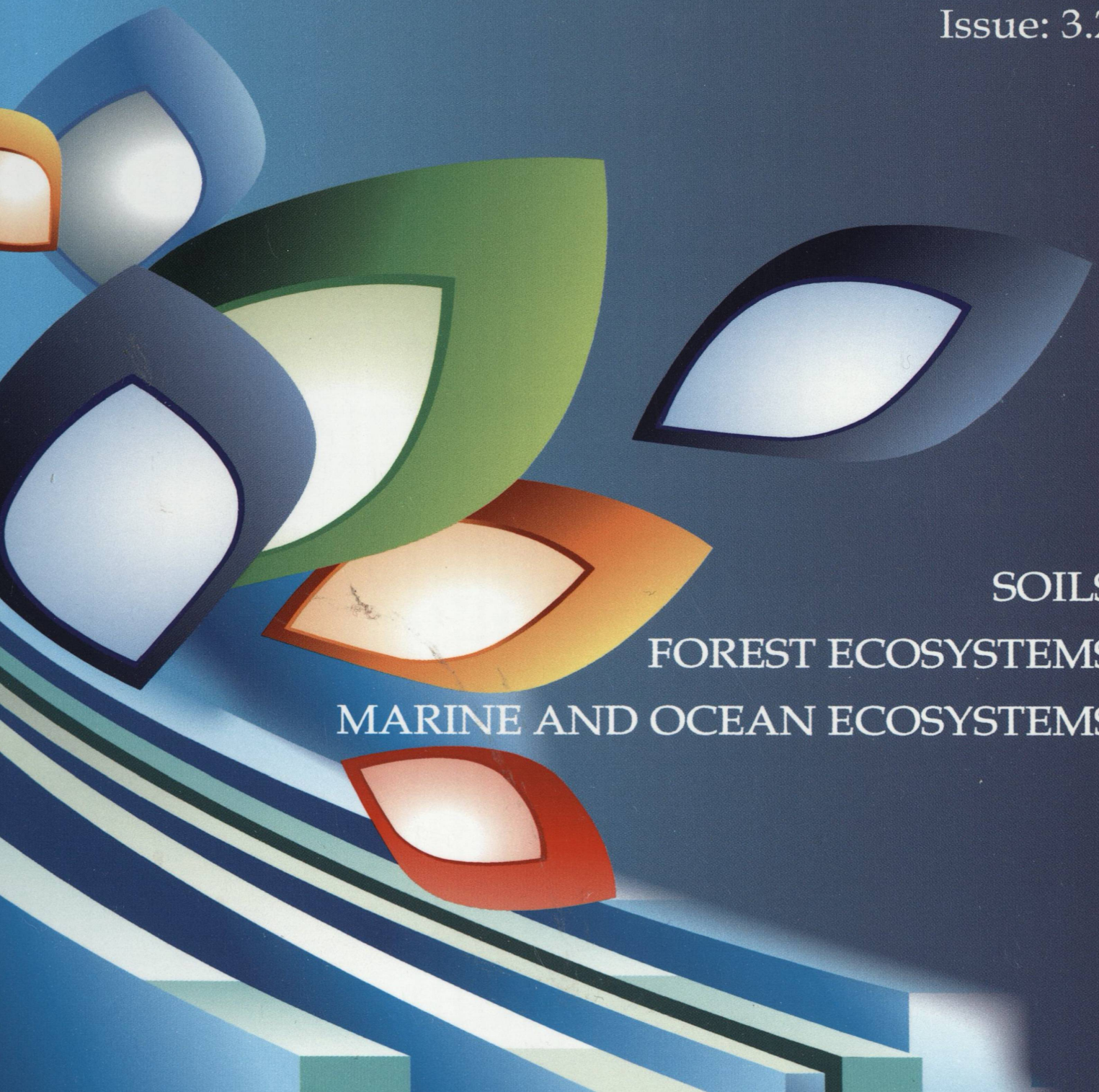


18th INTERNATIONAL MULTIDISCIPLINARY
SCIENTIFIC GEOCONFERENCE
SGEM 2018

CONFERENCE PROCEEDINGS
VOLUME 18

Water Resources. Forest, Marine
and Ocean Ecosystems

Issue: 3.2



SOILS
FOREST ECOSYSTEMS
MARINE AND OCEAN ECOSYSTEMS

**18th INTERNATIONAL MULTIDISCIPLINARY
SCIENTIFIC GEOCONFERENCE
S G E M 2 0 1 8**

**CONFERENCE PROCEEDINGS
VOLUME 18**



**WATER RESOURCES. FOREST,
MARINE AND OCEAN ECOSYSTEMS
ISSUE 3.2**

SOILS

FOREST ECOSYSTEMS

MARINE AND OCEAN ECOSYSTEMS

**2 July - 8 July, 2018
Albena, Bulgaria**

DISCLAIMER

This book contains abstracts and complete papers approved by the Conference Review Committee. Authors are responsible for the content and accuracy.

Opinions expressed may not necessarily reflect the position of the International Scientific Council of SGEM.

Information in the SGEM 2018 Conference Proceedings is subject to change without notice. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of the International Scientific Council of SGEM.

Copyright © SGEM2018

All Rights Reserved by the International Multidisciplinary Scientific GeoConferences SGEM

Published by STEF92 Technology Ltd., 51 “Alexander Malinov” Blvd., 1712 Sofia, Bulgaria

Total print: 5000

ISBN 978-619-7408-43-0

ISSN 1314-2704

DOI: 10.5593/sgem2018/3.2

**INTERNATIONAL MULTIDISCIPLINARY SCIENTIFIC GEOCONFERENCE SGEM
Secretariat Bureau**

E-mail: sgem@sgem.org | URL: www.sgem.org

ORGANIZERS AND SCIENTIFIC PARTNERS

- THE CZECH ACADEMY OF SCIENCES
- LATVIAN ACADEMY OF SCIENCES
- POLISH ACADEMY OF SCIENCES
- RUSSIAN ACADEMY OF SCIENCES
- SERBIAN ACADEMY OF SCIENCES AND ARTS
- SLOVAK ACADEMY OF SCIENCES
- NATIONAL ACADEMY OF SCIENCES OF UKRAINE
- INSTITUTE OF WATER PROBLEM AND HYDROPOWER OF NAS KR
- NATIONAL ACADEMY OF SCIENCES OF ARMENIA
- SCIENCE COUNCIL OF JAPAN
- EUROPEAN ACADEMY OF SCIENCES, ARTS AND LETTERS
- ACADEMY OF SCIENCES OF MOLDOVA
- MONTENEGRIN ACADEMY OF SCIENCES AND ARTS
- CROATIAN ACADEMY OF SCIENCES AND ARTS, CROATIA
- GEORGIAN NATIONAL ACADEMY OF SCIENCES
- ACADEMY OF FINE ARTS AND DESIGN IN BRATISLAVA
- TURKISH ACADEMY OF SCIENCES
- NIZHNY NOVGOROD STATE UNIVERSITY OF ARCHITECTURE AND CIVIL ENGINEERING, RUSSIAN FEDERATION
- BULGARIAN ACADEMY OF SCIENCES
- BULGARIAN INDUSTRIAL ASSOCIATION
- BULGARIAN MINISTRY OF ENVIRONMENT AND WATER

INTERNATIONAL SCIENTIFIC COMMITTEE

Water Resources. Forest, Marine and Ocean Ecosystems

- PROF. DIPL.-ING. DR. TECHN. GÜNTER BLÖSCHL, AUSTRIA
- PROF. GHISLAIN DE MARSILY, FRANCE
- PROF. MICHAEL BONELL, UK
- PROF DR PLAMEN NINOV, BULGARIA
- PROF. SIRJE KEEVALLIK, ESTONIA
- PROD DR VALENTIN KAZANDJIEV, BULGARIA
- PROFESSOR DR. GYÖRGY VARALLYAY, HUNGARY

