

**ISSN 2224-4980**



**International  
Journal of Ecosystems and Ecology Science  
(IJEES)**

<https://doi.org/10.31407/ijeess>



**Essays on Ecosystems and Environmental Research**

**Volume 12/3, 2022**

**April - July 2022**

<http://ijeess.net/>

**International  
Journal of Ecosystems and Ecology Science  
(IJEES)**

<https://doi.org/10.31407/ijeess>





Clarivate Analytics

<https://mjl.clarivate.com/home?PC=MASTER&Word=ijeess>

Volume 12, Issue 3, April 2022 - July 2022, (Serial Number 47)



### 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.

### Deputy-Editor-in-Chief

**Sukru Dursun**, Professor, Konya Technical University, Environmental Engineering Dep., Konya-Turkey.

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

**Cezar Kongoli**, Professor, University of Maryland College Park, Earth System Science Interdisciplinary Center (ESSIC), USA.

**Selim Dogan**, Professor, Konya Technical University, Environmental Engineering Dep., Konya-Turkey.

### International Scientific Editorial Board

**Sukru Dursun**, Professor, Konya Technical University, 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;

**Hysen Mankolli**, Professor, Ecologist, Plainfield, Illinois, USA;

**Lyudmyla Symochko**, Prof. Assoc. Dr. Uzhhorod National University, Faculty of Biology, Uzhhorod, Ukraine;

**Zacharoula S. Andreopoulou**, Professor, Aristotle University of Thessaloniki, Thessaloniki, Greece;

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

**Antonis K. Kokkinakis**, Professor, Aristotle University of Thessaloniki, Thessaloniki, Greece;

**Olivia Cioboiu, PhD**, The Oltenia Museum Craiova, Popa Șapcă 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, Dep. of Entomology, National Museum of Natural History, 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;  
**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, University of Maryland College Park, Earth System Science Interdisciplinary Center (ESSIC), USA;  
**Justas Kažys**, PhD, Assoc. Professor, Vilnius University, Department of Hydrology and Climatology, Vilnius –Lithuania;  
**Selim Dogan**, PhD, Assoc. Professor Selcuk University, Environmental Engineering Department, Konya Turkey;  
**Hisham Mostafa Alidrisi**, PhD, Assoc. Professor, King Abdulaziz University, Engineering College, Jeddah Saudi, Arabia;  
**Khalid A. A. Al-Ghamdi**, PhD, Assoc. Professor, King Abdulaziz University, Engineering College, Jeddah Saudi, Arabia;  
**Osman Taylan**, PhD, Assoc. Professor, King Abdulaziz University, Engineering College, Jeddah Saudi, Arabia;  
**Robert J. Kuligowski**, PhD, University of Maryland College P, Earth System Science Interdisciplinary Center (ESSIC), USA;  
**Mariia M. Fedoriak**, Professor, Chernivtsi National University, Dep. of Ecology and Biomonitoring, Chernivtsi, Ukraine;  
**Narayan Ramappa Birasal**, Associate Professor, KLE Society's G H College, Zoology Department, , Karnataka state, India;  
**Rana P. Singh**, Professor, Babasaheb Bhimrao Ambedkar University, Dep. of Environmental Science, U.P., India;  
**Hayati AKMAN**, Dr., Selcuk University, Seed Department, 42430 Konya, Turkey;  
**Fatma ÇANKA KILIÇ**, Professor, Kocaeli University, Technology Faculty, Energy Systems Engineering Dep., Kocaeli, 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, Russian Academy of Sciences, Siberian Institute, Irkutsk, Lermonyova, Russia;  
**Zeynep EREN**, Professor, Ataturk University, Environmental Engineering Department, Erzurum, Turkey;  
**Sheida Korjani**, PhD, Department of Architecture, Tabriz Branch, Islamic Azad University, Tabriz, Iran;  
**Maan Maarroof**, PhD, Assistant Professor, University of Mosul, College of Veterinary Medicine, Iraq;  
**Koula Doukani**, Professor, University of Ibn Khaldoun, Zaaroura, Tiaret, Algeria;  
**Svetla Petkova Gateva**, PhD, Institute of Biodiversity and Ecosystem Research, Bulgarian Acad. of Sciences, Sofia, Bulgaria;  
**Rrahim Sejdiu**, Professor Assistant, PhD, University of Applied Sciences-Ferizaj, Kosovo;  
**Mouloud BOUHOUBOU**, Dr., ENS Assia Djebar - Constantine, Algeria;  
**Dinh Tran Ngoc Huy**, Dr., Banking University HCMC, Ho Chi Minh city Vietnam-International University of Japan, Japan;  
**Nataliia P. Kovalenko**, PhD, Inst. of History of Agrarian Science, Education and Technique of NSAL NAAS, Kiev, Ukraine;  
**Admir Jançe**, Professor Assoc., European University of Tirana, Tirana, Albania;

