



Latvia University of
Agriculture

12th International Scientific Conference
STUDENTS ON THEIR WAY TO SCIENCE
(undergraduate, graduate, post-graduate students)
Collection of Abstracts
April 21, 2017

Jelgava
2017

ISSN 2255-9566

STUDENTS ON THEIR WAY TO SCIENCE

(undergraduate, graduate, post-graduate students)

Collection of abstracts from the 12th International Scientific Conference. – Jelgava, 2017. – 159 p.

CONFERENCE COMMITTEE

Chairperson

Voldemars Bariss, Dr.phil., Associate Professor, Latvia University of Agriculture (Latvia)

Members

Daina Grasmane, Dr.paed., Assistant Professor, Latvia University of Agriculture (Latvia)

Jiri Masek, Ing., Ph.D., Vice-dean for Teaching and Learning, Czech University of Life Sciences in Prague (Czech Republic)

Olga Vetrova, Ph.D., Professor, Peter the Great Saint Petersburg Polytechnic University (Russia)

Rozalija Radlinskaite, Head of the International Office, Alytaus Kolegija University of Applied Sciences (Lithuania)

Romualdas Povilaitis, PhD, Assistant Professor, Aleksandras Stulginskis University (Lithuania)

Nadezda Stojkovic, Dr.paed., Assistant Professor, University of Niš (Serbia)

Zigrida Vincela, Dr.philol., Assistant Professor, University of Latvia (Latvia)

Arnīs Mugurevics, Dr.med.vet., Professor, Latvia University of Agriculture (Latvia)

Larisa Malinovska, Dr.paed., Professor Emeritus, (Latvia)

STEERING COMMITTEE

Chairperson

Inese Ozola, Dr.philol., Assistant Professor, Head of Language Centre

Members

Aina Dobeļe, Dr.oec., Professor, Faculty of Economics and Social Development

Sandra Gusta, Dr.oec., Associate Professor, Faculty of Environment and Civil Engineering

Laima Liepa, Dr.oec., Associate Professor, Faculty of Veterinary Medicine

Līga Zvirgzdiņa, Dr.oec., Assistant Professor, Deputy Dean, Faculty of Information Technologies

Vita Cintiņa, Mg.sc.ing., Lecturer, Faculty of Environment and Civil Engineering

Gita Krūmiņa-Zemture, Mg.cib.hyg., Deputy Dean, Faculty of Food Technology

Irina Sivicka, Mg.agr., Lecturer, Faculty of Agriculture

Larisa Turuseva, Dr.paed., Assistant Professor, Language Centre

Janis Kjakste, Mg.sc.ing., Faculty of Engineering

Solveiga Luguza, Mg.silv., Lecturer, Forest Faculty

Editorial board:

Inese Ozola, Dr.philol., Assistant Professor

Daina Grasmane, Dr.paed., Associate Professor

Larisa Turuseva, Dr. paed., Assistant Professor

Diana Svika, Mg.paed., Lecturer

Irina Orlova, Mg.philol., Lecturer

Joseph Horgan, Mg.paed., Lecturer

Technical editors:

Jānis Trepša

Artis Lapa

The conference is aimed at dissemination of scientific research results, sharing of experience, improvement of foreign language and cross-cultural communication skills, and establishing of international contacts.