- ACAD. ALEXANDER ALEXANDROV, BULGARIA
- PROF. DR. JULIUS OSZLANYI, SLOVAKIA
- PROF. WINFRIED E.H. BLUM, AUSTRIA
- ASSOC.PROF. ALEXANDER IVANOV, RUSSIA
- ASSOC. PROF. DR SNEJANA MONCHEVA, BULGARIA

CONFERENCE PROCEEDINGS CONTENTS
SOILS

1. **A SALINE SOIL BETWEEN MELIORATION AND RENATURATION**, Dr. Daniela Raducu, Dr. Sorina Dumitru, Dr. Petru Ignat, Dr. Amelia Anghel, Dr. Voicu Petre, National Research and Development Institute for Soil Science Agrochemistry and Environment, Romania3
2. **ACCUMULATION AND DISTRIBUTION OF HEAVY METALS IN SOILS FROM THE EXPLOSIONS BY MINING-PROCESSING POLY-METALLIC PLANT**, Alex Gongadze, Lia Matchavariani, Marika Avkopashvili, Guranda Avkopashvili, Ivane Javakhishvili Tbilisi State University, Georgia11
3. **AMPLIFIED SOIL DEGRADATION AFTER 38 YEARS OF THE DRAINAGE NETWORK ON THE UPPER TERRACES OF THE MOLDOVA RIVER (ROMANIA)**, Oprea Radu, Minodora Ailenei Radu, Feodor Filipov, University of Agriculture and Veterinary Medicine Iasi, Romania 19
4. **ANALYTICAL STUDIES ON CONTENTS OF ESSENTIAL AND TOXIC ELEMENTS IN RICE AVAILABLE IN LATVIAN RETAIL**, BSc. Elza Lama, MSc. Ruta Ozola, Dr. Vita Rudovica, BSc. Konstantins Bavrins, Prof. Arturs Viksna, University of Latvia, Latvia.....27
5. **BIODIAGNOSIS OF THE STATE OF OIL-POLLUTED CHERNOZEM DURING REMEDIATION WITH UREA AND POTASSIUM HUMATE**, Jun. Researcher Tatyana V. Minnikova, Prof. Dr. Sergey I. Kolesnikov, Prof. Dr. Tatyana V. Denisova, Assist. Prof. Ph.D. Yuliya V. Akimenko, Southern Federal University, Russia33
6. **BIODIAGNOSTICS OF CONSEQUENCES OF SOIL CONTAMINATION WITH MODERN BIOCIDES**, Assist. Prof. Ph.D. Yuliya V. Akimenko, Prof. Dr. Sergey I. Kolesnikov, Prof. Dr. Kamil Sh. Kazeev, Jun. Researcher Tatyana V. Minnikova, Southern Federal University, Russia.....41
7. **BIOGENIC ELEMENTS AND TECHNOGENIC POLLUTANTS ACCUMULATION INFLUENCED BY ANTHROPOGENIC LOAD IN THE SOILS OF SOLOVETSKY SETTLEMENT**, Trofimova A., Popov S., Popova L., Nikitina M., Gerasimova L., Northern Arctic Federal University, Russia.....49
8. **CHERNOZEM DEGRADATION IN THE CZECH REPUBLIC OVER THE LAST 50 YEARS**, Jan Hladky, Martin Brtnicky, Jakub Elbl, Antonin Kintl, Jindrich Kynicky, Mendel University in Brno, Czech Republic.....57
9. **CLIMATE CHANGE AND POLYPHASIC SOIL DEVELOPMENT**, Adia Grozav, Gheorghe Rogobete, Politehnica University of Timisoara, Romania65

- 10. CONCENTRATION OF ARSENIC IN THE SOILS OF THE DANUBE FLOODPLAIN BETWEEN THE TIMOK RIVER AND THE VIT RIVER,** Velimira Stoyanova, Tsvetan Kotsev, Ruben Kretzschmar, Kurt Barmettler, Bulgarian academy of science, Bulgaria71
- 11. CONSIDERATIONS CONCERNING THE IMPORTANCE OF THE CAPPING LAYER IN THE DESIGN OF SUSTAINABLE ROAD PAVEMENTS,** Florin Belc., Paul Marc., Anda Ligia Belc, Politehnica University of Timisoara, Romania.....79
- 12. COPPER AND ZINC FRACTIONAL DISTRIBUTION IN CHERNOZEM HAPLIC UNDER MODEL EXPERIMENTAL CONDITIONS,** Dr. Marina Burachevskaya, Prof. Dr. Tatiana Minkina, Dr. Saglara Mandzhieva, Elizaveta Konstantinova, Dr. Vishnu Rajput, Southern Federal University, Russia87
- 13. DISTRIBUTION, ACCUMULATION AND BIOINDICATION OF HEAVY METALS IN THE SOIL-PLANT SYSTEM OF THE DON RIVER ESTUARINE REGION, RUSSIA,** Prof. Tatiana Minkina, Dr. Dina Nevidomskaya, Dr. Victor Chaplygin, Marina Kozlova, Tatiana Pol'shina, Southern Federal University, Russia95
- 14. DYNAMICS OF THE SOIL CO₂ EMISSION DURING SNOW-FREE PERIOD IN THE IN MIDDLE TAIGA ZONE OF CENTRAL SIBERIA,** Anastasia V. Makhnykina, Natalia N. Koshurnikova, Anatoly S. Prokushkin, Eugene A. Vaganov, I.I. Tyckov, Siberian Federal University, Russia103
- 15. ECOLOGICAL AND GEOCHEMICAL FEATURES OF THE DISTRIBUTION OF TRACE ELEMENTS IN VIRGIN AND ARABLE CHERNOZEMS,** Assoc. Prof. Larisa Novykh, Assoc. Prof. Alexander Solovyov, Senior lecturer Ivan Novykh, Grad. student Ekaterina Chuikova. Assoc. Prof. Ludmila Tricula, Belgorod National Research University, Russia.....111
- 16. ECOLOGICAL STATE OF THE SOIL AT THE ROSTOV-ON-DON ZOO,** Prof. Dr. Kamil Sh. Kazeev, Postgraduate Alexander V. Zhadobin, Student Andrey I. Barbashev, Ph.D. Yuliya V. Akimenko, Prof. Dr. Sergey I. Kolesnikov, Southern Federal University, Russia.....119
- 17. ECOTOXICITY MONITORING OF PESTICIDE CONTAMINATED SEDIMENTS USING EARTHWORM EISENIA FOETIDA,** PhD. Hana Sezimova, University of Ostrava, Czech Republic127
- 18. EFFECT OF ANCIENT TERRACING ON SOIL BALANCE IN MOUNTING ZONE OF DAGESTAN (EASTERN CAUCASUS, RUSSIA),** Aleksandr Borisov, Idris Idrisov, Institute of Physicochemical and Biological Problems in Soil Science, Russia135