## 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://ijeess.net/>  
Frequency: four times a year. IJEES Electronic Journal Publication: Plainfield, Illinois, USA;  
DOI prefix: 10.31407, <https://doi.org/10.31407/ijeess>



Clarivate Analytics

<https://mjl.clarivate.com/home?PC=MASTER&Word=ijeess>

Clarivate

<https://mjl.clarivate.com/home>

Web of Science Core Collection,

Journal Citation Indicator (JCI): 2020: **0.05**; 2019:**0.05**

<https://apps.clarivate.com/mjl-beta/search-results>

Emerging Sources Citation Index - JOURNAL LIST

<http://mjl.clarivate.com/cgi-bin/jmlst/jlresults.cgi?PC=EX&Alpha=I>



ESCI Clarivate, <https://mjl.clarivate.com/home>

UOI license: <http://u-o-i.org/1.01/ijeess>; <http://www.u-o-i.org/index.php/SearchLicense>



DPI Digital Library USA and assign unique digital no. DPI: 16.10047.IJEES

U.S. National Library of Medicine,

NLM ID: [101726509](https://pubmed.ncbi.nlm.nih.gov/101726509/) [Serial]; Other ID: (OCOLC)879805056;

<https://www.ncbi.nlm.nih.gov/nlmcatalog/101726509>

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

## Abstracted / Indexed / Impact Factor in:

International journal of ecosystems and ecology science (IJEES), ISSN 2224-4980,

IJEES: <http://ijeess.net/>

*IJEES have an international status and has been indexed, abstracted, and have impact factors:*

ISSN Center responsible of the record: CIEPS - ISSN

<https://portal.issn.org/resource/ISSN/2224-4980>

IJEES doi crossref

<https://doi.org/10.31407/ijeess>

IJEES, Volume 12/3, 2022

[https://www.ijeess.net/journal-85-International--Journal-of-Ecosystems-and-Ecology-Science--\(IJEES\)--Volume-12-3,-2022.html](https://www.ijeess.net/journal-85-International--Journal-of-Ecosystems-and-Ecology-Science--(IJEES)--Volume-12-3,-2022.html)

Clarivate Analytics

<https://mjl.clarivate.com/home?PC=MASTER&Word=ijeess>

Clarivate

<https://mjl.clarivate.com/home>

Web of Science Core Collection,

Journal Citation Indicator (JCI):2020: **0.05**; 2019:**0.05**

<https://apps.clarivate.com/mjl-beta/search-results>

Emerging Sources Citation Index - JOURNAL LIST

<http://mjl.clarivate.com/cgi-bin/jmlst/jlresults.cgi?PC=EX&Alpha=I>

Sciencegate cited

<https://www.sciencegate.app/source/315335/top-cited>

Scilit

<https://www.scilit.net/journal-articles/1892436>

CiteFactor: IF 2019-2020:1.40;

<https://www.citefactor.org/impact-factor/impact-factor-of-journal-International-Journal-of-Ecosystems-and-Ecology-Science-IJEES.php>

EBSCO's library products,USA

<http://www.ebscohost.com/for-publishers/for-publishers>

IARC: Journal Impact Factor (USA), IF=2017: **1.811**; IF=2016: **1.463**; =2015: **0.861**

[http://iarcif.org/index.php/journal\\_information/show/44/0/2224-4980](http://iarcif.org/index.php/journal_information/show/44/0/2224-4980)

