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**ORGANIC CULTIVATION OF MAKHANA IN LOW LAND DURING RAINY SEASON FOR ENHANCING FARM PROFITABILITY****Bakulranjan Jana**

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UOI license: <http://u-o-i.org/1.01/ijeess/07047308>**ABSTRACT**

Proper agronomic practices are needed to harness the maximum benefit of genetic potentials of crop and nutrient availability in any production system. Thus, in the current study, we compared different methods of *makhana* or gorgon nut cultivation with organic and inorganic fertilizers with different combinations. The use of organic fertilizers in form of arandi cake (*Ricinus communis*, and karanj cakes (*Pongamia pinata*) and neem cakes (*Azadiracta indica*) in different combinations showed promising results. Neem cake + arandicake (10:7) @2.5 T/ha resulted in the maximum gorgon nut yield (4.3T/ha) and also maintained soil health. Net return was also the maximum (about 1.72 lakh/ha) with this treatment. So far nut quality is concerned; nut size was decreased (0.86 g) with the enhancement of yield in organic cake application i.e. castor cake and neemcake (7:10) 2.5T/ha(T4). In organic pond system (T2) and lite organic cake application (T1)[( arandi cake and karanj cake (50:50) 2T/ha produced the bold seed (1.03 g) in field system. The minimum gestation period was found in T4 treatments (135 days including total decomposition of vegetative growth in rain water as compared to T2 (180 days) [ inorganic pond system].

**Key Words:** Gestation Period, Organic *makhana*, Seed Quality and Yield,

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**CONTRIBUTIONS TO STUDIES OF THREATENED MOSSES FROM  
EASTERN EUROPE, THE REPUBLIC OF MOLDOVA****Adam Begu, Ala Donica**

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The forests of the Republic of Moldova, by their ecological characteristics and the fact that a large part of them are protected areas, serve as habitats for optimal growth and development of different species of bryophytes. In order to identify areas of growth and development of rare bryophytes, included in various editions of the Red Book of Moldova (1978, 2001, 2015), we researched the main forest and forest-rocky ecosystems from various regions of our country' natural areas (years 2000-2015), these being compared with data of previous research in this area (years 1972-2006). The study indicated that between the seven rare species of mosses, included in the new edition of the Red Book of Moldova (2015), one species (*Climacium dendroides*) is at the Southern limit of its spreading areal and prefers moist habitats of deciduous forests; species (*Ditrichum flexicaule*) - mesophyte and (*Weisia fallax*) - xerophyte, prefer habitats of rocky forests, limestone cliffs from Prut River and Dniester River; two other species (*Cirriphyllum piliferum*, *Thuidium delicatulum*) - prefer as habitat the dry forest' phytocenoses and species (*Orthotrichum patens*, *Neckera pennata*) - the wet forests' phytocenoses of Moldova. For some rare species of mosses, *indicated for the first time* in six new places of Moldova, it is necessary to take under state protection these habitats, through their transformation into natural areas that protect directly the referred mosses species.

**Key words:** bryophytes, chorology, Red Book, ecosystems, habitats.

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## SOME METABOLIC INDICES AND MORPHOMETRIC PARAMETERS BETWEEN SEXES IN *SALMO LETNICA* FROM OHRID LAKE

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### ABSTRACT

Eight metabolic indices and four morphometric parameters of *Salmo letnica* Karaman, 1929, in natural conditions from Ohrid Lake have been analyzed. The aim of the study was to evaluate the differences between sexes. The study has been carried out during the period 2006-2008 (summer and winter) in Pogradec area, near Ohrid Lake (Lin, Pojskë, Piskupat, Zagorçan and Tushemisht) and 94 healthy individuals of fish, randomly collected were involved in the study. Higher values of hematocrit, hemoglobin, cholesterol, inorganic phosphorus and glucose were observed in male individuals. Higher values of total protein, calcium, alkaline phosphatase and morphometric parameters (total body weight, maximal length, length till the tail bifurcation, length till the end of scales and maximal body height) were observed in females. Statistically significant differences have been found for the mean values of the level of hematocrit, hemoglobin, the activity of alkaline phosphatase and the four morphometric parameters between sexes; whereas the other metabolic indices (total protein, inorganic phosphorus and glucose) showed no significant differences.

**Key word:** Salmon letnica, metabolic indices, morph metric parameters.

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**CHEMICAL CHARACTERIZATION OF *ACHILLEA MILLEFOLIUM*  
POPULATION FROM ALBANIA****Jonida Salihila, Aurel Nuro***University of Tirana, Faculty of Natural Sciences, Department of Chemistry, Tirana, Albania;*Email: [jonida.s@hotmail.it](mailto:jonida.s@hotmail.it)

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UOI license: <http://u-o-i.org/1.01/ijeess/12049645>**ABSTRACT**

The essential oil of *Achillea Millefolium* plants were analyzed from population of different areas in North-East and South-East of Albania. The *Achillea Millefolium* herbs were sampling in July, 2015. The air dried plant samples were subjected to European Pharmacopoeia apparatus (Clevenger type) for 6 hours to obtain *Achillea Millefolium* oil in 1 ml Toluene. The chemical compositions of the essential oils were analyzed using GC/FID technique. The oil of each *Achillea Millefolium* samples was injected in a Varian 450 GC. VF-1ms capillary column (30m x 0.33mm x 0.25 um) was used for separation of compounds. Alfa-Pinene (2.1-4.3%), Sabinene (1.1-4.4%), beta-Pinene (6.8 – 12.1%), 1,8-Cineole (9.6-16.2%), Camphor (2.1-6.4%), Borneol (9.2-13.0%), Bornyl acetate (7.3-12.6%), beta-Caryophyllene (3.2-6.3%) and Azulenes (4.1–6.7%) were identified as the main components of the essential oils of *Achillea Millefolium* samples from Albania populations. Other compounds were found to be lower than 1%. The chemical composition of the essential oil of *Achillea Millefolium* plants is associated with type, time of sampling and geographic position. *Achillea Millefolium* plants from Albania were shown to be the same composition with other similar studies from Mediterranean region.