- 19. EFFECT OF SOIL AMENDMENTS AND MANURE APPLICATION ON SOIL REACTION**, Dip. Ing. Martin Brtnicky, Dip. Ing. Ivana Oravcova, Dr. Jakub Elbl, Dr. Oldrich Latal, Dr. Jan Hladky, Mendel University in Brno, Czech Republic.....143
- 20. EFFECT OF SOIL PHYSICAL PROPERTIES DEGRADATION ON SOIL RETENTION CAPACITY USING AN EXAMPLE OF CAMBISOLS**, Jan Hladky Martin Brtnicky Jakub Elbl Antonin Kintl Jindrich Kynicky, Mendel University in Brno, Czech Republic.....149
- 21. ELEMENTS OF SOIL AND LAND COVER MAPPING IN THE CADASTRE SYSTEM OF THE RUSSIAN FEDERATION**, Prof. Dmitry A. Shapovalov, Dmitry I. Rukhovich, Prof. Andrey L. Kulyanitsa, Natalia V. Kalinina, Polina V. Koroleva, State University of Land Use Planning, Russia.....157
- 22. ESTIMATING SOIL HYDRAULIC PROPERTIES FOR UNSATURATED ZONE USING GRADIENT AND METAHEURISTIC METHODS**, Roxana-Gabriela Dobre, Dragos-Stefan Gaitanaru, Technical University of Civil Engineering Bucharest, Romania.....165
- 23. EVALUATION OF THE CO₂ EVOLUTION RATE IN ORDINARY CHERNOZEM UPON CONTAMINATION WITH ANTIBIOTICS**, Assist. Prof. Ph.D. Yuliya V. Akimenko, Prof. Dr. Sergey I. Kolesnikov, Prof. Dr. Kamil Sh. Kazeev, Undergraduate Olga V. Chuvaraeva, Assist. Prof. Ph.D. Margarita A. Myasnikova, Southern Federal University, Russia173
- 24. EVOLUTION OF SOILS OF THE SOUTHERN URALS IN THE EARLY BRONZE AGE ON THE BASIS OF ARCHAEOLOGICAL DATA (ON AN EXAMPLE OF A BURIAL GROUND KRASIKOVO I IN THE ORENBURG REGION)**, Student Alena Papkina, Dr. Olga Khokhlova, Dr. Nina Morgunova, PhD. Tatiana Puzanova - Lomonosov Moscow State University, Department of Geography, Moscow, Russia.....181
- 25. EXPERIMENTAL EQUIPMENT TO SIMULATE FIRE IMPACT ON SURFACE SOIL LAYER IN FORESTS**, Nikolay V. Baranovskiy, Alexander S. Razva, Vyacheslav I. Maksimov, Alexander V. Bazarov, National Research Tomsk Polytechnic University - Institute of Power Engineering, Russia189
- 26. FERTILIZATION PLAN AT FARM LEVEL FOR COMPLIANCE WITH THE ACTION PROGRAMS REQUIRED BY THE NITRATES DIRECTIVE**, Burtan Lavinia, Vizitiu Olga, Calciu Irina, National Research and Development Institute for Soil Science Agrochemistry and Environment ICPA Bucharest, Romania.....197
- 27. FERTILIZERS WITH NATURAL ORGANIC SUBSTANCES, AGROCHEMICAL EFFECTS**, Cioroianu Traian, Sirbu Carmen, Daniela Mihalache, Dumitru Mihail, Nicoleta Marin, National Research and Development Institute for Soil Science Agrochemistry and Environment ICPA Bucharest, Romania205

28. GREENHOUSE GAS RELEASE FROM BURIED SOIL IN THE LENA RIVER DELTA, SIBERIA: FIELD INCUBATION STUDY, Dr. Svetlana Evgrafova, Oleg Novikov, Dr. Maria Meteleva, Prof. Dr. Georg Guggenberger, V.N. Sukachev Institute of Forest SB RAS, Russia.....	213
29. HEAVY METALS CONTENTS IN AGRICULTURAL MONITORING SITES FROM THE COUNTIES AFFECTED BY HISTORICAL POLLUTION, Alexandrina Manea, Dr. Mihail Dumitru, Dr. Nicoleta Vranceanu, Dr. Sorina Dumitru, Dr. Georgiana Plopeanu - National Research and Development Institute for Soil Science, Agrochemistry and Environment, Romania.....	219
30. HUMIC SUBSTANCES HOLDUP ON BIO POLYMERIC STRUCTURES, Sirbu Carmen, Cioroianu Traian, Stanescu Ana-Maria, Nicoleta Marin, Daniela Mihalache, National Research and Development Institute for Soil Science Agrochemistry and Environment, Romania	227
31. IMPACT OF PHALACROCORAX CARBO COLONIES ON SOIL AND VEGETATION AT LAKE KANIERIS ISLANDS IN LATVIA, Dr. Gunta Cekstere, Dr. Anita Osvalde, Dr. Maris Laivins, Institute of Biology University of Latvia, Latvia	235
32. INFLUENCE OF FALLOW MANAGEMENT ON SOIL AGGREGATE STABILITY, Ing. Jaroslava Novotna Ph.D., Ing. Barbora Badalikova, Agricultural Research Ltd., Czech Republic	243
33. INFLUENCE OF FOLIAR FERTILIZATION WITH 15N-LABELLED FERTILIZERS ON THE SUNFLOWER CROP, Mihalache Dr. Sirbu, National Research and Development Institute for Soil Science Agrochemistry and Environment ICPA Bucharest, Romania.....	249
34. INFLUENCE OF THE NO-TILL TECHNOLOGY ON THE ENZYMATIC ACTIVITY OF DIFFERENT CHERNOZEMS OF SOUTHERN RUSSIA, Ph.D. Gregory V. Mokrikov, Prof. Dr. Kamil Sh. Kazeev, Ph.D. Yuliya V. Akimenko, Ph.D. Margarita A. Myasnikova, Prof. Dr. Sergey I. Kolesnikov, Southern Federal University, Russia	257
35. INFLUENCE OF TILT ANGLE OF SIEVES ON THE QUALITY OF SEPARATION OF SEEDS IN THE WINDROWS, Constantin POPA, Alina OVANISOF, Adrian COSTACHE, Roxana - Alexandra PETRE, University Politehnica of Bucharest, Romania	265
36. INTRODUCTION OF BIOCONTROL AGENTS OF FUSARIOUSIS ON THE COMPOSTS, Glazunova D.M., Kuryntseva P.A., Selivanovskaya S.Y., Galitskaya P.Y., Kazan (Volga Region) Federal University, Russia	273

- 37. INVESTIGATION OF POTENTIALLY CONTAMINATED INDUSTRIAL SITES FROM EASTERN JIU VALLEY**, Simion Alexandru-Florin, Kovacs Marius, Simion Sorin Victor, National Institute for Research and Development in Mine Safety and Protection to Explosion - INSEMEX, Romania281
- 38. INVESTIGATIONS ON SOME SOIL PHYSICAL PROPERTIES OF LANDS AFFECTED BY HYDRIC EROSION. CASE STUDY FROM SECASE PLATEAU, ROMANIA**, Marioara Costea, Lucian Blaga University of Sibiu, Romania.....289
- 39. LINKING THE DEFORMATION MODULI AND CONE INDICES OF FOREST AND PEATLAND SOILS**, Assoc. Prof. Egor Khitrov, Prof. Viktor Ivanov, Assoc. Prof. Dr. Marina Stepanishcheva, Prof. Alexandr Kochnev, Saint-Petersburg State Forest Technical University named after S.M. Kirov, Russia.....297
- 40. LONG TERM STUDIES ON DYNAMICS OF SOIL NUTRIENT STATUS OF Highbush Blueberry in Latvia**, Dr. Anita Osvalde, Dr. Andis Karlsons, Dr. Gunta Cekstere, MSc. Jolanta Pormale, Institute of Biology University of Latvia, Latvia.....305
- 41. MAIZE-LEGUME INTERCROPPING SYSTEM AS AN ALTERNATIVE TO CONVENTIONAL CROPPING SYSTEM – EFFECT ON SOIL PROPERTIES**, Jakub Elbl, Helena Brtnicka, Antonin Kintl, Jindrich Kynicky, Martin Brtnicky - Mendel University in Brno, Czech Republic313
- 42. NITROGEN USE EFFICIENCY IN WINTER WHEAT - WINTER PEA INTERCROPPING SYSTEM**, Dip. Ing. Antonin Kintl, Dr. Jakub Elbl, Prof. Dr. Tomas Losak, Dr. Jan Hladky, Dip. Ing. Helena Hutyrova - Agricultural Research Ltd., Czech Republic.....321
- 43. NORMATIVE-REFERENCE DATABASE STRUCTURE FOR AGRICULTURAL MANUFACTURERS SUPPORT SYSTEM AND RATIONAL CHOICE OF COST-EFFECTIVE ADAPTIVE TECHNOLOGIES FOR GRAIN CROPS CULTIVATION**, Gostev A.V., Pykhtin A.I., Southwest State University, Russia329
- 44. PALEOECOLOGICAL SITUATION FOR THE KUBAN-AZOV LOWLAND, RUSSIA AT THE BRONZE AGE BASED ON PEDOLOGICAL AND PALINOLOGICAL ANALYSES OF PALEOSOLS BURIED UNDER KURGAN**, Olga Khokhlova, Tamara Tregub, Alena Papkina, Moscow State University, Russia335
- 45. PARTICULARITIES OF GREENHOUSES SOIL SAMPLING FOR MESOFAUNA STUDY**, Assoc. prof. Feodor Filipov, Dr. Otilia Ivan, Dr. Adina Calugar, Dr. Camil Stefan Lungu Constantineanu, University of Agricultural Sciences and Veterinary Medicine Iasi, Romania343