Index Copernicus ICV= 2020: **100.00**; ICV= 2019: **100.00**; ICV= 2018: **100.00**; ICV= 2017: **98.95**;

<https://journals.indexcopernicus.com/search/journal/issue?issueId=197247&journalId=31407>

Academic Resource Index Research Bible:

<http://paper.researchbib.com/view/issn/2224-4980/10/2>

Scientific Journal Impact Factor Value 2020: **SJIF 2020 = 7.167**

<http://sjifactor.com/masterlist.php?area=all&country=al&ord=sjif>

Google scholar Cited: **h-index: 10**; **Citations 400**;

<https://scholar.google.com/citations?user=W89N8qgAAAAJ&hl=en>

MIAR

<http://miar.ub.edu/issn/2224-4980>

Directory of Research Journals Indexing (DRJI)

<http://olddrji.lbp.world/JournalProfile.aspx?jid=2224-4980>

WorldCat

[https://www.worldcat.org/search?qt=affiliate\\_wc\\_org\\_all&ai=Directory\\_ashok.drji%252540gmail.com&fq=&q=2224-4980&wcsbtn2w=Go](https://www.worldcat.org/search?qt=affiliate_wc_org_all&ai=Directory_ashok.drji%252540gmail.com&fq=&q=2224-4980&wcsbtn2w=Go)

US. National Library of Medicine, NLM ID: **101726509** [Serial]; **Other ID:** (OCOLC)879805056;

<https://www.ncbi.nlm.nih.gov/nlmcatalog/101726509>

Global Impact Factor (GIF) IF: 2015: **0.765**; 2014: **0.625**; 2013: **0.541**; IF= 2012: **0.425**;

<http://globalimpactfactor.com/journals-list/?snap=I>

CAS Chemical Abstracts Service – CAS database

<http://cassi.cas.org/search.jsp>

Journal Factor: ISSN 2224-4980

[http://www.journalfactor.org/advance\\_search.php](http://www.journalfactor.org/advance_search.php)

Directory of Research Journals Indexing (DRJI)

<http://olddrji.lbp.world/justIncluded.aspx>

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](http://www.proquest.com/en-US/catalogs/databases/detail/periodicals_index.shtml)

CABI

<http://www.cabi.org/default.aspx?page=1016&site=170&pid=40&xslttab=2&newtitlesonly=1&search=>

## 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 and 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: [editorijeess@gmail.com](mailto:editorijeess@gmail.com); [2011ijeese@gmail.com](mailto:2011ijeese@gmail.com); [mjedisishendeti@yahoo.com](mailto:mjedisishendeti@yahoo.com); The confirmation of receiving these items will be announced within the period of one to three weeks after sending. Whether the article is accepted or not, will be announced within a period of two to three weeks. Only original articles will be accepted, validated, and not to have or be published in other journals. Publication lasts from two to six months. All Rights Reserved Copyright by © IJEES (the first or correspondent author have responsible for the accuracy of the article). Submission guidelines and Web Submission System are available at: <https://www.ijeess.net/page-6-Guide-for-authors.html>;  
**Note:** If the paper is published in another journal or if it includes false or inaccurate claims, it will be rejected or removed automatically as that constitutes a violation. Zero tolerance!*

## Editorial Office:

*IJEES Electronic Journal Publication: Plainfield, Illinois, USA; E-mail: [editorijeess@gmail.com](mailto:editorijeess@gmail.com);  
Health and Environment Association, Tirana, Albania; E-mail: [mjedisishendeti@yahoo.com](mailto:mjedisishendeti@yahoo.com);*



**International  
Journal of Ecosystems and Ecology Science  
(IJEES)**

DOI: <https://doi.org/10.31407/ijeess>

**Volume 12/3, 2022**

DOI: <https://doi.org/10.31407/ijeess12.3>

**Table of contents:**

**Nadia Kosovska<sup>1</sup>, Natalia Makarenko<sup>2</sup>, Valeria Bondar<sup>2\*</sup>, Anna Matviukiv<sup>2</sup>, Lyudmyla Symochko<sup>3</sup>**, SOIL MICROBIOME UNDER THE INFLUENCE OF NANO AND BIOPREPARATIONS, page 1-8;