**Keywords:** *Achillea Millefolium*, Medicinal Plant, Essential Oils, 1,8-Cineole, Borneol, Azulenes, GC/FID

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**PINE FORESTS WITH UNDERGROWTH OF PINE (*Pinus sylvestris* L.)  
AND CEDAR (*Pinus sibirica* Du Tour) IN EOLIAN SANDS OF THE  
CENTRAL PART OF LAKE BAIKAL EASTERN COAST**Alexander Sizykh<sup>1\*</sup>, Alexander Gritsenyuk<sup>2</sup>, Alexey Shekhovtsov<sup>3</sup><sup>1</sup>Siberian Institute of Plant Physiology and Biochemistry, Russian Academy of Sciences, 664033 Irkutsk, Lermontova str., 132, Box 317, Russia;<sup>2</sup>Sochava Institute of Geography, Russian Academy of Sciences, 664033 Irkutsk, Ulanbatorskaya str., 1, Russia;<sup>3</sup>Fillipov Agriculture Academy, Buryat Republic, 670024 Ulan-Ude, Gushkina str., 8, Russia;\*E-mail: [alexander.sizykh@gmail.com](mailto:alexander.sizykh@gmail.com)

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UOI license: <http://u-o-i.org/1.01/ijeess/69836340>**ABSTRACT**

The work performed allowed to reveal specific pine forests (Scotch pine) with undergrowth of pine (*Pinus sylvestris* L.) and cedar (*Pinus sibirica* Du Tour) forests. The underwood of these forests consists of Daurian rhododendron (*Rhododendron dauricum* L.), blueberry (*Vaccinium uliginosum* L.), marsh tea (*Ledum palustre* L.). The general structure of the soil cover of the research area consists of cowberry (*Vaccinium vitis-idaea* L.), crowberry (*Empetrum nigrum* L.), multifoliate Andromeda (*Andromeda polifolia* L.), cranberry (*Oxycoccus microcarpus* Turcz. ex Rupr.), fescue grass (*Festuca lenesis* Drobov), bush grass (*Calamagrostis neglecta* (Ehrh.) Gaertner.), garden burnet (*Sanguisorba officinalis* L.), field horsetail (*Equisetum pratense* Ehrh.) with inclusion of such mosses as Schreber pleurotium (*Pleurozium shreberi* (Brid.) Mitt.), pigeon-wheat moss (*Polytrichum juniperinum* Hedw.) and hexagonal (*Polytrichum sexangulare* Brid.), polypody dicranum (*Dicranum polysetum* Sw.), ptidium pectinate (*Ptilium crista-castrensis* (Hedw.) De Not), Muehlenbeck's dicranum (*Dicranum muehlenbeckii* B.S.G.) and such peat mosses as *Sphagnum palustre* and *Sphagnum fuscum* in different variants of the species in the plant communities. The second synfolium contains Siberian cedar (*Pinus sibirica* Du Tour), rarely – spruce (*Picea obovata* Ledeb.) and Siberian fir (*Abies sibirica* Ledeb.). The cenoses include as well *Pinus pumila* (Pallas) Redel and weeping birch (*Betula pendula* Roth), white birch (*Betula pubescens* Ehrh.) and Asian white birch (*Betula platyphylla* Sukaczew) synusially in different quantitative variations in the phytocenoses. Such cenoses are formed on eolian sands along the eastern coast of Lake Baikal, from the Selenga R. delta (Obлом Cape) to Gramyachinsk settlement including isolated sites of the pre-coastal area of Chivyrkuy Bay where they occupy a narrow near-coastal line at the slopes aprons.

**Key words:** Pine forests, undergrowth of pine and cedar, eolian sands, species of forests communities, eastern coast of Lake Baikal

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## THE PROGRESS OF INFORMATION AND COMMUNICATION TECHNOLOGIES

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### ABSTRACT

Information and Communication Technologies (ICT) play a specific role in the development of a competitive economy based on knowledge and innovation. This technology allows for a higher life quality for the citizens, assists in facilitation and efficiency of business processes, as well as the increase of effectiveness and governance transformation. Development of the ICT sector is considered a horizontal policy since the effects and influence of its implementation is extended on all social and economic sectors of the country. Priorities of ICT on a European level are contained in Europe 2020 - a strategy for a sustainable and comprehensive growth, which aims at the preparation of the EU economy for the challenges of the next decade. The Digital Agenda for Europe (DAE)<sup>2</sup>, is directly related to the field of Information and Communication Technology. To draw an analogy with the European Union policies and priorities, the development of ICT and the digital agenda are part of the programme of the Albanian Government for 2013-2017. The programme views the ICT and e-services development as closely related to the economic and social development of the country.

