Mill.) D.A. Webb in the introductory studies of the Khorol Botanical Garden.	191
Suslova O., Boyko L. Vital state of species of the genus <i>Acer</i> L. in the urban systems of the steppe zone of Ukraine.	196
Fitsailo T. Shrub communities with the participation of hawthorns.	202
INNOVATIVE RESEARCH METHODS	207
Kononov O. The use of artificial intelligence in methods of bioindication and monitoring of anthropogenic load on the example of Chat GPT and MS Copilot.....	207
Khrutba Yu., Patseva I., Khrutba O. Development of scientific methods for researching a comprehensive assessment of the use of information technology to manage interactions in eco-projects.	211
THE ISSUE OF SUSTAINABLE DEVELOPMENT	217
Petrovska M., Petrovskiy S. Organic production in Ukraine as a priority component of sustainable development.	217
Radkevych V., Kravets S., Sali I., Radkevych O. Modern professional qualifications for sustainable development of the green economy.	224
GENERAL ENVIRONMENTAL SAFETY ISSUES	231
Zhitska L., Khomenko O., Alifanova G., Bondarenko Yu. Ecological risk assessment for the environment and the dynamics of the use of persistent organic pollutants in the Cherkassy region.	231
Sverdlenko D., Horban V., Tereshchenko O. Energy analysis of the functioning of Zaporizhzhia ecosystems.	241
Snitko D., Zolotarova O. Analysis of statistical data on criminal offenses against the environment for 2018–2022 (based on the materials of the Office of the Prosecutor General of Ukraine)	245
AUTHORS' CREDENTIALS	252