DOI: <https://doi.org/10.31407/ijeess12.301>

**Haider Romella<sup>1\*</sup>, Moradi Hossein<sup>1\*</sup>, Saghafi Hossein<sup>2</sup>, Majid Asghari<sup>1</sup>, Aliasl Fatemeh<sup>1</sup>, Nojavan Fatemeh<sup>1</sup>, Borujerdi Razieh<sup>1</sup>, Khayatzaade Batool<sup>1</sup>**, CONTROL OF PROTEINURIA IN PATIENTS WITH DIABETIC NEPHROPATHY ACCORDING TO TRADITIONAL PERSIAN MEDICINE, THE EFFECT OF PLANTAGO SEEDS: A LITERATURE REVIEW, page 9-14;

DOI: <https://doi.org/10.31407/ijeess12.302>

**Nguyen Trong Diep<sup>1</sup>, Dinh Tran Ngoc Huy<sup>2\*</sup>**, VIEWPOINTS OF ISSUING LAW OF CONSUMER PROTECTION IN VIETNAM, page 15-22;

DOI: <https://doi.org/10.31407/ijeess12.303>

**Alexander Victorovich Rudenko<sup>1\*</sup>, Tatiana Alexandrovna Mokhovaya<sup>2</sup>, Alexander Sergeevich Gorban<sup>1</sup>, Vladimir Alexandrovich Zavyalov<sup>1</sup>, Alexey Igorevich Sankin<sup>1</sup>**, ORGANIZATION OF TACTICAL OPERATIONS AS AN INDEPENDENT ELEMENT OF THE MECHANISM OF THEIR IMPLEMENTATION, page 23-32;

DOI: <https://doi.org/10.31407/ijeess12.304>

**A. T. Aimen<sup>1\*</sup>, G. T. Kuandykova<sup>1</sup>, I. Suleimenova<sup>1</sup>, F. R. Tashmukhamedov<sup>1</sup>, G. B. Demeuova<sup>1</sup>, G. S. Anarova<sup>1</sup>, S. A. Aimenova<sup>1</sup>, A. B. Moldasheva<sup>1</sup>**, ENVIRONMENTAL EVALUATION OF WATER SALT EXCHANGE PROCESS IN SOIL DEGRADATION IN THE ARID ZONE, page 33-42;

DOI: <https://doi.org/10.31407/ijeess12.305>

**Serhii Razanov<sup>1\*</sup>, Oksana Husak<sup>2</sup>, Mikhaylo Polishchuk<sup>3</sup>, Oleh Bakhmat<sup>4</sup>, Olha Koruniak<sup>5</sup>, Lyudmyla Symochko<sup>6</sup>, Ivanna Ovcharuk<sup>7</sup>**, ACCUMULATION PECULIARITIES OF HEAVY METALS IN CEREAL CROPS GRAINS OF DIFFERENT VEGETATION PERIOD IN CONDITIONS OF THE FOREST STEPPE OF THE RIGHT BANK OF UKRAINE, page 43-50;

DOI: <https://doi.org/10.31407/ijeess12.306>

**Kawa Hama Sharif<sup>1</sup>, Omruye Ozok-Arici<sup>2</sup>, Aykut Çağlar<sup>3</sup>, Hilal Kivrak<sup>2,3,\*</sup>, Arif Kivrak<sup>5\*</sup>**, SYNTHESIS OF THYMOL DERIVATIVES AND ITS FUEL CELL PERFORMANCE AS AN ANODE CATALYST, page 51-58;

DOI: <https://doi.org/10.31407/ijeess12.307>

**BOUACHA Mohamed Islem<sup>1\*</sup>, SAFA Omar<sup>1</sup>, SOUDANI Leila<sup>1</sup>, AZZAOUI Mohamed Essalah<sup>1</sup>, CHAFAA Meriem<sup>1</sup>**, ROAD TRAFFIC AND CANYON STREET EFFECT ON AIR POLLUTION IN TIARET CITY, ALGERIA, page 59-66;