**Key words:** ICT, e-services development, economic and social development

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**THE CAUSES AND RISK FACTORS FOR CHRONIC KIDNEY DISEASES**Fejzi Alushi<sup>1\*</sup>, Bora Alushi<sup>1</sup><sup>1</sup>University "Ismail Qemali", Vlora, Albania;\*E-mail: [fejzi.alushi@hotmail.com](mailto:fejzi.alushi@hotmail.com);

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UOI license: <http://u-o-i.org/1.01/ijeess/19346611>**ABSTRACT**

CKD it is a pathology that in recent years it appears as the clinical entity with global exponential growth and now it is considered as one of the major problems of medicine. Recent epidemiological data have become so alarming that most authors speak that she is taking the features of a "real social emergency". To study the epidemiology of CKD cases in the district of Vlora, estimate their incidence and prevalence and assessment of risk factors for uremia. Retrospective study with a homogeneous cohort. Data were collected from clinical records and records of visits of all patients of Vlora district during the period 2000-2010. A total of 310 patients were treated with CKD 14 (46%) males and 88 (54%) females ( $p=0.1$ ). The average age is 52.5 years. Chronic pyelonephritis is the major cause of illness in 188 (61%) patients ( $p<0.01$ ). 271 (87%) of cases treated with conservative therapy, whereas 39 (13%) patients currently undergo replacement therapy, of whom 27 (69%) on hemodialysis, 3 (7%) in peritoneal dialysis, and 9 (23 %) have undergone renal transplantation. Total number of newly affected individuals in 2010 with CRD is 17. Chronic pyelonephritis was the cause of illness in 8 (47%) cases, in four (24%) cases the illness was due to diabetic nephropathia. The prevalence of CKD in the district of Vlora is 205 cases per 100 thousand inhabitants. Its incidence in 2010 was 12 new cases per year per 100 thousand inhabitants. Currently, it is noticed an increasing number of cases with diabetic nephropathia. The end stage of all causes of chronic renal disease is uremia which represents one of the major issues of public health today. Prevention and correct treatment of primary and secondary nephropathies as well as the correct treatment of cardiovascular complications is undoubtedly today's orientation of medicine thus reducing to the utmost the renal morbidity and mortality.

**Key words:** chronic kidney diseases, dialysis, uremia

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## MANAGEMENT AND URBAN WASTE RECYCLING IN ALBANIA PRACTICE

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### ABSTRACT

This publication will be presenting a general information on urban waste management, as well as most used management methods in Albania and worldwide. Environment management in Albania will be a hot challenging point, trying to make a strong appeal on the existing situation. The existing situation indicates a real need for introducing *recycling* in the Albanian practice: the existing situation, the waste treatment cycle, technological aspects etc. This publication presents, on basis of real values and findings, the real possibilities and the phenomena perspective, embracing the contemporaneous practices and needs. A positive output on addressing this issue in Albania would be obtained by: drafting a strategy on abandoned industrial areas waste management, where environmental and health risks should be considered too; monitoring and fighting pollution in risky areas etc; addressing the need for closing existing dumps which constitute a risk for health and environment; drafting a strategy on sustainable urban waste treatment, where drafting new legal framework and relevant demonstration areas should be considered too, especially those arising Public Awareness On Urban Waste Management.

**Key words:** Environment management, waste management, recycling, good administration.



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## STUDYING THE EFFECT OF PERCEIVED VALUE AND TRUST ON BEHAVIOURAL INTENTIONS: A CASE STUDY OF INSURED'S

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### ABSTRACT

Nowadays insurance organizations had understand importance of having contact with customers and consent and loyalty to these organizations are the reason of their accomplishment so identifying customer behavioral intention has a specific importance and one way to increase customers' behavioral intention in a positive line is improve the perceived value and increasing belief of customers. Therefore, the goal of this research is checking these two factors. The study analyzed 384 customers of an insurance organization. The results showed that belief and its components effect customer behavioral intentions; meanwhile perceived value and its components effect belief of customers. Structure models of believe perceive value and customer behavioral intention had a good fitness and so hypothesizes of research are confirmed. Insurance organizations should consider that for increasing customer behavioral intention they should increase believe and perceive value.

**Key words:** Effect of trust, perceived value, behavioral intentions

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## THE COMPOSITION OF STRATEGY TO PROTECT THE WILD SPECIES OF ALMOND (*PRUNUS SCOPARIA*) USING THE GEOGRAPHIC AND MOLECULAR DATA

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### ABSTRACT

In order to protect the program genetic resources, spatial and non-spatial distributions evaluation of genetic diversity is considered as one of the most important measures. *Prunus scoparia* is one the important species of Iran in the terms of economy and ecology. In this study, 36 polymorphic microsatellite markers (SSR markers) in evaluating genetic diversity and genetic structure of 158 samples from 12 populations of "*P. scoparia*" were used. The SSR markers have showed almost high genetic diversity ( $N_a= 6/47$ ,  $H_o= 0/603$  and  $H_e= 0/737$ ). According to the genetic differentiation coefficient, the genetic diversity in the populations (56/12 %) was higher than genetic diversity between the populations (43/88 %). The phylogenetic network (Neighbor-net) divided people into two major clusters. In addition, according to the analysis results of STRUCTURE it was suggested that studied "*P. scoparia*" populations are located into two major populations and 12 subpopulations. The comparison of these results with GENELAND showed relatively similar results in populations classification and the genetic relationships between the populations. It is worth noting that in the analysis of GENELAND, some of populations with similar genetic field were assigned in a geographical area. The application of GIS data and an appropriate number of microsatellite markers (SSR markers) provide the possibility of prioritizing areas of distribution in order to protect them in and out of the natural environment. Also, modeling the species distribution provides comprehensive information in the field of strategies to protect these valuable relative species of almond.

**Key words:** Protection Strategy, Species Distribution, Species Maintenance, Wild Almond, *Prunus Scoparia*.

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## COMPARATIVE STUDY OF FLOW REGIMES FOR THE EXAMINATION OF ENVIRONMENTAL FLOWS

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### ABSTRACT

The management of the water resources is an important issue in the countries around the world because it depends on many variables. Prior to the growing environmental awareness, flow rate and regime are critical components of water supply, water quality, and the ecological integrity of river systems. Environmental flow may be described as the required stream flow quantity to support the ecological activity in a river system. While environmental flow assessment provides protection and use balance over the water resources and it also reduces the natural and artificial effects that caused of deterioration of the natural condition of the rivers. There are only a few environmental flow assessment studies in Turkey. In this paper, daily flow data has been used to determine the flow regimes in order to have some idea about the environmental flow. For this purpose, common methods such as original Tennant method, modified Tennant method, wetted perimeter method, 7Q10 and Q95 have been examined. Daily flow data has been obtained from three gauging stations located in Great Menderes Basin. The first one (07-30) is unregulated, the second is regulated (07-04) and the third one is indirectly regulated (07-71) gauging stations. As a result of this study, particular methods have more reliability and might be more appropriate for each case. The modified Tennant method could be selected as the most practical method for the measured data of flow rates in unregulated gauging station. Q95 method can be used for the other two stations.

**Key words:** Environmental flow, Tennant method, Water resources, Wetted perimeter, Q95

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## STUDYING THE RELATIONSHIP BETWEEN SPORTS DIRECTOR'S FAMILIARITY WITH SPORTS RIGHTS CONCEPTS AND RISK MANAGEMENT BEHAVIORS

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### ABSTRACT

The objective of this research was investigating the relationship of sports directors familiarity with sports rights concepts and risk management behaviors at Kurdistan province. The methodology of this research is descriptive survey. The research statistical society consisted 255 members of all directors at Kurdistan Sport domain. The sampling method was simple random and for determining the sample volume 150 sport directors managers of Kurdistan province, using Morgan table, were selected as the sample. Measuring tool was questionnaires of Thomas Irons about familiarity of managers and directors with sports rights and risk management, its validity was confirmed by 10 experts and its stability was % 85 and % 89, in order. For theories analysis, Pearson's correlation coefficient was used by SPSS software. The finding showed that there is relation between the familiarity of sports directors with sports rights concepts, supervision, medical issues, bystander and population control, transportation, safety and applied equipment to their schedule at Kurdistan province.  $P < 0/05$ ; but employment and upbringing, safety, applied equipment and facilities factors do not affect manager's familiarity with sports rights  $P > 0/05$ . Finally it can be said that it seems risk management and sports rights require facilities and specific situations that rarely exist in the country's organizations and institutions and while it is not the right condition it is not expected these behaviors would happen in a favorable way. The present research concluded valuable results about investigating the relationships of familiarity of sports directors of Kurdistan province, with sports rights concepts and risk management behaviors.

**Keywords:** risk management, sports rights, sports directors, Kurdistan province.

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## EXAMINING THE ROLE OF LEADERSHIP STYLES IN CONFLICT BETWEEN WORK AND FAMILY AMONG PUBLIC RELATIONS STAFF OF BANK BRANCHES IN SANANDAJ

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### ABSTRACT

The aim of this study is to examine the role of leadership styles in conflict between work and family among public relations staff of bank branches in Sanandaj. Given the population of 150 people, sample size has been calculated as 108 people according to Cochran's formula that is done by stratified sampling with proportional allocation. Data collection tools are leadership style questionnaires by Clark (1998) and work-family conflict questionnaire by Carlson et al. (2000). Cronbach's alpha of 90% and 87% for the questionnaire showed acceptable reliability of the questionnaires. According to the research findings, authoritarian, benevolent, and participatory leadership styles have a significant positive correlation with work-family conflict among public relation staff of state-owned and private banks in Sanandaj. Thus, the existence of the mentioned styles leads to more work-family conflict. The findings also show a significant negative relationship. Thus, by adopting consultative leadership style, work-family conflict among public relation staff of state-owned and private banks in Sanandaj reduces.

**Keywords:** leadership styles, work-family conflict, state banks, private banks, Sanandaj

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## THE RAINFALL – RUNOFF SIMULATION WITH HYBRID METHOD AND ITS COMPARISON WITH NETWORKING MODEL, CASE STUDY: THE CATCHMENT BASIN OF SOFI CHAY

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### ABSTRACT

The rainfall – runoff simulation in the basin is the awareness toward the Hydrological answer of rainfall basin and due to its importance in managing and utilizing the available water resources (providing different drinking, agricultural and industrial consumptions, Flood warning system and designing water regulator structures), it was an evitable subjects of hydrological researches in recent years. In hydrology, to show the flow direction and calculating the slope of regions, digital elevation model (DEM) is used that in the current study, the flow direction of each cell of basin to its output was determined using the digital elevation model and finally, the total volume of allocated water to each cell was identified. In this research, the rainfall – runoff process was survey by two hybrid and networking models using ArcGIS 9.3 software in the catchment basin of Sofi Chay locates in East Azerbaijan Province that in the study, the amount of Discharge output and the runoff resulted by rainfalls were measured. The results showed that in the studied region, the hybrid model has a higher performance and efficiency for simulating the rainfall – runoff process.

**Keywords:** Rainfall, hybrid model, networking model.

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**ADSORPTION OF COPPER AND CADMIUM IONS FROM AQUEOUS SOLUTIONS BY EUCALYPTUS BICOLOR LEAF POWDER****Atef S. Alzaydeen\****Department of Chemistry, Mutah University, P. O. Box 7, Jordan;*\*E-mail: [atef\\_sal99@yahoo.com](mailto:atef_sal99@yahoo.com);

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UOI license: <http://u-o-i.org/1.01/ijeess/02386595>**ABSTRACT**