- 46. PECULIARITIES OF DECOMPOSITION OF ORGANIC SUBSTRATES OF DIFFERENT NATURE IN SOIL: IMPLICATION FOR ARCHAEOLOGICAL RECONSTRUCTIONS**, Dr. Tatiana Khomutova, St. Kamilla Dushchanova, Pushchino State Institute for Natural Sciences, Russia351
- 47. PEDOBIOPLASMA ILLUVIATION – A NEW THEORY**, Dr. Daniela Raducu, National Research and Development Institute for Soil Science Agrochemistry and Environment, Romania.....357
- 48. POLYCYCLIC AROMATIC HYDROCARBONS LEVEL IN SOILS OF THE EMISSION ZONE OF THE NOVOCHERKASSK ENERGY PLANT**, Svetlana Sushkova, Tatiana Minkina, Galina Vasilyeva, Elizaveta Konstantinova, Inna Zamulina, Southern Federal University, Russia365
- 49. POSSIBILITIES AND LIMITATIONS RELATED TO APPLICATION OF NIR SPECTROSCOPY IN THE MONITORING OF SOIL CONTAMINATION**, Dr Anna Sliwinska, Prof. Adam Smolinski, Central Mining Institute (GIG), Poland373
- 50. POTENTIAL USE OF LEGUME IN MAIZE CROPPING SYSTEM TO INCREASE THE ROOT SYSTEM IN ORDER TO PREVENT SOIL EROSION**, Jakub Elbl, Helena Brtnicka, Antonin Kintl, Jindrich Kynicky, Martin Brtnicky - Mendel University in Brno, Czech Republic381
- 51. PRESENCE AND EXPRESSION OF GENES ENCODING HYDROCARBON DECOMPOSITION ABILITY OF MICROBES IN DIFFERENT SOIL TYPES SAMPLED IN TATARSTAN REPUBLIC (RUSSIA)**, L.R. Biktasheva, S. Yu. Selivanovskaya, N.V. Danilova, S., P. Yu. Galitskaya., Kazan (Volga Region) Federal University, Russia.....389
- 52. PROPERTIES OF FROZEN AND THAWED SOILS, BAYDARATSKAYA BAY COAST, KARA SEA: VARIABILITY AND TRENDS**, Daria Aleksyutina, Rimma Motenko, Nataliya Belova, Olga Shilova, Lomonosov Moscow State University, Russia.....397
- 53. GEOPHYSICAL MAPPING OF SOIL MOISTURE VARIATIONS IN CULTIVATED LAND. CASE STUDY: BUZAU COUNTY, ROMANIA**, Ioane D., Chitea F., Garbacea G., Calin R., University of Bucharest, Romania405
- 54. REGULARITIES OF DISTRIBUTION OF BIOLOGICAL ACTIVITY OF MAIN TYPES AND SUBTYPES OF SOILS OF VERTICAL ZONALITY OF NORTHERN TIEN SHAN**, Z.A. Tukenova, M.B. Alimzhanova, S.Zh.Kazybaeyeva, Kazakhstan Engineering and Technological University, Kazakhstan.....411
- 55. REHABILITATION OF THE STERILE DUMPS RESULTING FROM SURFACE MINING OF LIGNITE**, Mihail Dumitru, Andrei Vrinceanu, Nicoleta Marin, Anca Lacatusu, Lavinia Burtan, National Research and Development Institute for Soil Science Agrochemistry and Environment ICPA Bucharest, Romania419

- 56. RESEARCHES ON THE INFLUENCE OF CROP ROTATION AND FERTILIZATION TO THE MAIZE CROPPED ON THE IMPROVED SANDY SOIL FROM SOUTHERN PART OF DOLJ COUNTY**, Marin Stefan, Cristian Popescu, Dumitru Gheorghe, University Of Craiova, Romania427
- 57. RESPONSES OF WHEAT AND CUCUMBER PLANTS ON TREATMENT BY NEWLY DEVELOPED HUMIC SUBSTANCES CONTAINING FERTILIZER**, Gulnaz Galieva, Alina Akhtyamova, Polina Galitskaya, Svetlana Selivanovskaya, Kazan (Volga Region) Federal University, Russia435
- 58. RETROSPECTIVE MONITORING OF SOIL AND LAND COVER OF CLOSED DEPRESSIONS ON THE AZOV PLAIN**, Dr. Nikolay B. Khitrov, Ekaterina V. Vilchevskaya, Dr. Dmitry I. Rukhovich, Alexey D. Rukhovich, Dokuchaev Soil Science Institute, Russia443
- 59. SHREDDED PAPER AS FOOD FOR EISENIA FETIDA: CHANGES IN SOIL AND IN SEVERAL BIOLOGICAL PARAMETERS**, Madalina Iordache, Simona Iordache, Iacob Borza, Valentina Andriuca - University of Agricultural Science and Veterinary Medicine of Banat Timisoara, Romania449
- 60. SLOPE LAND – AN IMPORTANT INDICATOR IN THE ASSESSING SOIL EROSION AND THE LOCALITIES FRAMING IN THE MOUNTAIN AREA**, Assoc. Prof. Madalina Marian, Assoc. Prof. Daniela Giosanu, Assoc. Prof. Benedict Oprescu, Lecturer Cicerone Marinescu, University of Pitesti, Romania457
- 61. SOIL AND CLIMATE FACTORS THAT DEFINE LAND PRODUCTIVITY IN THE LOWER PLAIN OF BANAT**, Prof. Dsc. Gheorghe David Prof. Dsc. Dorin Tarau Phd. Eng. Cristian I. Sandor Prof. Dsc. Lucian Nita - Banat University of Agricultural Sciences and Veterinary Medicine King Michael I of Romania from Timisoara, Romania465
- 62. SOIL CARBON AND SEWAGE WATER**, Clara Magda Tudor, Gheorghe Rogobete, Adia Grozav, Politehnica University Timisoara, Romania473
- 63. SOIL CONTAMINATION IN THE PROXIMITY OF THE HISTORICAL COPPER SMELTER - A REVIEW**, Manea Alexandrina, Alina Eftene, Amelia Anghel, Mariana Marinescu - National Research and Development Institute for Soil Science Agrochemistry and Environment, Romania479
- 64. SOIL INDICATORS OF LATE HOLOCENE FOREST-STEPPE LANDSCAPE EVOLUTION ON THE RUSSIAN PLAIN**, Kurbanova F.G., Makeev A.O., Puzanova T.A., Kust P.G., Chernov T.I., Moscow State University, Russia487
- 65. SOIL INPUTS AND DYNAMIC OF HUMIC SUBSTANCES DYNAMIC IN CHERNOZEM**, Assoc. Prof. Dr. Lubica Pospisilova, Ing. Jaroslava Novotna, Ph.D., Ing. Vitezslav Vlcek, Ph.D., Ing. Barbora Badalikova, Agricultural Research Ltd., Czech Republic495

- 66. SUPPLY AND DEMAND OF MULTIPLE SOIL FUNCTIONS IN TWO DIFFERENT REGIONS IN LATVIA**, Kristine Valujeva, Aleksejs Nipers, Juris Zarins, Latvia University of Agriculture, Latvia503
- 67. TECHNOGENIC TRANSFORMATION OF HEAVY METAL STREAMS IN THE SOILS OF THE KOLA PENINSULA**, Assoc. Prof. Dr. Ekaterina Elsukova, Prof. Dr. Marina Opekunova, Prof. Dr. Anatolii Opekunov, Assist. Prof. Stepan Kukushkin, Saint Petersburg State University - Institute of Earth Sciences, Russia511
- 68. THE COMPOSITION OF COPPER COMPOUNDS IN SOILS SUBJECTED TO AEROSOL EMISSIONS OF FUEL AND ENERGY COMPLEX**, Dr. Marina Burachevskaya, Prof. Dr. Tatiana Minkina, Dr. Saglara Mandzhieva, Tatiana Bauer, Prof. Dr. Vitaly Linnik, Southern Federal University, Russia519
- 69. THE EFFECT OF LEVELING AND TERRACING ON THE FIELD WATER CAPACITY OF SOILS FROM SLOPING LAND IN THE NORTH EAST PART OF ROMANIA**, Assoc. Prof. Feodor Filipov, Dr. Sorin Capsuna, Prof. Gerard Jitareanu, University of Agricultural Sciences and Veterinary Medicine Iasi, Romania.....527
- 70. THE EFFECT OF THE DRIP IRRIGATION ON SOIL WITH FINE TEXTURE AND HARDPAN IN PLASTIC TUNNELS FROM NORTH – EAST OF ROMANIA**, Assoc. Prof. Filipov Feodor, Dr. Ilie Bodale, University of Agricultural Sciences and Veterinary Medicine Iasi, Romania535
- 71. THE EFFECTS OF THE ARIDITY PHENOMENON INTENSIFICATION ON THE VEGETAL LAND COVER IN THE EASTERN ROMANIAN PLAIN**, Vrinceanu Andrei, Anca-Rovena Lacatusu, Amelia Anghel, Irina Moraru, Mihail Dumitru, National Research and Development Institute for Soil Science Agrochemistry and Environment ICPA Bucharest, Romania543
- 72. THE IMPACT OF LEAD AND OIL POLLUTION ON THE ECOSYSTEM FUNCTIONS OF ORDINARY CHERNOZEM**, Ph.D. Maria G. Zharkova, Prof. Dr. Sergey I. Kolesnikov, Southern Federal University, Russia551
- 73. THE IMPACT OF THE POLLUTION BY ZINC ON THE ENZYMIC ACTIVITY OF THE SOIL OF ARID ECOSYSTEMS IN THE SOUTH OF RUSSIA**, Prof. Dr. Sergey I. Kolesnikov, Postgrad. St. Rama M. Daoud, Prof. Dr. Kamil Sh. Kazeev, Assist. Prof. Ph.D. Yuliya V. Akimenko, Southern Federal University, Russia.....559
- 74. THE INFLUENCE OF LONG-TERM CHEMICAL CONTAMINATION IN THE ZONE OF SEDIMENT PONDS ON BIOGEOCHEMICAL AND MORPHOLOGO-ANATOMICAL CHARACTERISTICS OF SOILS AND PLANTS**, Dr. Victor Chaplygin, Prof. Dr. Tatiana Minkina, Dr. Dina Nevidomskaya, Prof. Dr. Grigoriy Fedorenko, Dr. Aleksei Fedorenko, Southern Federal University, Russia567

- 75. THE INFLUENCE OF N AND P FERTILIZATION ON SOME CHEMICAL CHARACTERISTICS OF THE SOIL**, Nicoleta Marin, Mihail Dumitru, Carmen Sirbu, Traian Cioroianu, National Research and Development Institute for Soil Science Agrochemistry and Environment ICPA Bucharest, Romania575
- 76. THE INFLUENCE OF NITROGEN AND PHOSPHORUS-BASED FERTILISERS ON THE MUSTARD AND MAIZE PRODUCTION UNDER SOIL AND CLIMATE CONDITIONS IN THE LOWER PLAIN OF BANAT**, PhD. Eng. Cristian I. Sandor Prof. Dsc Gheorghe David Prof. Dsc. Dorin Tarau, Banat University of Agricultural Sciences and Veterinary Medicine King Michael I of Romania from Timisoara, Romania583
- 77. THE INFLUENCE OF THE LATERAL WATER INFILTRATION ON THE ENTOMOFAUNA AND SOIL MESOFAUNA FROM SOME POLYTUNNELS OF NORTH EASTERN ROMANIA**, Dr. Camil Stefan Lungu Constantineanu, Dr. Otilia Ivan, Dr. Adina Calugar, Assoc. prof. Feodor Filipov, National Institute of Research and Development for Biological Sciences, Romania.....595
- 78. THE LEAVES OF ACER PLATANOIDES: POTENTIAL FOOD FOR EARTHWORM EISENIA FETIDA**, Madalina Iordache, Ioan Gaica, Daniel Dicu, Valentina Andriuca, Iacob Borza -University of Agricultural Science and Veterinary Medicine of Banat Timisoara, Romania.....603
- 79. THE METHODS OF RESEARCH OF BURIED SOILS UNDER ARCHAEOLOGICAL SITES**, Puzanova T. A., Aseeva E. N., Lebedeva M.P., Kurbanova F. G., Chernov T.I., Moscow State University, Russia611
- 80. THE NATURAL ENVIRONMENT AND REGIONAL PARTICULARITIES, ELEMENTS THAT ARE DEFINING THE LAND STRUCTURE AND SOIL QUALITY IN LIPOVA HILLS**, Dorin Tarau, Alina Andreea Abrudan, Banat University of Agricultural Sciences and Veterinary Medicine King Mihai I of Romania from Timisoara - Faculty of Food Processing, Romania619
- 81. THE PHYSICAL CHARACTERISTICS OF PERIDOTITE AND AMPHIBOLITE BASED SOILS FROM KAHRAMANMARAS, SE ANATOLIA-TURKEY**, Res. Assist Zekeriya Kara, Assist. Prof. Dr. Tamer Rizaoglu, Prof. Dr. Kadir Saltali, Kahramanmaras Sutcu Imam University, Turkey.....627
- 82. THE PROTECTIVE EFFECT OF PLANTATIONS ON SOIL OF ROADSIDE LANDSCAPES**, Ivanisova N.V., Davydenko N.M., Kurinskaya L. V., Kolesnikov S. I., Don state agrarian University, Russia635
- 83. THE ROLE OF LAND RECLAMATION WORKS ON SOIL EROSION CONTROL IN THE HOMORICIU RIVER WATERSHED AND THEIR IMPACT ON THE SLOPE'S STABILITY**, Phd. Sebastian Barbu, Phd. Marin Alexandru Matache, Phd. Bianca Elena Badulescu, Prof. Nicolae Petrescu, Prof. Sevastel Mircea, University of Agronomic Science and Veterinary Medicine - Bucharest, Romania.....643

- 84. THE USE OF SOIL MESOFAUNA FOR ASSESSMENT OF SOIL ECOSYSTEM**, Z.A. Tukenova, M.B. Alimzhanova, S.Zh.Kazybaeyeva, Kazakhstan Engineering and Technological University, Kazakhstan651
- 85. TOTAL HEAVY METAL CONTENTS IN SERPENTINITE SOILS FROM TÜRKOĞLU-KAHRAMANMARAŞ/TURKEY**, Res. Assist Zekeriya Kara, Assist. Prof.Dr. Tamer Rizaoglu, Prof.Dr. Kadir Saltali, Kahramanmaras Sutcu Imam University, Turkey.....659
- 86. TRANSFORMATION OF SOILS OF THE EAST EUROPEAN FOREST-STEPPE UNDER CONDITIONS OF THE CENTENNIAL CLIMATE FLUCTUATIONS**, Anastasiya Narozhnyaya, Yury Chendev, Lidiya Smirnova, Nataliya Kukharuk, Ivan Vagurin, Belgorod National Research University, Russia....667
- 87. TREATED AND UNTREATED WASTEWATER AS ALTERNATIVE WATER SOURCE IN AGRICULTURE: EFFECT ON SOIL QUALITY, LEACHING OF MINERAL NITROGEN FROM SOIL AND BIOMASS PRODUCTION**, Dr. Jakub Elbl, Dr. Lukas Plosek, Dip. Ing. Antonin Kintl, Assoc. Prof. Dr. Jindrich Kynicky, Dip. Ing. Martin Brtnicky, Mendel University in Brno, Czech Republic.....675
- 88. TUNNEL EROSION AFFECTING A SENSITIVE LANDSCAPE**, Assoc. Prof. Filipov Feodor, Drd. Capsuna Sorin, Dr. Raducu Daniela, Prof. Jitareanu Gerard, University of Agricultural Sciences and Veterinary Medicine Iasi, Romania683
- 89. URBAN SOILS POLLUTED WITH HEAVY METALS AND HEALTH**, Anca Lacatusu, Radu Lacatusu, National Research and Development Institute for Soil Science Agrochemistry and Environment, Romania691
- 90. WATER INFILTRATION AFTER DRIP IRRIGATION IN THE SLIGHT ERODED CHERNOZEMS FROM SLOPE LAND OF SMALL RIVER BASIN REDIU, ROLLING HILL JIJIA-BAHLUI (ROMANIA)**, Oprea Radu, Minodora Ailenei Radu, Feodor Filipov, University of Agriculture and Veterinary Medicine Iasi, Romania.....699
- 91. WATERLOGGING OF GROUNDWATER ORIGIN AND CRITICAL MINERALIZATION AS PROCESSES OF SOIL DEGRADATION RESULTING FROM NATURAL SPECIFIC CONDITION, WITHIN DOLJ COUNTY, ROMANIA**, Popescu Cristian, University Of Craiova, Romania 707
- 92. SUITABILITY OF CONSERVATION AGRICULTURE ON ECO-PEDOLOGICAL CONDITIONS OF ROMANIA**, Dr. Anca-Rovena Lăcătușu, Dr. Lavinia Burtan, Dr. George Andrei Vrînceanu, Dr. Daniel Țopa, Prof. Dr. Mihail Dumitru - National Research and Development Institute for Soil Science, Agricultural Chemistry and Environment – ICPA Bucharest, Romania 715

FOREST ECOSYSTEMS

- 93. ANTI-INFLAMMATORY AND ANTI-MICROBIAL ACTIVITY OF FATTY OILS OF PUMPKIN SEEDS (*Cucurbita moschata*) HARVESTED IN BOUIRA (ALGERIA)**, Nadjiba Meziou -Chebouti, Behidj Nassima, Amel Merabet, Soumeya Fekkoun, Meriem Tani, Fatima Djeddi, Universite MHamed Bougara Boumerdes, Algeria725
- 94. APPLYING OF ACUSTIC TOMOPGRAPHY AS A DECISION SUPPORT TOOL FOR FORESTS MANAGEMENT IN PROTECTED AREAS**, Prof. Jaroslav Simon, Assoc. Prof. Ivo Machar, Assoc. Prof. Vilem Pechanec, Palacky University in Olomouc, Czech Republic733
- 95. BLUE INTENSITY IN LARIX SIBIRICA TREE RINGS AS A NEW PALAEOCLIMATE PROXY IN ALTAI, RUSSIA**, PhD. Dmitriy Ovchinnikov, Anastasiya Eremina, Svjatoslav Ovchinnikov, Institute of Forest SB RAS, Russia.....741
- 96. CHAOTIC ANALYSIS OF DISTURBANCE REGIME IN THE PRIMARY FORESTS**, Radko Kriz, University of Hradec Kralove, Czech Republic749
- 97. CLEARCUT FELLING STOCK DETERMINATION COSTS, PRECISION AND TIME CONSUMPTION IN HYLOCOMIOSA – CASE STUDY IN MIDDLE PART OF LATVIA**, Dubrovskis E., Mieziute O., Ruba J., Latvia University of Agriculture, Latvia757
- 98. CLIMATE CHANGE TRENDS IN LANDSCAPES OF SAMTSKHE-JAVAKHETI**, Dali Nikolaishvili, Lamzira Lagidze, Mariam Tsitsagi, Maia Tskhvaradze, Mzia Kubetsia, Ivane Javakhishvili Tbilisi State University, Georgia765
- 99. DEPOSITION CHEMISTRY IN CONIFEROUS STANDS IN BULGARIA**, Sonya Damyanova, Emilia Velizarova, Radka Fikova, University of Forestry, Bulgaria773
- 100. EFFECT OF GROWTH CONDITIONS ON QUALITATIVE CHARACTERISTICS OF CHAGA MUSHROOM**, Ruslan R. Safin, Evgeny Y. Razumov, Ruslan R. Khasanshin, Valeriy V. Gubernatorov, Ksenia V. Saerova, Kazan National Research Technological University, Russia781
- 101. EFFECT OF THE ESSENTIAL OIL OF MENTHA PIPERITA AND THYMUS NUMIDICUS ON THE GROWTH OF FUSARIUM SP**, Prof. Dr. Nassima Behidj, Dr. Nadjiba Chebouti, Thoraya Dahmene, Rosa Daoudi, Esma Rahmoune, Universite M Hamed Bougara Boumerdes, Algeria789
- 102. ENERGY WOOD RESOURCES IN UNDERGROWTH AND UNDERSTOREY OF MYRTILLOSA MEL. FOREST SITE TYPE IN LATVIA**, Aigars Indriksons, Martins Graudums, Latvia University of Agriculture, Latvia797