Contents

AGRICULTURE	9
Barčauskaitė K., Mažeika R. EFFECT OF NAPHTHALENE ON SPRING BARLEY GERMINATION AND AMOUNT OF GREEN MASS	10
Bernande K., Gaile Z. FABA BEAN YIELD IN ORGANIC AND CONVENTIONAL GROWING SYSTEM	11
Daumanis A., Vircava I. PHOSPHORUS ACCUMULATION IN SOILS UNDER DIFFERENT TILLAGE SYSTEMS	12
Freimane L., Alsiņa I. THE EFFECT OF DOUBLE INOCULATION ON PROTEIN CONTENT OF PEAS	13
Gailums E., Karklins A. SOIL PHYSICAL PROPERTIES AND FERTILISER RECOMMENDATIONS	14
Halzovs J., Dubova L. THE LATGALE MELON CLONING IN VITRO AND ACCLIMATIZATION	15
Heimanis O., Karklins A. SOIL MODIFICATION METHODS FOR HIGHBUSH BLUEBERRY PLANTATIONS	16
Ivanova E., Kampuss K., Laugale V. EVALUATION OF THE NETHERLANDS' STRAWBERRY CULTIVARS IN LATVIA CONDITIONS	17
Kaņeps J., Bankina B. MAIN CAUSAL AGENTS OF WHEAT CROWN ROT IN LATVIA	18
Konavko A., Ruža A. QUALITY OF WINTER WHEAT GRAINS DEPENDING ON AGRONOMIC PRACTICES	19
Koškins R., Ruža A. FABA BEAN (VICIA FABA VAR. MINOR) YIELD DEPENDING ON SOIL TILLAGE	20
Kysliuk V., Kysliuk V., Hrynyk H., Hrynyk O. CHARACTERISTICS OF VEGETATIVE REPRODUCTION TYPE OF THE GUELDER ROSE (VIBURNUM OPULUS)	21
Lapiņa L., Pakalns A., Gaile Z. EFFECT OF FIELD BEANS' SEED TREATMENT WITH RHYZOBIIUM BACTERIA	22
Ozoliņa L. K., Jonkus D. GENETIC PARAMETERS' ANALYSIS OF DIFFERENT ORIGIN CHAROLAIS SIRE PROGENY GROWTH RATES	23
Plūduma I., Gaile Z. FIELD BEANS' YIELD AND QUALITY DEPENDING ON AGROTECHNOLOGY	24
Priedītis U., Gaile Z. EVALUATION OF MALTING BARLEY YIELD AND QUALITY IN 2016	25
Rubinova R., Timoshenko V., Panysheva T. MATHEMATICAL MODELLING IN AGRICULTURE	26
Tiberiu-Ionut T., Popescu C. G. SOME CONSIDERATIONS ON ACTUAL ROMANIAN VITICULTURAL SECTOR	27
Tiberiu-Ionut T., Sivicka I. SOME CONSIDERATION ABOUT GROWING PAULOWNIA TREES	28
Tokusheva A., Kreismane D. CURRENT STATE OF AGRICULTURAL LANDS IN KAZAKHSTAN	29
Treguba A., Bankina B. LEAF DISEASES OF FABA BEANS	30
Vecvagars J., Kairiša D. ANALYSIS OF INTENSIVELY FATTENED LAMBS CARCASSES' QUALITY	31
Višniauskė I., Bakšienė E., Mažeika R. COMPOST AS ONE OF THE BEST ORGANIC FERTILIZERS FOR THE SOIL ORGANIC MATTER PRESERVATION	32
VETERINARY MEDICINE	33
Brente J., Liepa L. CORRELATION BETWEEN COWS' DAILY RUMINATION TIME, PRODUCTIVITY, LACTATION AND HEALTH	34
Dauliūtė R., Kučinskas A. OVERVIEW OF EQUINE GASTRIC ULCERATION SYNDROME (EGUS) IN 150 HORSES IN LITHUANIA	35
Grasbergs A., Šematoviča I. EMBRYO FLUSHING AND TRANSFER METHODS IN CATTLE	36
Kalniņa A., Valdovska A., Dūrītis I., Joffe R. INVESTIGATION OF BIOACTIVE PRINCIPLES OF SOME ESSENTIAL OILS	37

Mateusa M., Deksnė G., Keidāne D. FACTORS ASSOCIATED WITH GASTROINTESTINAL PARASITE INFECTIONS IN DOGS AND CATS	38
Putniņa S., Lisoška M., Liepa L. RELEVANCE OF URINE pH DETECTION IN THE PROGNOSIS OF COW POSTPARTUM HYPOCALCEMIA AND FACTORS INFLUENCING THIS CORRELATION	39
Rieksta Z., Ilgašs A. COGNITIVE DYSFUNCTION SYNDROME IN DOGS.....	40
Viselga T., Bižokas V. BREED, SEX, AND TIME INFLUENCE ON CANINE CRANIAL CRUCIATE LIGAMENT RUPTURE.....	41
Zute J., Lūsis I. IMMUNITY DYNAMICS AGAINST INFECTIOUS BRONCHITIS IN VACCINATED COMMERCIAL LAYERS.....	42
FOOD SCIENCE.....	43
Andreev A., Boitsova E. INFLUENCE OF RAW FOODISM ON HUMAN HEALTH.....	44
Baumane L., Galoburda R., Klava D. RHEOLOGICAL PROPERTIES OF MILK	45
Bazhenova T., Bazhenova I. RESEARCH OF BIOCHEMICAL AND MORPHOLOGICAL CHANGES OF MILLET CROPS AT GERMINATION	46
Davis D. Kirse A., Karklina D. INVESTIGATION OF PROBIOTIC DAIRY DRINKS	47
Dzenīte K., Bulgakova A., Rogovs E., Miķelsons V. TOTAL PHENOL AND ANTIOXIDANT CONTENT IN VARIOUS PROCESSED POLLENS.....	48
Kudriashova T., Ivanchenko O. ASSESSMENT OF FLOCCULATION ACTIVITY OF DRY BREWER'S YEAST SACCHAROMYCES CEREVISIAE	49
Ozoliņa U., Kampuse S. Chamomile, Calendula, mint and yarrow tea beverage production	50
Seglins-Grinblats K., Skudra L. INFLUENCE OF MILK READY GRAINS ON LACTIC ACID BACTERIA GROWTH IN SOURDOUGH.....	51
Shaykhattarova E., Bazhenova I. DEVELOPMENT OF BERRY AND VEGETABLE YOGURTS USING MULTI-STEMMED STARTERS	52
Sokolova A., Filippova A., Ivanchenko O. INVESTIGATION OF ANTIOXIDANT COMPONENTS IN THE ORANGE PEEL CITRUS SINENSIS	53
ENGINEERING	54
Aponas Ž., Brazionienė I. INTELLIGENT TRANSPORT SYSTEMS FOR THE CARGO TRANSPORT PROCESSES' OPTIMISATION	55
Grefelytė S., Šiuškaitė A., Kundrotaitė D., Sūdžiuvienė R., Gerikienė V. IMPACT OF POSITIVE AND NEGATIVE ULTRAVIOLET RADIATION ON THE HUMAN BODY	56
Gylis J., Milius R., Abromavičienė D., Šaulys P. REFLECTORS – SAFETY HELPERS	57
Naujokas M., Milius R., Rakauskienė B., Bartkevičiūtė R. LIGHT SOURCES IN CARS	58
Stanis V., Stirbys L., Sūdžiuvienė R., Gerikienė V. LIFE IN ELECTROMAGNETIC WAVES: Problems and solutions.....	59
INFORMATION TECHNOLOGIES	60
Baranovska E., Čeverė R. DEVELOPMENT OF EVOLUTION CRITERIA FOR SOFTWARE LIFE CYCLE MODELS	61
Belvovs A., Šmits I. DEVELOPMENT OF AUTOMATIC WEB PAGE CLASSIFICATION SYSTEM USING TF-IDF WEIGHTING.....	62
Ivanova I., Vītols G. "GLOCALIZATION" STRATEGY IN WEBSITE DESIGN	63
Kazaine I., Arhipova I. DEVELOPMENT OF SELF-ASSESSMENT TOOL FOR E-LEARNING MATERIAL	64

Kuzmin V., Panysheva T. A NEW APPROACH TO STUDYING ENGLISH FOR SPECIAL PURPOSES	65
Landmane K., Komašilovs V. GLASS SHEETS CUTTING STOCK PROBLEM ALGORITHM SURVEY	66
Lācis A., Vītols G. CLUSTER COMPUTING SOLUTIONS FOR BIG DATA MANAGEMENT	67
Leja M. J., Arhipova I. EFFICIENCY AND EFFECTIVENESS OF STUDY PROGRAMMES IN INFORMATION TECHNOLOGIES	68
Poļakova M., Vītols G. METHODS FOR ANALYSIS OF BIG SPATIAL DATA	69
Roberts A., Osadčuks V. HOME BREWING MONITORING SYSTEM.....	70
Siemaškēvičs T., Rubina T. MODELLING OF HEATWAVE TRANSFER PROCESS	71
Štāls M., Vītols G. COMPARISON OF CROSS-PLATFORM MOBILE DEVELOPMENT ENVIRONMENTS.....	72
RURAL ENGINEERING AND ENVIRONMENT	73
Abramchuk Y., Zuyeu U. ENVIRONMENTAL MANAGEMENT OF KARST LAKES OF THE BREST REGION. 74	
Arkliņa D., Baumane V. ANALYSIS OF LAND USE IN MUNICIPALITY OF LATVIA.....	75
Belkus S., Baumane V. AMENDMENTS ON TRANSACTION WITH AGRICULTURAL LAND.....	76
Cera Z., Baumane V. GEOSPATIAL INFORMATION SYSTEM	77
Čanižs N., Baumane V. CADASTRE VALUE IN LATVIA	78
Daudaitē D., Gurskienē V. THE CHANGE OF RESIDENTIAL AREAS IN TRAKAI DISTRICT	79
Freiberga A., Baumane V. THE EVALUATION OF THE ABANDONED MILITARY OBJECT „ZVAIGZNITE” .80	
Geduševa A., Palabinska A. LOCAL PLAN FOR ALLOTMENT GARDENS’ AREA IN ZILAIŠKALNS VILLAGE 81	
Grants E., Bukšns E., Šteinerts A. FIRE SAFETY DESIGN AND MODELLING OF MULTI-STORY TIMBER BUILDINGS	82
Gribkova M., Lukashova A., Penyevsckaya A., Romanova K., Shirokov A., Ericsson T., Ignatieva M. RESEARCH OF VISITING PATTERNS IN THE SPBFTU CAMPUS AS A BASE FOR FUTURE DEVELOPMENT .83	
Grigaitytė L., Valčiukienė J. CHANGE OF RESIDENTIAL AREAS AND THEIR NETWORK: A CASE STUDY IN KAUNAS DISTRICT (LITHUANIA)	85
Janušas D., Einikis A., Ovaltaitė V., Vaičekauskienė V. ECONOMIC ANALYSIS OF MULTISTORY HOUSES RENOVATION IN LITHUANIA.....	86
Kancāne U., Ziemeļniece A., Īle. RECREATIONAL ENVIRONMENT FOR CHILDREN IN ĀDAŽI	87
Karkluvalka E., Parsova V. ACCESS TO LAND PARCELS DUE TO RAILWAY LINE RAIL BALTICA.....	88
Kasnauskas L., Beniūšienė G., Ovaltaitė V. CONSTRUCTION ANALYSIS OF REDUCED WEIGHT FLOORING	89
Katlapa A., Zigmunde D. PERCEPTION OF THE POST-INDUSTRIAL LANDSCAPE	90
Kazlauskienė G., Tiškutė-Memgaudienė D. CHANGES OF FOREST COVER AND SPATIAL DISTRIBUTION IN THE LANDSCAPE OF ALYTUS COUNTY OVER THE PAST CENTURY	91
Keiva M., Grinfelde I. DEVELOPMENT OF SUSTAINABLE URBAN RAIN WATER MANAGEMENT AND DRAINAGE SYSTEMS IN LATVIA’S CLIMATE CONDITIONS	92
Keivs M., Ozola L. BEHAVIOUR OF CROSS LAMINATED TIMBER ELEMENTS IN ZONES OF BENDING MOMENT AND SHEAR FORCE	93
Konošonoka D., Jankava A. ELIMINATING THE RISKS OF LAND DEGRADATION IN THE MANAGEMENT OF STATE ROAD INFRASTRUCTURE.....	94
Krenciūtė A., Tiškutė-Memgaudienė D. EFFECT OF DRAINAGE SYSTEM CONDITION ON LAND USE	95

Kukule I., Baumane V. COMPARISON OF TERRITORIAL PLANNING IN LATVIA AND ENGLAND	96
Makštutytė T., Pašakarnis G. CHANGE AND CONDITION OF AGRICULTURAL LAND AREAS IN MAŽEIKIAI DISTRICT	97
Matakaitė J., Gurskienė V. ANALYSIS OF DERELICT AND ABANDONED BUILDINGS IN VARENA DISTRICT MUNICIPALITY	98
Matulevičiūtė A., Valčiukienė J. ANALYSIS OF ALYTUS CITY GREENERY SYSTEM	99
Matulionytė N., Atkocevičienė V. APPLICATION OF UKMERGE DISTRICT'S NATURAL RESOURCES FOR ECOTOURISM (GREEN TOURISM)	100
Mičure L., Paršova V. THE LEGISLATION OF THE AGRICULTURAL LAND MARKET IN LATVIA	101
Miniotaitė J., Kundrotaitė I., Sodienė V., Beniušienė G. INVESTIGATION OF CONCRETE PROPERTIES MODIFIED BY SUPERPLASTICIZERS	102
Naujokaitytė G., Gurskienė V. IMPLEMENTATION OF THE LAND CONSOLIDATION PROJECT IN PART OF ŠAKIAI DISTRICT PLOKŠČIAI CADASTRAL AREA	103
Ozoliņa S., Paršova V. AGRICULTURAL LAND MARKET IN LATVIA	104
Paveļčuks H., Celms A. USE OF UNMANNED AERIAL VEHICLE TECHNOLOGIES FOR GEODETIC NETWORK RECONSTRUCTION	105
Pilecka J., Grīnfelde I. PEAT EXTRACTION IMPACT ON HYDROLOGICAL REGIME OF RAISED BOG	106
Platūke D., Gurskiene V., Parsova V. REAL ESTATE CADASTRE IN LITHUANIA AND LATVIA.....	107
Spāģe A., Ziemeļniece A., Īle U. HISTORICAL LANDSCAPE OF THE TEBRA RIVER IN AIZPUTE	108
Stonkus T., Gusta S. EMPLOYEES' MOTIVATION IN VARIOUS COMPANIES	109
Špaks D., Gusta S. EXISTING BUILDING ENERGY EFFICIENCY IMPROVEMENT	110
Vasyte J., Kupsys M., Kukliene L., Kuklys I., Jankauskiene D. OBJECTS DIGITIZATION OF SCULPTURE PARK IN KLAIPEDA CITY.....	111
Veličkaitė I., Juknelienė D. ANALYSIS OF LAND EXPROPRIATION PROJECTS IN LITHUANIA	112
Virubka L., Grīnfelde I. IMPACT OF THE SLAMPE RIVER RENATURALISATION ON HYDROLOGICAL REGIME OF NEARBY TERRITORIES	113
Zaharāne K., Grīnfelde I. MEASUREMENTS OF DIRECT N ₂ O AND NH ₃ EMISSIONS FROM NITROGEN FERTILIZERS APPLICATION IN LABORATORY CONDITIONS	114
Amirzhanova Z., Parsova V. IMPROVING THE EFFICIENCY OF LAND MANAGEMENT	115
Ziankovich P., Yakubovskaya V., Savchenko V. GENERAL DESCRIPTION OF STATE CONTROL OVER LAND USE AND PROTECTION IN MOGILEV REGION	116
FORESTRY AND WOOD PROCESSING	117
Brice K., Straupe I. ASSESSMENT OF VEGETATION IN SCOTS PINE PINUS SYLVESTRIS L. FOREST STANDS WITH SEED TREES.....	118
Elizalde D., Petit C., Breger P., Ramananantoandro T. MALAGASY WOODS: RELATION BETWEEN EXTRACTABLE CONTENT AND NATURAL DURABILITY	119
Dubrovskis E., Indriksons A. VEGETATION CHARACTERISTICS AFTER PERFORMING OF CLEARCUT IN HYLOCOMIOSA FOREST SITE TYPE	120
Galina S., Indriksons A. FOREST GROWTH CONNECTION WITH EARTH'S ELECTROMAGNETIC FIELD .	121
Graudums M., Indriksons A. ESTIMATION OF WOOD	122
Grava A., Straupe I., Liepa L. ASSESSMENT OF VEGETATION IN COMMON ASH WOODLAND KEY HABITATS IN SOUTHERN LATVIA.....	123