Eucalyptus bicolor Leaf Powder (ELP) has been utilized as a sorbent for uptake Cu(II) and Cd(II) ions from aqueous solution. Equilibrium adsorption experiments were conducted to evaluate the adsorption characteristics of Cu(II) and Cd(II) from aqueous solutions by ELP. The equilibrium sorption isotherms have been analyzed by the linear, Freundlich and Langmuir models. Langmuir isotherm is better fit than the Freundlich isotherm at different temperature according to values of the correlation coefficients ( $r$ ). The maximum adsorption capacity ( $X_m$ ) of ELP for the adsorption of  $Cu^{2+}$  ions and  $Cd^{2+}$  ions decreased from  $3.27 \times 10^{-5}$  and  $3.07 \times 10^{-5}$  to  $1.19 \times 10^{-5}$  and  $1.06 \times 10^{-5}$  mol/g with increasing temperature from 298 to 313 K. The dimensionless factor,  $R_L$  revealed the favorable nature of the isotherm of metal ion-ELP system. The negative free energy values indicate the feasibility of the process and the spontaneous nature of the adsorption. negative  $\Delta H$  values indicate the exothermic and physical type of the adsorption. A positive entropy of adsorption also reflects the affinity of ELP for Cu (II) and Cd(II). The PH for all solutions were in the range of 5 to 6. Results showed that the powder could remove the ions effectively from aqueous solution.

**Key words:** eucalyptus bicolor leaf powder, adsorption, copper, cadmium, equilibrium, thermodynamic

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## MONITORING INPATIENT ANTIMICROBIAL USE

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### ABSTRACT

Measuring antimicrobial use is an important way to provide metrics that support more vigorous, facility-specific stewardship efforts, which in turn will be a major step toward reducing unnecessary use of broad-spectrum antimicrobials. Yet no single system is available that can meet stewardship needs at the level of individual hospitals and provide benchmarks, monitor trends, and measure the magnitude of antimicrobial use at the regional, state, and national levels. Therefore, distinct and complimentary efforts that remain focused on providing "data for action," including facility-level use metrics for benchmarking across comparable patient care settings, national estimates of usage patterns using sentinel surveillance sites, and limited assessments using proprietary data.

**Keywords:** antibiotic stewardship; patient safety; antibiotic use; surveillance



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## INVESTIGATE USING SEISMIC SEPARATION (VISITATION) SYSTEM AT HIGH-RISE STRUCTURES TO RETROFIT WITH DECREASING BUILDING CONSTRUCTION MATERIALS, WITH THE APPROACH OF PROTECTING THE ENVIRONMENT

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### ABSTRACT

Nowadays paying attention to the environment problems and also special attention and conservation to it, is very important in human societies. In this regard, the present research investigates the effect of using seismic isolation system at high-rise structures to retrofit with decreasing building construction material consumption by the approach of protecting the environment. In recent decades utilizing seismic separators to strengthen the structures against quakes has entered performance. The main goal in this method preventing direct transition of earth-quake force from the foundation to the structure. In the other word in seismic separation to confront lateral loads due to the earthquake, only to apply lateral rigidity of the structure. Against lateral loads such as wind load, or operation loads of some ingredients with lateral loads in the least need is suggested. In this method because the earth-quake is not entered the structure or a small share is transferred to the structure, it will have consequences such as reduction of the floors relocation, decreasing acceleration, decreasing structural and nonstructural damages, and finally decreasing materials usage, and environmental protection. Initially using a laboratory sample, selected from a steel frame, we payed to the procedure of modeling and validation results, by the method of limited components at ANSYS software, and in the following by modeling the structure of 15 floors, in existing and non-existing the separator and interaction between soil and structures and doing nonlinear dynamic analysis the systems operation, in consecutive cycles, is investigate. The results show the reduction of materials to protect the environment.

**Key words:** protecting the environment, seismic separation, soil and structure interaction, non-linear dynamic analysis.

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**DETERMINE OF THE PREVALENCE OF GENETIC DISORDERS IN REFERRED COUPLES TO SCREENING CENTERS OF KURDISTAN PROVINCE 2016**Asadolah Fatholahpour<sup>1</sup>, Parya Khadivar<sup>2</sup>, Shelir Katorani<sup>3</sup>, Golaleh Karbasi<sup>4\*</sup><sup>1</sup>*Pediatrics Department, Faculty of Medicine, Kurdistan University of Medical Sciences, Sanandaj, Iran;*<sup>2</sup>*Student Research Committee, Kurdistan University of Medical Sciences, Sanandaj, Iran;*<sup>3</sup>*Master in GIS, expert of Kurdistan SID, Sanandaj, Iran;*<sup>4</sup>*Faculty of Medicine, Kurdistan University of Medical Sciences, Sanandaj, Iran;*\*Corresponding author: [gelare\\_633@yahoo.com](mailto:gelare_633@yahoo.com)

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UOI license: <http://u-o-i.org/1.01/ijeess/57238673>**ABSTRACT**

One of the treatments that impose a great cost on the patients is incurable genetic diseases. Population genetic screening means detecting people with genetic diseases or defective genes. This article aims to determining genetic disorders incidence in referred couples to screening centers of Sanandaj and Ghorva city in Kurdistan province 2016. This article has done with following of the cross sectional and descriptive method and consists 1135 and 319 couples who refer to screening centers of Sansndaj and Ghorve city in 2016.the demographic information forms and disease recorders was distributed among the studied people. After the filling the forms out by people the data inserted in SPSS version 20 and provided the descriptive statistics. The most common genetic abnormalities in Ghorve city such as mental retardation, disorder of audition and limb movement disorder 33/12, 25/97 and 14/94 percent respectively. Mental retardation, limb movement disorder and mortality of the children under 3 years of age with 17/44, 15/03, and 11/87 respectively have a higher incidence in Sanandaj city. Determination of genetic diseases incidence can help to regulation of screening programs and health cares. The prevalence of these diseases in the region indicates to the importance of establish a center based on population. More population studies in order to expansion the preventive procedures and proceedings in the genetic diseases control in the region are required.