DOI: <https://doi.org/10.31407/ijeess12.308>

**Ahmad Zamir<sup>1</sup>, Aziz Ullah<sup>2</sup>, Arz Muhammad Umrani<sup>1\*</sup>, Shehla Sattar<sup>3</sup>, Rahib Hussain<sup>4</sup>, Syed Talha Kamil<sup>1</sup>, Shabir Ahmad Jan<sup>1</sup>**, ROLE OF VILLAGE ORGANIZATION IN THE SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES AND THEIR CONSTRAINTS IN VILLAGES (LILOWNAI, CHORBUT AND NOREPEZW) OF DISTRICT SHANGLA, KPK PAKISTAN, page 67-74;

DOI: <https://doi.org/10.31407/ijeess12.309>

**Bedri Dragusha<sup>1</sup>, Skender Demaku<sup>2\*</sup>**, WATER QUALITY STUDY OF THE LUMBARDHI RIVER IN THE PRIZREN AREA USING PHYSICO-CHEMICAL AND HEAVY METALS ANALYSIS, page 75-84;

DOI: <https://doi.org/10.31407/ijeess12.310>

**Lanh Nguyen Van<sup>1</sup>, Tha To Hien<sup>2\*</sup>, Dinh Tran Ngoc Huy<sup>3\*</sup>, Duong Phan Huy<sup>4</sup>**, MACROECONOMIC IMPACTS ON BANK PERFORMANCE AND EVALUATING RELATIONSHIP BETWEEN BETA CAPM AND BANK COST OF EQUITY: A CASE OF ENHANCING RISK MANAGEMENT MECHANISM OF SACOMBANK IN VIETNAM, page 85-94;

DOI: <https://doi.org/10.31407/ijeess12.311>

**Irina Sergeevna Agasyeva<sup>1\*</sup>, Vladimir Yakovlevich Ismailov<sup>1</sup>, Anton Sergeevich Nastasiy<sup>1</sup>, Mariya Vladimirovna Nefedova<sup>1</sup>**, DEVELOPMENT OF WAYS TO CONTROL CODLING MOTH WITH THE HELP OF BIOLOGICAL PRODUCTS AND METHODS, page 95-100;

DOI: <https://doi.org/10.31407/ijeess12.312>

**Ta Van Thanh<sup>1</sup>, Dinh Tran Ngoc Huy<sup>2\*</sup>, Le Ngoc Nuong<sup>3</sup>, Nguyen Tien Dung<sup>4</sup>**, MAINTAINING LEADERSHIP ROLES OF BANKS VIA DIGITAL MARKETING IN BANKING SECTOR - AND MARKETING EDUCATION FOR STUDENTS IN UNIVERSITIES, page 101-108;

DOI: <https://doi.org/10.31407/ijeess12.313>

**Natalia Vladimirovna Khavanova<sup>1\*</sup>, Vladimir Yurievich Morozov<sup>1</sup>, Nikolay Gubachev<sup>2</sup>, Tatyana Morozova<sup>2</sup>, Irina Duborkina<sup>1</sup>**, THE MECHANISM OF FORMING STATE GOVERNANCE OF TERRITORIES, page 109-116;

DOI: <https://doi.org/10.31407/ijeess12.314>

**Tatiana Anatolievna Saadulaeva<sup>1\*</sup>, Oxana Nikolaevna Afanasyeva<sup>1</sup>, Valentina Dmitrievna Lukina<sup>1</sup>, Irina Gennadievna Shadskaja<sup>2</sup>, Anna Sergeevna Filonova<sup>3</sup>**, FORMING APPROACHES TO CONTROLLING STATE BUDGET DEFICIT, page 117-122;

DOI: <https://doi.org/10.31407/ijeess12.315>

**Imran khan<sup>1</sup>, Ahmad Zamir<sup>1</sup>, Aziz Ullah<sup>2\*</sup>, Salar Ali<sup>3</sup>, Zile Huma<sup>4</sup>, Sohaib Ahmed<sup>1</sup>, Arz Muhammad Umrani<sup>1\*</sup>, