

# **ISSN 2224-4980**

# International Journal of Ecosystems and Ecology Science (IJEES)



**Essays on Ecosystems and Environmental Research** 

Volume 8/2, 2018

April, 2018

http://ijees.net/



International Journal of Ecosystems and Ecology Science (IJEES)



## International Journal of Ecosystems and Ecology Science (IJEES), ISSN: 2224-4980

## Volume 8, Issue 2, April, 2018, (Serial Number 30)



## EDITOR - IN - CHIEF:

**Hysen Mankolli**, Professor, Ecologist, Plainfield, Illinois, USA; Health and Environment Association, Tirana Albania; Earth System Science Interdisciplinary Center (ESSIC), University of Maryland College Park, USA, Consultant Scientist;

### **CO-EDITOR - IN - CHIEF:**

Sukru Dursun, Professor, Selcuk University, Engineering and Architecture Faculty, Environmental Engineering Dep., Konya-Turkev:

Massimo Zuchetti, Professor, MIT, Massachusetts Institute of Technology, Cambridge MA, USA;

## **INTERNATIONAL SCIENTIFIC EDITORIAL BOARD:**

Sukru Dursun, Professor, Selcuk University, Engineering and Architecture Faculty, Environmental Engineering Dep., Konya-Turkey;

Massimo Zuchetti, Professor, MIT, Massachusetts Institute of Technology, Cambridge MA, USA;

Veselin Alexandrov, Professor, National Institute of Meteorology and Hydrology, Bulgaria;

Nicola Senesi, Professor, University of Bari, Bari, Italy;

Wander Michelle M, Professor, University of Illinois at Urbana-Champaign, Urbana, Urbana, IL 61801, USA;

Vladimir Pesic, Professor, University of Montenegro, Department of Biology, Podgorica Montenegro;

Ibraim Dincer, Professor, University of Ontario, Faculty of Engineering and Applied Science, Ontario, Canada;

Ali Berktay, Professor, Selcuk University, Dept of Environmental Eng, 42031 Konya Turkey;

Mariana Golumbeanu, PhD, National Institute for Marine Research and Development "Grigore Antipa", Constanta, Romania;

Antonis K. Kokkinakis, Professor, Aristotle University of Thessaloniki, Faculty of Forestry and Natural Environment, Thessaloniki, Greece;

Olivia Cioboiu, PhD, The Oltenia Museum Craiova, Popa Şapcă str. No 8, Rumania;

Nasser Modirshahla, Professor, Islamic Azad University, Department of Applied Chemistry, Iran;

Nina Liogchii, Professor, Institut of Ecology and Geografy, Republic of Moldova;

Trajce Talevski, Professor, Hydrobiological Institute, Naum Ohidski 50, 6000 Ohrid - R.Macedonia;

Alexander V. Derunkov, Professor, Department of Entomology, National Museum of Natural History, MRC-168 Washington, DC, USA;

Can Ozgur Colpan, Professor, Ryerson University, Canada;

Muhammad Ashraf, Professor, University of Agriculture, Faculty of Sciences, Faisalabad 38040, Pakistan.;

Roberto Mancinelli, Professor, University of Tuscia, Viterbo, Italy;

Bahrive Gulgun, Professor, Ege University, Izmir, Turkey;

Shukri Fetahu, Professor, Pristine University, Kosovo;

Insaf Mekki, PhD, National Research Institute for Rural Engineering, Water, and Forestry (I.N.R.G.R.E.F), Ariana, Tunisia;

Hany Gaber El Shaer, PhD, IUCN Centre for Mediterranean Cooperation / Global Marine, Egypt;

**Ertugrul Esmeray**, Ph.D, Karabuk University, Engineering Faculty, Environmental Engineering Department Turkey; **Violeta Vidaček-Hainš**, PhD, Ass. Professor, University of Zagreb, Croatia;

**Cezar Kongoli,** Professor, Research Scientist at Earth System Science Interdisciplinary Center (ESSIC), University of Maryland College Park, USA;

Justas Kažys, PhD, Ass. Professor, Vilnius University, Department of Hydrology and Climatology, Vilnius -Lithuania;

Selim Dogan, PhD, Selcuk University, Environmental Engineering Department, Konya Turkey;

Hisham Mostafa Alidrisi, PhD, Ass. Professor, Department of Industrial Engineering, Engineering College, King Abdulaziz University, Jeddah Saudi, Arabia;

Khalid A. A. Al-Ghamdi, PhD, Ass. Professor, Department of Industrial Engineering, Engineering College, King Abdulaziz University, Jeddah Saudi, Arabia;

**Osman Taylan, PhD,** Ass. Professor, Department of Industrial Engineering, Engineering College, King Abdulaziz University, Jeddah Saudi, Arabia;

**Robert J. Kuligowski**, PhD, National Oceanic and Atmospheric Administration (NOAA), National Environmental Satellite Data and Information Service (NESDIS), NOAA Center for Weather and Climate Prediction (NCWCP), College Park, MD, USA;

Mariia M. Fedoriak, Professor, Department of Ecology and Biomonitoring, Chernivtsi National University, 2 Kotsyubynskyi st., Chernivtsi, Ukraine;

Narayan Ramappa Birasal, Associate Professor, Zoology Department, KLE Society's G H College, HAVERI – 581 110, Karnataka state, India;

Rana P. Singh, Professor, Department of Environmental Science, Babasaheb Bhimrao Ambedkar University, Lucknow-226025, U.P., India;

Hayati AKMAN, Dr., Selcuk University, Seed Department, 42430 Konya, Turkey;

**Durmuş Kaya**, Professor, Kocaeli University, Technology Faculty, Energy Systems Engineering Department, Kocaeli, Turkey; **Fatma ÇANKA KILIÇ**, Associate Prof. Dr., Head of Electrical and Energy Department, Kocaeli Vocational School, Kocaeli University & International Student Coordinator, Kocaeli University, Turkey;

**Ferim Gashi**, Dr., University of Pristina, Department of Geography, Faculty of Mathematical-Natural Sciences, Kosovo; **Altin Dorri**, Professor Assoc., Polytechnic University of Tirana, Tirana, Albania;

Alexander P. Sizykh, Professor, Siberian Institute of Plant Physiology and Biochemistry, Russian Academy of Sciences, Irkutsk, Lermonyova, Russia;

# **Publication Information:**

International journal of ecosystems and ecology science (IJEES), ISSN 2224-4980, publishing original articles, reviews and short communications of high scientific standard on ecosystems and science ecology. By: Hysen Mankolli, Professor, Ecologist, Plainfield, Illinois, USA; Health and Environment Association, Tirana, Albania;

ISSN International Centre, Bibliographic Data Section, PARIS, FRANCE; Bib - ID 68337; ISO standard 3297; Key title: International journal of ecosystems and ecology science Abbreviated key title: Int. j. ecosyst. ecol. sci. ISSN 2224-4980; http://ijees.net/ Frequency: four times a year. IJEES Electronic Journal Publication: Plainfield, Illinois, USA; UOI license: http://u-o-i.org/1.01/ijees; http://www.u-o-i.org/index.php/SearchLicense DPI Digital Library USA and assign unique digital no. DPI: 16.10047.IJEES

This journal has the status of an international journal.

# **Aims and Scope:**

The goals of the International journal of ecosystems and ecology science (IJEES), ISSN 2224-4980, are to bring together researchers and scientists with interests in the quality of the ecosystems research results, theories, technologies, systems, tools, applications, the work in progress and experiences on ecosystems used. The main topics of interest are:

- ✓ Ecosystems
- $\checkmark$ Agro ecosystems
- ✓ Agio cosystems
  ✓ Forest ecosystems
- ✓ Ecology
- ✓ Lakes and Rivers ecosystems
- ✓ Applied Biology
- Applied Chemistry  $\checkmark$
- Biodiversity  $\checkmark$
- ✓ Energy
- Geology  $\checkmark$
- $\checkmark$ Bioaccumulation
- $\checkmark$ Desalination
- ✓ Water
- ✓ Soil
- ✓ Air pollution
- ✓ Climate Change
- ✓ Ecosystem restoration
- ✓ Environment toxicology
- ✓ Environment protection
- ✓ Environmental radioactivity;
- ✓ Environmental legislation;
- Environmental management;  $\checkmark$
- $\checkmark$ Environmental education.
- $\checkmark$ Green technology
- $\checkmark$ Socioeconomic aspects in Ecosystems
- $\checkmark$ Agro tourism and National Park
- ✓ Health Care
- ✓ Food security
- $\checkmark$ Rights and Environmental Laws
- ✓ Environment Engineering
- $\checkmark$ Eco philosophy Issue

## Abstracted / Indexed / Impact Factor in:

International journal of ecosystems and ecology science (IJEES), ISSN 2224-4980, is indexed, abstracted and have impact factors:

#### **Thomson Reuters:**

http://ip-science.thomsonreuters.com/cgi-bin/jrnlst/jlresults.cgi?PC=MASTER&Word=ijees

EBSCO's library products, MA, USA http://www.ebscohost.com/for-publishers/for-publishers

SCOPUS INDEXED JOURNALS: no.237 IJEES http://www.scopus.tk/2015/06/international-institute-of-organized.html?m=0

Google scholar Cited: IJEES https://scholar.google.com/citations?user=W89N8ggAAAAJ&hl=en

IARC Impact Factor (USA), IF=2016: 1.463; 2015: 0.861 http://iarcif.org/index.php/journal\_information/show/44/0/2224-4980

Indexed in Index Copernicus: : ICV2016: 81.17; ICV2015: 93.51; ICV2014= 84.78 (7.93); ICV2013= 5.96; ICV 2012=5.68; ICV 2011=6.00; http://jml2012.indexcopernicus.com/International+journal+of+ecosystems+and+ecology+science+IJEES.p241.3.html

Global Impact Factor (GIF) IF= 2015: 0.765; 2014: 0.675; 2013: 0.541; 2012: 0.425; http://globalimpactfactor.com/international-journal-of-ecosystems-and-ecology-science/

Universal Impact Factor: IF 2013 = 0.541 http://www.uifactor.org/SearchJournal.aspx?q=2224-4980; http://www.uifactor.org/Certificate.aspx?jid=372

INFOBASE INDEX Impact factor IF: 2015=3.2 http://www.infobaseindex.com/journal-accepted.php

#### **Research Bible**

http://paper.researchbib.com/?action=viewList&issn=22244980&vol=4&no=1

Google scholar Cited https://scholar.google.com/citations?user=W89N8qgAAAAJ&hl=en

CAS Chemical Abstracts Service – CAS database http://cassi.cas.org/search.jsp

#### Electronic Journals Library

http://dispatch.opac.ddb.de/DB=1.1/SRT=YOP/LNG=DU/CMD?ACT=SRCHA&IKT=8506&TRM=2687819-7

Energy And Environmental Policy - Journals & <u>Databases</u> http://udel.edu/~hunpark/journals.htm

#### Sience and Ecology Articles

http://en.eannu.com/science\_and\_ecology\_articles,3.html

Efita International Directory of Agriculture, Food and the Environment http://www.efita.org/all-companies.html

#### Environment-and-Nature/Biodiversity/Ecosystem.

http://www.efita.org/Environment-and-Nature/Biodiversity/Ecosystem-Biodiversity/IJEES-details-28892.html

#### NewJour : Electronic Journal&Newsletters http://gulib.georgetown.edu/newjour/nj2/index.html

#### **Environmental expert**

http://www.environmental-expert.com/magazines/?keyword=ecosystem+science

#### **Currently Indexing at Pro Quest**

http://www.proquest.com/en-US/catalogs/databases/detail/periodicals\_index.shtml

## CABI

 $\underline{http://www.cabi.org/default.aspx?page=1016\&site=170\&pid=40\&xslttab=2\&newtitlesonly=1\&search=1.5\%itestablesonly=1.5\%itestabl$ 

#### Academia.edu

http://www.academia.edu/3834422/ 2013 Networking approach to the sustainable development of European Regions bordering major rivers

#### EElinked

http://eelinked.naaee.net/n/eelinked

# IRIS

http://www.iris-sostenibilita.net/iris/index.asp

#### BlogEcologia

http://www.blogecologia.it/2013/03/un-nuovo-articolo-scientifico-conferma-le-ragioni-dei-notav/

#### Cabdirect.org

http://cabdirect.org/abstracts/20133106128.html;jsessionid=A6F4735FC0EBE3D1368E947A2993074A

ISRA (JIF) http://www.israjif.org/raj.html

IIFS http://impactfactorservice.com/home/journal/133

## Manuscripts and correspondence are invited for publication.

Dear Professors, PhD, researchers and scholars of the field of ecosystems and related areas to, such as environmental engineering, agriculture, bio-chemistry (soil, water, air),pollution, geology, forestry, urban ecology, resource economics, etc., at the moment, I declare the sending of scientific journal articles to International Journal of Ecosystems and Ecology Science (IJEES) is open. Sending of items can only be done electronically, to the following address: E-mail: <u>editorijees@gmail.com; 2011jiese@gmail.com; mjedisishendeti@yahoo.com;</u> The confirmation of receiving these items will be announced within the period of three weeks after sending. Weather the article is accepted or not, will be announced within a period of six weeks. Only original articles will be accepted, validated, and not to have or be published in other journals. Publication lasts from three to six months. Submission guidelines and Web Submission system are available at: https://sites.google.com/site/injournalofecosystems/template/guide-for-authors.

## **Editorial Office:**

*IJEES Electronic Journal Publication: Plainfield, Illinois, USA; E-mail: <u>editorijees@gmail.com;</u> <i>Health and Environment Association, Tirana, Albania; E-mail: <u>mjedisishendeti@yahoo.com</u>;* 

<sup>©</sup> IJEES copyright. All rights reserved. Health and Environment Association, Tirana, Albania Publisher; hold the exclusive copyright of all the contents of this journal. In accordance with the international convention, no part of this journal may be reproduced or transmitted by any media or publishing organs (including various websites) without the written permission of the copyright holder. Otherwise, any conduct would be considered as the violation of the copyright. The contents of this journal are available for any citation. However, all the citations should be clearly indicated with the title of this journal, serial number and the name of the author. Price per article published online Regular: \$200 or euro 170 and article published out of order in a short time: \$400 or euro 330, per standard pages; To send online full journal: \$600 or euro 500; \*Subscription for online access to a single article by non-authors has a price of \$200 or euro 170; Health and Environment Association, Tirana, Albania; Tel: 0035542258730; Fax:03554258730; Fax:0354258730; Fax:0354258730; Fax:0354258730; Fax:0458; E-mail: 2011jiese@gmail.com; editorijees@gmail.com;

International Journal of Ecosystems and Ecology Science (IJEES)

Volume 8/2, 2018

Table of contents:

**Cezar Kongoli<sup>12</sup>, Peter Romanov<sup>42</sup>, Sean Helfrich<sup>2</sup>, Jiarui Dong<sup>3</sup>, Michael Ek<sup>3</sup>, Tomas Smith<sup>2</sup>, A SNOW DEPTH ANALYSIS FOR THE NEXT GENERATION OF GLOBAL PREDICTION SYSTEMS, page 189-192;** 

**Lubov Vladimirovna Pomazkina\*, Yuliaya Victorovna Semenova,** INFLUENCE OF HEAVY METALS POLLUTION IN SOIL AND CLIMATIC FACTORS ON THE FUNCTIONING OF AGROECOSYSTEMS IN THE FOREST-STEPPE OF THE BAIKAL REGION, page 193-202;

Abdi Atılgan<sup>1</sup>, Hüseyin Tan<sup>2</sup>, Hatice Ulusoy<sup>3\*</sup>, Hüseyin Peker<sup>4</sup>, DYE OF WASTE TEA EXTRACT WITH MORDANT-VARNISH AND THE EFFECT OF COLOR CHANGES ON WOOD, page 203-212;

**Sukru Dursun<sup>1\*</sup>, Nahida Hameed Hamza Alqaysi<sup>1, 2\*</sup>,** MULTIPLE LINEAR REGRESSION AND INVERSE DISTANCE WEIGHT (IDW) INTERPOLATION FOR SPATIAL ANALYSIS OF PM<sub>10</sub> AND SO<sub>2</sub> IN BURSA CITY, TURKEY, page 213-220;

**Alexander Sizykh\***, SCHEMATIC MAP "ECOTONES AND PARAGENESE IN THE VEGETATION STRUCTURE OF THE BAIKAL REGION, page 221-234;

**Rrahman Ferizi<sup>1</sup>, Qenan Maxhuni<sup>2</sup>, Kadir Huseyin<sup>3</sup>\***, ASSESSMENT OF PSEUDOMONAS AERUGINOSA AND SULFOREDUCTON BACTERIA AS AN INDICATOR OF HUMAN HEALTH RISK AND NATURAL WATER RESOURCE, page 235-240;

**Elnaz Mehrvar Kokhalou<sup>1</sup>, Mehri Fadaei Haghi<sup>1\*</sup>,** IMPACT OF BUILDING FORM AND URBAN MICROCLIMATE ON ENERGY CONSUMPTION OF RESIDENTIAL BUILDINGS, page 241-248;

**Timuçin BARDAK<sup>1</sup>, Hüseyin PEKER<sup>2\*</sup>, Selahattin BARDAK<sup>3\*</sup>**, EFFECTS EXAMINATION OF THE FACTORS AFFECTING CHOICE OF TYPE OF FURNITURE WITH DATA MINING TECHNIQUE (DECISION TREE), page 249-252;

**E.** Gjeçi<sup>1\*</sup>, P. Dhoqina<sup>1</sup>, G. Xhixha<sup>1</sup>, M. Shyti<sup>2</sup>, Th. Karaja<sup>1</sup>, NATURAL RADIOACTIVITY IN MAIN BUILDING AND RAW MATERIALS USED IN ALBANIA, page 253-256;

**Birol BAKI<sup>1\*</sup>, Dilara KAYA ÖZTÜRK<sup>1</sup>, Murat KERIM<sup>1</sup>,** DETERMINATION OF GROWTH AND NUTRIENT COMPOSITION VALUES IN MEAGRE (*ARGYROSOMUS REGIUS*) AQUACULTURE, page 257-262;

**Sukru Dursun<sup>1\*</sup>, Mushtaq Abdulameer Alwan Almuslehi<sup>1,2\*</sup>,** COMPARATIVE BETWEEN GEOSTATISTICAL MODELS WHICH APPLIED TO ANALYSE THE MAJOR ANIONS CONCENTRATION IN GROUNDWATER KARAPINAR, KONYA, TURKEY\*, page 263-272;

**Özgür Eminağaoğlu<sup>1\*</sup>, Emrah Yüksel<sup>1</sup>, Hayal Akyıldırım Beğen<sup>2</sup>,** FLORA OF THE HOD VALLEY (ARTVIN, TURKEY), page 273-282;

**Victor I. Voronin\*, Victor A. Krasnobaev,** DETERMINATION OF PHENOLOGICAL PERIODS OF TREES BY THE METHOD OF CONDUCTOMETRY, page 283-292;

**Mah Ozar Mahmudinejad<sup>1</sup>, Mahmoud Rahmani<sup>2\*</sup>, Hamid Lorestani<sup>2</sup>,** IDENTIFY THE FACTORS INFLUENCING THE SELECTION OF ATTRACTIVE COMPANIES FOR INVESTMENT CASE STUDY: COMPANIES ACCEPTED IN TEHRAN STOCK EXCHANGE, page 293-300;

Nasim Hadadan<sup>1</sup>, Afsaneh Sanatkaran<sup>2\*</sup>, Jaleh bagherly<sup>2</sup>, EDUCATIONAL AND MOTIVATIONAL SELF-TEACHING EFFECT ON THOUGHT CONTROL VERSUS DISTURBING THOUGHTS OF ADOLESCENT SWIMMER GIRLS, page 301-308;

**Mohammad Sadegh Rafat<sup>1</sup>**, **Afsaneh Sanatkaran<sup>2\*</sup>**, **Shahram Mohammadkhani<sup>3</sup>**, THE EFFECT OF RATIONAL EMOTIVE BEHAVIOR THERAPY (REBT) ON NEGATIVE PERFECTIONISM AND BURNOUT IN ATHLETES, page 309-318;

Vugar Ali Türksoy<sup>1</sup>, Meşide Gündüzöz<sup>2</sup>, Servet Birgin Iritaş<sup>3\*</sup>, Sultan Pınar Çetintepe<sup>4</sup>, Mohammed Akkbik<sup>5</sup>, Deniz Boz Eravcı<sup>6</sup>, Lütfiye Tutkun<sup>7</sup>, Serdar Deniz<sup>8</sup>, Eun-Kee Park<sup>9</sup>, DETERMINATION OF CONTAMINANTS IN DRINKING WATER IN YOZGAT, TURKEY, page 319-328;

Aurora Buci<sup>1</sup>, Entela Hodaj-Çeliku<sup>2,3\*</sup>, Hasime Manaj<sup>1</sup>, Sokol Abazi<sup>4</sup>, Spiro Drushku<sup>1</sup>, Diamanto Lazari<sup>2</sup>, COMPARISON OF THE CHEMICAL COMPOSITION OF ESSENTIAL OIL AND HYDROLATES FROM *SATUREJA MONTANA*, page 329-334;

Alexander Sizykl<sup>\*</sup>, VEGETATION MONITORING: SOME METHODOLOGICAL AND METHODIC ASPECTS OF MONITORING WHILE PLANNING TECHNICAL BUILDING, page 335-338;

**Masoud Reihanifar<sup>1\*</sup>, Sepanta Naimi<sup>2</sup>**, EVALUATION OF ROAD CONSTRUCTION PROJECTS BY VALUE ENGINEERING APPROACH AS A TOOL FOR SUSTAINABILITY, page 339-346;

**Dumbadze Guguli<sup>1\*</sup>, Gokturk Temel<sup>2</sup>, Vasadze Revaz<sup>1</sup>, Lomtatidze Nino<sup>1</sup>, Chakhvadze Khatia<sup>1</sup>**, INTENSITY OF CHESTNUT DRYING AND NATURAL RESTORATION OF FOREST IN KEDA MUNICIPALITY (AJARA, GEORGIA), page 347-352;

Alexander Sizykh\*, ECOLOGICAL-GEOGRAPHIC COMPOSITION OF PLANT SPECIES OF TAIGA-STEPPE COMMUNITIES ON LAKE BAIKAL WESTERN SHORE, page 353-358;

**Meysam Moradi\*, Khabat Mohammadi,** THE EFFECT OF SEISMIC SEPARATORS UNDER EARTHQUAKE STIMULUS, page 359-366;

**Azalia Golzari<sup>1</sup>, Alireza Rahimi<sup>2\*</sup>, Mohammad Hosein Naser Meli<sup>3</sup>,** COMPARISON OF THE EFFECT OF SIX WEEKS OF STRENGTH AND PLYOMETRIC EXERCISES ON SOME OF THE KINEMATIC PARAMETERS OF THE LOWER EXTREMITIES IN THE IMPACT ON THE FOOT OF FOOTBALL PLAYER'S GIRL OF 20 TO 25 YEARS OLD, page 367-374;

Hamid Taghinejad<sup>1</sup>, Arman Azadi<sup>1</sup>, Ali Khorshidi<sup>2</sup>, Sasan Navkhasi<sup>3\*</sup>, INCIDENCE RATE OF URINARY TRACT INFECTIONS IN PATIENTS AND EFFECT OF STANDARD CATHETRIZATION EDUCATION ON KNOWLEDGE AND ATTITUDE OF NURSING IN INTENSIVE CARE UNITS OF SHAHID-MOSTAFA KHOMEINI'S HOSPITAL OF ILAM IN 2017, page 375-382;

**L. Hoxha<sup>1\*</sup>, I. Beqiraj<sup>2</sup>, E. Prifti, A. Shehu<sup>3</sup>,** MONITORING OF POLLUTION CAUSED BY THE OIL INDUSTRY, AREA PATOS – MARINZ, page 383-394;

Zamira Shabani<sup>1\*</sup>, Vera Gjinaj<sup>2</sup>, Arlinda Ramaj<sup>3</sup>, LIFE QUALITY OF MALE RELATED TO THE URINARY SYMPTOMS OF PROSTATE IN SHKODRA REGION, page 395-400;

**Zehra Eminağaoğlu\***, ECOLOGICAL APPROACHES IN RURAL SETTLEMENT: A CASE OF TURKEY, page 401-408;

**Victor Voronin<sup>1</sup>**, Alexander Sizykh<sup>1\*</sup>, MODERN TRENDS OF FORESTS FORMATION AT DIFFERENT ENVIRONMENTAL CONTACTS IN THE BAIKAL REGION, page 409-414;

Kübra Yazici<sup>1\*</sup>, Bahriye Gülgün Aslan<sup>2</sup>, GIS USING MULTI-CRITERIA DECISION ANALYSIS FOR ASSESSMENT AND MAP-BASED INDICATORS FOR NURSERY GARDEN MANAGEMENT, page 415-428;

**Najada Kadiasi<sup>1</sup>, Rea Tako<sup>1</sup>, Alban Ibraliu<sup>1\*</sup>,** VARIABILITY OF ESSENTIAL OIL COMPOSITION OF *ORIGANUM VULGARE* L. SUBS. *HIRTUM* AT DIFFERENT HARVESTING STAGES, page 429-432;