**Key word:** genetic disorder, screening, disease

**EFFECTS OF CERTIFICATION OF WHEAT FIELDS AND SEED YIELD**

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**ABSTRACT**

The research purpose was application of the standards for seed production schemes, namely the evaluation of the effects of field certification, based on the Kosovo Seed Law and the OECD Guidelines. The object of the evaluation were the wheat fields for seed production, yield and quality of seed produced with dedication Kosovo market during the years 2014 (Y1) and 2015 (Y2). The certified seed C1, is sown to reproduce C2. The origin of cultivars was from different countries, but registered on the Official Seed List within MAFRD. The experimental design was a random complete block design (RCBD) with quadrants of 20 m<sup>2</sup>, with three replications. For the data analysis were used ANOVA, according to the program MINITAB-16©. The application of the certification standards of the wheat fields resulted in certified or rejected fields, in particular in the case of presence of wild oats. The mean results for the parameters were: seed yield (SY=494.81g m<sup>2</sup>), spike weight (SW=1.59g spike<sup>-1</sup>), grain weight per spike (GWS=1.13g spike<sup>-1</sup>), harvest index (HI=0.43) and wild oat presence (WO = 8 to 33 plants ha<sup>-1</sup>). Researched parameters shown significant differences for the level of LSDp=0.05 and LSDp=0.01. Application of the certification standards for wheat fields ensures the identity of the cultivar, the genetic and physical purity of the seed, without the weed seeds, and with the defined phytosanitary status.

**Key words:** Certification, wheat, yield, seed, standard, law.

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## THE ANTIOXIDATIVE EFFECT OF *CITRULLUS COLOCYNTHIS* ON ENVIRONMENTAL POLLUTANT OZONE

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### ABSTRACT

Airborne environmental pollutants play important role in the biological parameters of animals, plants, mushrooms and microorganisms. Uncontrolled ozone gas directly affects non-target organisms. In this study, crude extract of *Citrullus colocynthis* L. fruits was evaluated for antioxidant activities against ozone, *Drosophila melanogaster* Meigen (Diptera: Drosophilidae) was used as a model organism. Insect larvae were grown up in the laboratory. Given ozone (0.2-1 ppm) for two hours adults were fed with different concentrations of this plant fruit. Lipid peroxidation product such as Malondialdehyde (MDA) and antioxidant enzymes, Glutathione-S-Transferase (GST) levels were determined in male and female. The effect of *C. colocynthis* on antioxidant defense system of *D. melanogaster* were investigated. This study has shed light on whether or not herbal treatments are sufficient, in order to remove free radicals from the organism caused by environmental pollutants.

**Keywords:** *Citrullus colocynthis*, Ozone, Antioxidant activity, *Drosophila melanogaster*.

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## SPIDERS AND OTHER ARTHROPODS OF CHERNIVTSI POULTRY FARM (UKRAINE) AND THE PRELIMINARY DATA ABOUT BACTERIA INHABITING THEIR EXTERNAL SURFACES

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### ABSTRACT

We inventoried the fauna of synanthropic spiders and their prey occurring in different premises of Chernivtsi poultry farm in 2015 and compared with the data obtained in 2011. *Steatoda castanea* (Clerck, 1757), *Ph. phalangioides* (Fuesslin, 1775), *Ph. ponticus* Thorell, 1875, and *Tegenaria domestica* (Clerck, 1757) formed the dominant nuclei of studied spider assemblages in both years. Spider assemblages of production premises are shown to be more vulnerable in comparison with those in administrative offices, storage rooms, etc. The premises of the last type can be considered as buffer zones to ensure the survival of different spider species and maintenance of normal structure of synanthropic spider assemblages. Spiders on the premises of Chernivtsi poultry farm prey on a wide range of arthropods dominated by Diptera. Nine bacterial species were detected on the external surfaces of studied arthropods, namely *Staphylococcus saprophyticus*, *S. aureus*, *Streptococcus agalactiae*, *Enterococcus faecalis*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Proteus mirabilis*, *Escherichia coli*, and *Pseudomonas aeruginosa*. Frequency isolation varied from 10 % (*Pseudomonas aeruginosa*) to 80 % (*Escherichia coli*). The number of bacteria varied from 3.18 log CFU/ml (for *Escherichia coli* isolated from the surface of *Lithobius* sp.) to 5.65 log CFU/ml (for *Pseudomonas aeruginosa* isolated from the surface of *Fannia* sp.). Among the detected bacterial species *S. saprophyticus*, *S. aureus*, *P. aeruginosa*, and *K. pneumoniae* are known to be of high medical importance. Our study reveals limited role of spiders in the dissemination of bacteria. It is caused by the dominance of web-builders which avoid frequent moves in the spider assemblages inhabiting the buildings of the studied poultry farm. Moreover, spiders eliminate from the buildings such important mechanical vectors of potentially virulent bacteria as Diptera, Myriapoda, Coleoptera being predators themselves.

**Keywords:** Araneae, spider assemblages, prey, external bacteria.

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**EFFECT OF CLIMATIC FACTORS ON THE GROWTH OF ORIENTAL SPRUCE STANDS IN MOUNTAINOUS ECOREGION OF NE TURKEY**Ismet Yener<sup>1\*</sup>, Lokman Altun<sup>2</sup><sup>1</sup>Department of Forest Engineering, Artvin Çoruh University, Turkey;<sup>2</sup>Department of Forest Engineering, Karadeniz Technical University, Turkey;\* Email: [yener@artvin.edu.tr](mailto:yener@artvin.edu.tr)

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UOI license: <http://u-o-i.org/1.01/ijeess/37578367>**ABSTRACT**

Atmospheric conditions have some direct and indirect effects on plant growth in many ways. This effect is important especially in physical, chemical or biological process in plant growth. Deviations from optimum conditions could negatively affect plant growth. Thought that the climate is the main factor limiting the plant distribution and living, the climatic parameters would be used as indicators of plant productivity. Annual mean temperature (TEMP) and annual mean precipitation (PREC) are two of the most used climate factors to model stand productivity. Annual mean minimum-maximum temperature, temperature and precipitation in growing season, actual evapotranspiration (AET) and moisture index have been also used in related studies. This study aims to determine the relationships between some climate factors and the site index (SI) of oriental spruce (*Picea orientalis* (L.) Link.) naturally distributed in Rize-Kaçkar Mountainous Ecoregion in Turkey. Within this scope, 54 sample plots were visited in the study area and tree height, tree diameter at breast height and stand age were measured in each sample plot to determine SI. Climatic data was obtained from meteorological stations closest to study areas Results showed that SI of oriental spruce were positively correlated with annual mean temperature ( $r= 0,424$ ), mean temperature in during season (VTEMP) ( $r= 0,484$ ) and annual AET ( $r= 0,312$ ). On the other hand annual mean precipitation ( $r= -0,593$ ), mean precipitation during growing season (VPREC) ( $r= -0,633$ ) and the Thornthwaite moisture index (THMI) ( $r= -0,541$ ) were negatively correlated with SI. To model the SI multiple linear regression technique was used. The model, consisting of VTEMP and VPREC accounted for only 42,7 % of the variation in SI. The results show the importance of climate factors on oriental spruce growth, especially in site selection for afforestation activities.

**Keywords:** *Picea orientalis*, site index, climatic factors, Turkey,

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## IMPREGNATION IN WOOD OF PYRITE ( $FeS_2$ ) MATERIAL AND COMPRESSIVE STRENGTH

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### ABSTRACT

In this study, it is aimed to have the ability of being identifying to be impregnated with pyrite substance that is the one of the resources of our country of spruce wood (*Picea orientalis* (L.) Link) in various concentration (1%, 3%, 5%) with boron compounds up to standart of ASTM 1413-76 and identifying the areas of usage in outdoor furniture industry. For that purpose, it is identified that occurrence changes in mechanical features (compression strength). According to the experiment results, control samples compression strengths value ( $32.43 \text{ N/mm}^2$ ) is determined as 3% (the highest) pyrite +Boric acide ( $48.14 \text{ N/mm}^2$ ) and 1% (the lowest) Pyrite ( $36.81 \text{ N/mm}^2$ ). When the pyrite material was used both alone and in combination with boron compounds, it increased the compression strengths according to the control sample.

**Keywords:** Furniture/building industry, Spruce wood, Concentration, Pyrite, Boric acid.

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## TRAVELLERS' KNOWLEDGE ON INFECTIOUS DISEASES A SURVEY STUDY ABOUT TRAVEL HEALTH AMONG AIRPORT TRAVELLERS IN ALBANIA

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### ABSTRACT

Travel infectious diseases are a health, social and economic issue. Their assessment is getting difficult seeing the growing number of people traveling and the diversity of their destinations hence the importance of collecting the information on travel infectious diseases and their access to this information. For this study, it was gathered and processed data obtained from Albanian travellers departing from Tirana International Airport from July to September 2015. To the citizens were given a questionnaire with fourteen closed questions about their actual information on infectious diseases and their access to new information. Six hundred and six persons responded. 54 % of respondents were women. The majority of the participants in the survey were in the age group of 20-40 years old. The survey showed that almost 44 % of respondents claimed to have heard about infectious disease when traveling and only 70.9 % of them had further information about prevention. The majority of respondents pointed at internet and friends as their most reliable sources of information rather than medical care centres. When asked if they had sought their doctor's advice before traveling, only 26 % of the responses were positive. In conclusion, the survey showed that the majority of Albanian travellers have general information about infectious diseases and most of this information comes from unreliable, non-official sources. Results suggest strategies to better inform people about travel diseases when traveling.

**Keywords:** infectious disease, travel, prevention, information, airport



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## PREVALENCE OF SYMPTOMS AND ATTITUDES TOWARDS MENOPAUSE IN MIDLIFE FEMALE POPULATION IN ALBANIA

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### ABSTRACT

*Background:* Menopause is an important lifestage accompanied with various symptoms. Women have different attitudes towards this change and it is essential to explore and know the variability of symptoms, so to implement programs that will help women to cope better. *Objective:* The objective of this study was to assess the distribution of symptoms and attitudes in midlife women in transitioning Albania. *Methodology:* The study was conducted in Tirana and some rural areas around in 2016. Sample included 1207 women aged 45-64 years old and for data collection we used a self-administered questionnaire. The questionnaire included 21 most frequent symptoms of menopause and a section on attitudes towards the phenomenon. *Results:* Overall, the prevalence of menopausal symptoms in women in Albania is low. The most frequently reported symptoms include forgetfulness (26.3%), hot flushes(25.9%), frequent headaches(23.3%), aching joints(21.6%) and stomach bloating(21.0%). The majority of women don't see menopause as a disorder and 51.7% see it as a positive event. Instead, 37.9 % don't know how to qualify the importance of HRT, while 33% of all women respond positively to the usage of HRT. *Conclusions:* As all around the world, in Albania women report various symptoms that can influence the quality of life, but it is important the fact women don't see menopause as a disease. Although, the numbers infer that more information should be distributed to all women regarding HRT and menopause in general.