- 103. FOREST STAND INDICES IN AREAS WITH DIFFERENT EARTH MAGNETIC FIELD IN OGRE REGION IN LATVIA**, Aigars Indriksons, Sandra Galina, Ludmila Kartunova, Latvia University of Agriculture, Latvia805
- 104. GIS-BASED ANALYSIS OF THE TREE HEALTH PROBLEMS USING UAV IMAGES AND SATELLITE DATA**, Maria Asenova, University of Forestry, Bulgaria813
- 105. IMPACT OF ABIOTIC AND BIOTIC FACTORS ON ENGLISH OAK QUERCUS ROBUR L. PLANTS AFTER WINTERING IN TREE NURSERIES IN LATVIA**, Aigars Indriksons, Solvita Krodziniece, Olga Miezite, Latvia University of Agriculture, Latvia821
- 106. IMPLEMENTATION OF THE METHOD OF VARYING INTENSITY IN FOREST ECOSYSTEMS WITH A PREDOMINANCE OF LINDEN TREES**, Vladimir Zakamskii, Darya Egoshina, Volga State University of Technology, Russia829
- 107. INTENSIFICATION OF WATER EXTRACTION PROCESS OF CHAGA BY MEANS OF RECURRENT PRESSURE REDUCTION OF THE MEDIA**, Evgeny Y. Razumov, Ruslan R. Safin, Maria A. Sysoeva, Venera R. Khabibrakhmanova, Valeriy V. Gubernatorov, Kazan National Research Technological University, Russia.....835
- 108. LODGEPOLE PINE GROWTH QUALITY AND ECONOMICAL EVALUATION IN LATVIA**, Dr. Linards Sisenis, Prof. Irina Pilvere, Dr. Aleksejs Nipers, Mg. Edgars Dubrovskis, Mg. Baiba Džeriņa, Latvia University of Agriculture, Latvia843
- 109. MATH MODELING AS A WAY OF INTENSIFICATION OF TIMBER PROCESSING AND FOREST MANAGEMENT PROCESSES**, Julia Shchepelina, Mikhail Derbin, Kristina Isaeva, Evgenij Sedakov, Viktoriya Seryodkina, Northern Arctic Federal University named after M.V. Lomonosov Forest Engineering Institute, Russia851
- 110. MATHEMATICAL MODEL TO SIMULATE ANTHROPOGENIC LOADING AROUND POINT SOURCE IN ONE-DIMENSIONAL STATEMENT**, Nikolay V. Baranovskiy, National Research Tomsk Polytechnic University - Institute of Power Engineering, Russia.....857
- 111. NEW PEST CONTROL METHODS AGAINST STEREO NYCHUS FRAXINI DEGEER (COLEOPTERA: CURCULIONIDAE)**, dr. Tatiana Blaga, dr. Lucian Dinca, Ioana Plesca, Emilia Vechiu, dr. Cristinel Constandache, National Institute for Research and Development in Forestry Marin Dracea, Romania863
- 112. OPTIMIZATION OF SHELTERBELTS IN THE STEPPE ZONE OF UKRAINE IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT**, Tatiana Boiko, Pavel Boiko, Denys Breus, Kherson State Agricultural University, Ukraine ...871

- 113. PRODUCTION OF NON-WOOD FOREST PRODUCTS IN LATVIA**, Aina Mushka, Latvia University of Life Sciences and Technologies, Latvia.....877
- 114. PRODUCTION OF PHYTOMASS CARBON IN THE DARK CONIFEROUS FOREST OF THE WESTERN SIBERIA**, Koshurnikova N.N., Makhnykina A.V., Garmash A.A., Zlenko L.V., Verkhovets S.V., Siberian Federal University, Russia.....885
- 115. SAPLINGS HEIGHT GROWTH DYNAMICS IN TREELINE ECOSYSTEMS FROM EASTERN CARPATHIANS**, Popa Ionel, Nechita Constantin, Semeniuc Anca, Timis Voichita, University of Oradea, Romania893
- 116. SEASONAL VARIATION OF MINERAL NUTRITION FOR SESSILE OAK (QUERCUS PETRAEA (LIEBL.))**, Dr. eng. Raluca Enescu, Dr. eng. Vlad Crisan, Dr.eng. Diana Vasile, Dr.eng. Virgil Scarlatescu, Dr.eng. Gheorghe Sparchez, National Institute for Research and Development in Forestry Marin Dracea, Romania901
- 117. STRUCTURE AND FUNCTIONING OF SOME FOREST ECOSYSTEMS LOCATED IN TIMIȘ, BEGA AND ARGEȘ RIVER MEADOWS IN ROMANIA**, Dr. Florin Matei, Nicolae Cadar, National Institute for Research and Development in Forestry, Romania909
- 118. STUDY OF IMPACT OF A SMALL DRAFT RAFTING UNIT OVERALL DIMENSIONS ON THE HYDRODYNAMIC RESISTANCE**, Assoc. Prof. Pavel Perfiliev, Assoc.Prof. Natalia Zadrauskaite, Assoc.Prof. Natalia Glavatskih, Northern Arctic Federal University, Russia.....917
- 119. STUDY OF THE STABILITY OF ALEPPO PINE WITH A VIEW TO A SYLVICULTURAL MANAGEMENT PLAN**, Rached-Kanouni Malika, Kara Karima, Hadeff Azzedine, Larbi Ben Mhidi Oum El Bouaghi, Algeria925
- 120. TECHNICAL SOLUTIONS TO AVOID CALAMITY EFFECTS ON FORESTRY ROADS**, Eng. Adelin Stirb, Student. Lecturer Eng. Paul Marc, Ph.D. Eng. Andrei Forton, Ph.D. Student, Politehnica University of Timisoara, Romania....933
- 121. THE EFFECT OF CLIMATIC CHANGES OVER SOME ROMANIAN FOREST ECOSYSTEMS**, Dr.Cristinel Constandache, Dr.Lucian Dinca, Laurentiu Popovici, Cosmin Braga, Dr.Tatiana Blaga, National Institute for Research and Development in Forestry Marin Dracea, Romania.....941
- 122. THE EXPERIMENTAL BASE FOR DETERMINING THE FORM OF THE AEROSTATIC BEARINGS SEALING GROOVE**, M. Derbin, E. Sedakov, V. Seryodkina, J. Shchepelina, Northern Arctic Federal University named after M.V. Lomonosov Forest Engineering Institute, Russia.....949
- 123. THE GROWTH COURSE OF PLANTED SCOTS PINE (PINUS SYLVESTRIS L.) YOUNG STANDS IN LATVIA**, Aigars Indriksons, Reinis Andersons, Latvia University of Agriculture, Latvia957

- 124. THE ISSUE OF INCREASING FOREST COVER IN POLAND**, Katarzyna Sobolewska-Mikulska, Warsaw University of Technology, Poland.....965
- 125. THE MODEL OF ENVIRONMENTAL ASSESSMENT OF COMPLEX LANDSCAPE SYSTEMS**, Anatoliy Obshta, Tetiana Bubela, Maria Ruda, Roman Kochan, Lviv Polytechnic National University, Ukraine.....973
- 126. THE NATURAL AND SOCIAL – ECONOMIC ENVIRONMENT, ELEMENTS WHICH DEFINE THE STRUCTURAL AND ORGANIZATIONAL FRAME IN MANAGING THE WASTES FROM THE COUNTY OF TIMIS**, Tarau Dorin, Ursu Romeo Petru, Banat University of Agricultural Sciences and Veterinary Medicine King Mihai I of Romania from Timisoara - Faculty of Food Processing, Romania981
- 127. THEORETICAL MODEL FOR EVALUATION OF TRACTIVE PERFORMANCE OF FORESTRY MACHINE’S WHEEL**, Prof. Viktor Ivanov, Assoc. Prof. Dr. Marina Stepanishcheva, Assoc. Prof. Egor Khitrov, Assoc. Prof. Dmitriy Iliushenko, Saint-Petersburg State Forest Technical University named after S.M. Kirov, Russia997
- 128. THEORETICAL MODELS FOR RUT DEPTH EVALUATION AFTER A FORESTRY MACHINE’S WHEEL PASSOVER**, Prof. Alexandr Kochnev, Assoc. Prof. Egor Khitrov, Saint-Petersburg State Forest Technical University named after S.M. Kirov, Russia1005
- 129. TIMING OF SPRING PHENOLOGICAL PHASES OF BIRD CHERRY AND SILVER BIRCH UNDER CLIMATE CHANGE IN 21ST CENTURY IN LATVIA**, Andis Kalvans, Gunta Kalvane, University of Latvia, Latvia1013
- 130. TO THE QUESTION ABOUT THE EFFICIENCY USING OF BOILER PLANTS ON THE CHIPWOOD**, M. Derbin, V. Seryodkina, J. Shchepelina, E. Sedakov, Northern Arctic Federal University named after M.V. Lomonosov Forest Engineering Institute, Russia.....1021
- 131. TREE DEFECTS IMPACT ON PICEA ABIES (L.) H. KARST STANDS QUALITY**, Ruba J., Dubrovskis E., Miezite O., Latvia University of Agriculture, Latvia.....1029
- 132. UPDATING THE RED LIST OF THREATENED, ENDANGERED AND RARE FOREST HABITATS FROM ROMANIA**, Dr. eng. Diana Vasile, Dr. eng. Virgil Scarlatescu, Dr.eng. Liviu Ciuvat, Dr.eng. Raluca Enescu, Dr.eng. Vlad Crisan, National Institute for Research and Development in Forestry Marin Dracea, Romania.....1037
- 133. WOOD QUALITY POTENTIAL AS A CRITERION FOR FOREST MANAGEMENT**, Assoc. Prof. Zadrauskaite Natalia, Assoc.Prof. Perfiliev Pavel, Assoc. Prof. Glavatskih Natalia, Northern Arctic Federal University, Russia.....1045