Ivanāns M., Indriksons A. ABUNDANCE, AGE AND QUALITY OF UNDERGROWTH OF NORWAY SPRUCE (PICEA ABIES (L.) KARSTEN) IN HYLOCOMIOSA AND OXALIDOSA FOREST SITE TYPES.	124
Kalvis T., Luguza S. BENEFICIAL USE OF WOOD ASH IN FOREST STAND FERTILIZATION	125
Ķēniņa L., Dreimanis A., Miezīte O. AFRICAN SWINE FEVER IMPACT ON GAME UNGULATES POPULATIONS IN ZIEMEĻVIDZEME REGIONAL FOREST DISTRICT	127
Lavendels M., Luguza S. COMMON WALNUT JUGLANS REGIA L. FOR TIMBER PRODUCTION IN LATVIA	128
Rums O., Straupe I. LICHENOINDICATIVE ANALYSIS OF JELGAVA CITY, LATVIA	129
SOCIAL SCIENCES	130
Auzins J., Licite L. PERFORMANCE AND IMPROVEMENT OF “BVP” LTD	131
Barkāne I., Paula L. ATTRACTING AND RETAINING OF YOUNG TEACHERS IN THE EDUCATION SYSTEM	132
Boihmane P., Krūzmētra Ž. AMERICAN LATVIAN ASSOCIATION'S EDUCATION PROJECTS AND PROGRAMMES	132
Gemma S., Bulderberga Z. SMART SPECIALISATION STRATEGY IN THE BALTIC STATES	134
Gribanova S., Paula L. YOUNG PROFESSIONALS AND THEIR PERCEPTION OF HR STRATEGIES OF ORGANIZATIONS IN CONTEMPORARY LATVIA: VALUES, MOTIVATIONS AND EFFECTIVENESS (CASE IT PROFESSIONALS)	135
Grinevica L., Rivza B. YOUTH GUARANTEE MEASURES IN THE EU MEMBER STATES	136
Grīnfelde A., Paula L. BEGINNING TEACHER SUPPORT METHODS	137
Hauka L., Paula L. TRADE UNION'S IMAGE IN LATVIA	138
Jablonskaitē V., Šablevičienē D. PROBLEMS WITH FOOD ADDITIVES	139
Judickaitē R., Adomaitienē R. MOTIVES OF ALYTUS COLLEGE STUDENTS' PROFESSION CHOICE	140
Zviņģelis J., Dobeļe A. EXTERNAL BUSINESS ENVIRONMENT ANALYSIS OF “KRONIS” LTD	141
Klauža L., Eglīte A. ZEMGALE TOURIST PROFILE AND OPPORTUNITIES TO ATTRACT POTENTIAL TOURISTS	142
Koritko S., Seimuškāne L. INTERNAL CONTROL SYSTEM CHANGES IN PUBLIC ADMINISTRATION INSTITUTIONS	143
Krusts M., Pelse M. SOCIAL INEQUALITY EFFECT ON EMIGRATION LEVEL	144
Kumačeva S., Dobeļe A. CAUSES OF POVERTY IN FAMILIES WITH CHILDREN	145
Lapčinskis O., Jurgena I. PERSONNEL MOTIVATION IN COMPANY “SADALES TIKLS” LTD	146
Lukss A., Licite L. MARKETING DEVELOPMENT OPPORTUNITIES AT “ECOS” LTD	147
Luža L., Apsīte E. ACCOUNTING FOR CASH TRANSACTIONS IN RUGAJI MUNICIPALITY	148
Malyavina V., Paula L. CAREER EDUCATION IN GENERAL EDUCATION INSTITUTIONS IN LATVIA	149
Opoļska I., Proškina L. MEANING OF RECOGNITION OF SPORTS ORGANIZATIONS	150
Pershukevich I., Zuyeu U. PROSPECTS OF TOURIST DEVELOPMENT OF THE LUBCHA CASTLE	151
Pļaveniece A., Dobeļe A. DESCRIPTION OF ROAD CONSTRUCTION INDUSTRY IN LATVIA	152
Rubīns M., Pilvere I. STATE AID MODEL OF BIOGAS PRODUCTION IN LATVIA	153
Sharafutdinova D., Valieva F. COMPARATIVE ANALYSIS OF OPTIMISM PARAMETERS AMONG DIFFERENT AGE GROUPS	154