**Keywords:** menopause, symptoms, attitudes, distribution, HRT

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**RISK LEVEL INVESTIGATION OF HYDROGEN SULFIDE AND  
CARBON MONOXIDE FROM REFINERY IN ERBIL****Redar Ali Bakr<sup>1,2</sup>, Hilal Kivrak<sup>1\*</sup>**<sup>1</sup>*Chemical Engineering Department, Yuzuncu Yil University, Van, 65000, Turkey;*<sup>2</sup>*Ministry of Health Iraq, Mamostayani Zanko, 343, Kolani 3, Erbil, 4400, Iraq;*\*E-mail: [hilalkivrak@gmail.com](mailto:hilalkivrak@gmail.com), [hilalkivrak@yyu.edu.tr](mailto:hilalkivrak@yyu.edu.tr);

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UOI license: <http://u-o-i.org/1.01/ijeess/98836667>**ABSTRACT**

Erbil-Gwer Road refineries were not built according to the standard regulations. Hence, distillation tower, storage tanks, and flare sections of the refinery release the hydrogen sulfide (H<sub>2</sub>S) and carbon monoxide (CO). At present, the measurements of H<sub>2</sub>S and CO were taken in one of the Erbil-Gwer Road refineries to determine the risk level of these gases to human health and environment. Khurmala, Tawke, and Demir dagh crude oils having different properties, were utilized. According to the study performed, one could conclude that (i) several poisonous gases like H<sub>2</sub>S and CO are released by the Refineries into the atmosphere of refinery and nearby the refinery that have the dangerous impact on the health and environment; (ii) the hydrogen sulfide and carbon monoxide diffusion rate from flare, storage tank and distillation tower is higher than the standard rate; (iii) As Iraqi crude oil has high sulfur content than other crude oil and the proportion of sulfur is differ from one location to another, the utilization of this kind petroleum in Refinery is the cause the production of poisonous gases; (iv) wind highly impacts the diffusion of hydrogen sulfide and carbon monoxide. Hydrogen sulfide and carbon monoxide spread further from the source of these gases by increasing wind speed, (v) the effect of atmospheric temperature cannot be neglected. The diffusion rate of H<sub>2</sub>S and CO gas is increased in higher atmospheric temperature.

**Keywords:** Hydrogen sulfide, Carbon monoxide, Refinery

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## DETERMINATION OF SOME HEAVY METALS IN SOME WINES OF KOSOVO

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### ABSTRACT

Wine is one of the regularly consumed drinks and its control of content elements is necessary throughout the production process from the grape to the final product. The values of trace elements in wine are very important from the organoleptic point of view, as well as their nutritional value. Wine consumed in appropriate amounts, can have many health benefits, as some heavy metals are necessary for the body in very small quantities, but if taken in high doses, they become toxic. Therefore, recently it is expressed a concern regarding the exposure of heavy metals ions in wine. The heavy metal content in wine may have originated from atmospheric pollution, the presence of metal ions in the soil and most of them are originating from pesticides used to protect the wines from diseases and pests. The main purpose of this study was the identification of certain heavy metals (Zn, Fe, Cu, Mn, Hg, As) in some wines produced in Kosovo, in order to improve their nutritional quality. For this reason, wines produced from three (3) largest producers in the country are analysed. Flame atomic absorption spectrometry for the quantitative determination of the metals was used. An aliquot of 100 ml of wine sample was mixed with 1.0 mL of concentrated HNO<sub>3</sub>, and then directly nebulized in an air - acetylene flame under the optimal instrumental parameters. Moreover, because of interferences, poor reproducibility, and poor detection limits of Hg and As, with hydride generation atomic absorption spectroscopy (HGAAS) are measured.

**Key words:** Wine, heavy metals, flame AAS, grape, soil.

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## QUALITY OF FRUIT JUICES IN KOSOVO MARKET

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### ABSTRACT

Fruit juices constitute an important ingredient in the human diet. Having into consideration the large volumes and numerous types of fruit juices found in Kosovo's market, the aim of this study is to explore the quality of fruit juices, collected in different retail markets in Kosovo. In order to represent the most preferred types of fruit juices, during 2014, 15 samples of different fruit juices (Ci, Do, Ef, Ek, Fr, Fu, Jch, Lf, Ma, Mm, Mv, Re, Tf, Tl and Tu,) were included in this study. Samples in triplicate were analyzed on chemical-physical composition (total solids, total sugar, ash, vitamin C, ethanol, total acidity, pH value, sweetness index, density, the presence of artificial colors, the presence of artificial sweeteners), and sensory properties (clearness-homogeneity, sweetness, color, aroma and taste). Results were statistically processed using the statistical package JMP-in 7.0 (SAS business unit) and determination of average, minimal and maximal values, standard deviation and coefficient of variation were included. Of all 45 analyzed samples, results of chemical-physical composition showed statistically different values ( $P < 0.0001$ ) among fruit juices. Out of 15 analyzed fruit juices, the presence of artificial coloring is ascertained in 10 juices whereas the presence of artificial sweeteners is ascertained in 13 juices. Moreover, the sensory analysis showed that most of analysed brands did not meet quality requirements and were considered to be unacceptable for consumption.

**Keywords:** fruit juices, chemical-physical composition, sensory properties.

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## SNOW AND RAIN PRECIPITATIONS IN SOME REGION OF ALBANIA

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### ABSTRACT

Bio climate is considered as a combination among the vegetation area and climatic elements with indexes: temperature, precipitations, wind, air humidity etc. The more important eco-climatic indicators for study aspects are: sun-light, snow and rain precipitations, temperatures, relative air humidity, wind and other atmospheric phenomenon. This combination creates a complete, continued and stable view of an area or some ecologic areas in relation to indexes of bio-climate content elements. The basic indexes of use on bioclimatic study are: month temperatures, precipitations etc. They present a special importance from the point of study, evaluation, usage, preservation and improvement of natural resources. Their interaction has an impact on evolution and balance ecosystem progress. Beside the factors that indicate on improvement or no on an ecosystem, anthropogenic factor has a great importance for ecosystem.

**Key words:** indicators, precipitation, evaluation, snow, ecosystem