- 134. TIMING OF CELL PRODUCTION IN TREE RINGS: AN AUTOMATIC TWO-STEP PROCEDURE IN R**, Daria Belousova, Margarita Popkova, Dr. Elena Babushkina, Prof. Vladimir Shishov -Institute of Space and Information Technologies, Siberian Federal University, Russia1053

MARINE AND OCEAN ECOSYSTEMS

- 135. A CONCEPT OF A MODEL FOR THE MANAGEMENT OF SHIP-GENERATED WASTE AND CARGO RESIDUES IN A PORT AREAS**, Agnieszka Deja, Paulina Kabulak, Magdalena Kaup, Maritime University of Szczecin, Poland1063
- 136. ANALYSIS OF THE EXTREME EVENTS REPORTED IN THE PROXIMITY OF THE ROMANIAN HARBOUR AREAS**, Drd. Vasile Rata, Prof. Liliana Rusu, Assoc. Prof. Carmen Gasparotti, Dunarea de Jos University of Galati, Romania.....1071
- 137. ANALYSIS OF WASTE COLLECTED FROM PASSENGER-CARGO FERRIES AT THE PORT OF SWINOUJSCIE**, Agnieszka Deja, Paulina Kabulak, Magdalena Kaup, Maritime University of Szczecin, Poland1079
- 138. BIOPHYSICAL AND BIOCHEMICAL METHODS AT THE COASTAL ZONE MONITORING**, Ekaterina Skuratovskaya, Olga Mashukova, Inna Sysoeva, Olga Danilova, Institute of Marine Biological Research, Russia.....1087
- 139. COMPARATIVE UV-VIS SPECTRAL STUDIES ON CHITOSAN FROM DIFFERENT MARINE ORGANISMS**, Carla Paduretu, Manuela R Apetroaei, Sorin Ilie Damian, Marius G. Apetroaei, Verginica Schroder, National Research And Development Institute For Textiles And Leather - Division The Leather And Footwear Institute, Romania.....1095
- 140. DISTRIBUTION OF RADIOCAESIUM IN ARCTIC MARINE SEDIMENTS**, Assoc. Prof. Denis Alexeev, Prof. Vladislav Shelutko, Assoc. Prof. Elena Mikhteeva, Snr. Lecturer Liliia Dmitricheva, Russian State Hydrometeorological University, Russia.....1103
- 141. DISTRIBUTION OF THE ZOOPLANKTON ECOLOGICAL COMPLEXES IN THE EASTERN PART OF THE GULF OF FINLAND OF THE BALTIC SEA**, Assoc. Prof. Dr. Natalia Silina, Assist. Prof. Dr. Elena Kunaeva, Assoc. Prof. Dr. Maria Lebedeva, Pushkin Leningrad State University, Russia.....1111
- 142. ECOSYSTEMS OF SUBARCTIC SEAS OF RUSSIA AS A LARGE RESERVOIR OF THE RUNOFF AND DEPOSITION OF ATMOSPHERIC CARBON**, Dr. Elena Shirkova, Dr. Eduard Shirkov, Vitaliy Masnev, Kamchatka Branch of Pacific Geographical Institute, Russia.....1119

- 143. ESTIMATION OF THE TRACE METALS ACCUMULATION IN BOTTOM SEDIMENTS AND THEIR CONNECTION WITH THE GRANULOMETRIC COMPOSITION**, Konstantin Gurov, Ekaterina Kotelyanets, Marine Hydrophysical Institute of RAS, Russia1127
- 144. FACILITATION OF COMPETITIVENESS IN LATVIAN FISHERY SECTOR**, Inese Biuksane, Riga Technical University, Latvia1135
- 145. FEATURES OF WATER DYNAMICS IN SEMI ISOLATED TIDAL ESTUARY OF THE KANDALAKSHA BAY OF THE WHITE SEA**, Ionov V., Rubchenia A., May R., Smagin R., Saint Petersburg State University - Institute of Earth Sciences, Russia1143
- 146. MEASURES OF EFFICIENT ENERGY USE FOR A FISHING VESSEL - PROPOSALS**, Zbigniew Matuszak, Maritime University of Szczecin-Faculty of Mechanical Engineering, Poland.....1151
- 147. NEW ANTI - POLLUTING MARINE BIOMATERIAL IDENTIFICATION**, Manuela R. Apetroaei, Brandusa C Chiotoroiu, Dinu V Atodiresei, Ileana Rau, Verginica Schroder, National Research And Development Institute For Textiles And Leather - Division The Leather And Footwear Institute, Romania1159
- 148. REMARKS ON NOVEL CASE STUDIES FOR INTEGRATED POLLUTION PREVENTION IN BALTIC SEA REGION**, Juris Burlakovs, Kaur-Mikk Pehme, Olga Anne, Mait Kriipsalu, William Hogland, University of Latvia, Latvia1167
- 149. REMARKS ON THE USEFULNESS OF THE COMPUTER PROGRAMME AIDING EXPLOITATION OF THE FISHING VESSEL**, Zbigniew Matuszak, Maritime University of Szczecin-Faculty of Mechanical Engineering, Poland.....1175
- 150. SEASONAL, INTERANNUAL AND SPATIAL VARIABILITY OF BIOLUMINESCENCE FIELD IN THE NORTHERN BLACK SEA REGION**, Dr. Irina Serikova, Dr. Olga Mashukova, Dr. Vladislav Evstigneev, Institute of Marine Biological Research, Russia1183
- 151. SIGNS OF PALEOSOL FORMATION IN BASHKIRIAN CARBONATE ROCKS OF VOLGA-URAL REGION**, Kolchugin A.N., Korolev E.A., Eskin A.A., Petrova D.I., Barieva E.R., Kazan (Volga Region) Federal University, Russia1191
- 152. SULFUR GAS OF VOLCANIC ERUPTIONS AS A PROBABLE CAUSE OF ALTERATIONS AND CRISES IN THE MESOZOIC ECOSYSTEMS**, O.N. Zlobina, E.A. Predtechenskaya, A.A. Zlobin, Trofimuk Institute of Petroleum Geology and Geophysics SB RAS, Russia1197
- 153. THEORETICAL AND EXPERIMENTAL STUDY OF TURBULENT GAS FLOW THROUGH A PNEUMATIC MECHANISM**, Tamara Stanciu, Anca Constantin, Ovidius University of Constanta, Romania1205