Smertjeva A., Licite L. CORPORATE SOCIAL RESPONSIBILITY AS A PREREQUISITE FOR SUSTAINABLE DEVELOPMENT IN THE BANKING SECTOR.....	155
Visockaitė J., Šablevičienė D. STUDENTS' EATING HABITS.....	156
Zdanovskis K., Pilvere I. CHARACTERISTICS OF NONGOVERNMENTAL SECTOR IN LATVIA	157
Ziedīņa D., Peļše M. EUROPEAN UNION REGULATORY FRAMEWORK FOR ECONOMIC ZONES.....	158
Zvirgzdina S., Pilvere I. PROJECT MANAGEMENT AT LATVIA UNIVERSITY OF AGRICULTURE.....	159

Репозиторий Баргу

ENVIRONMENTAL MANAGEMENT OF KARST LAKES OF THE BREST REGION

Yuri Abramchuk

Baranovichy State University, Faculty of Pedagogy and Psychology, undergraduate student, Belarus

Uladzimir Zuyeu

Baranovichy State University, PhD Candidate, Belarus

The current state of unique karst lakes of the Brest region of the Republic of Belarus is analysed in the research. In recent years there is a need of complex profound studying of a condition of these lakes for the purpose of the organization and conducting monitoring of an ecological situation in this territory in connection with intensive development of a recreation and increase in anthropogenous loading. It should be clarified what specialized complex geocological works on these lakes have not been carried out so far. Brest region is in the southwest of the country and in the geomorphological relation treats the area of Polesia Lowland and, partially, in the north — the area of the Central Belarusian regional glacial heights and ridges and the area of plains and lowlands of Predpolesye [1].

Karst lakes are unique not only by the characteristics, but also due to their location in the area of Predpolesye and Polesye where generally low-lying flat landscape is present. Their value is connected, first of all, with the quality of water, and, that these lakes can be a source of water by having sinkholes [1]. Thanks to good hydrochemical indicators, karst lakes can serve for recreational purposes.

Hollows of modern lakes in connection with activization of the movement of the ascending streams of underground waters at the end of a pleistocene were formed. The age of peat in the basis of deposits of karst lakes exceeds 11 thousand years [2].

In total there are 44 lakes the area of which exceeds 0.1 sq.km. Only a small part of lakes belongs to karstic. Sinkholes of these lakes have the shape of two types. A roundish or oval shape occurs most often with a conical or paraboloidal underwater shape, an abrupt littoral and sublittoral and a funnel-shaped sinkhole. Vulkovskoye lake can be mentioned as an example. Less often lakes have a shape of a blade or an oval form, a flat littoral, sublittoral and a flat bed (depth of 2–4 m) with one or several deep funnels as, for example, lake Bobrovichskoye.

These lakes belong to recreational facilities and in most cases it causes the facts of anthropogenous intervention. Owing to a small amount of organic substances (karst lakes of this area belong to mezotrophic lakes), it is impossible to speak about karst lakes as objects of fishing.

In absolute majority of cases karst lakes of the area are not included into the borders of especially protected natural territories that increases a possibility of negative impact on the lake ecosystems. The status of a nature sanctuary or the hydrological wildlife area to these objects is obviously necessary.

References

1. Географія Брэсцкай вобласці, Минск, БДУ, 2002, 388 pp.
2. Мешечко Е.Н., Краеведение, Брест, 2010, 353 pp.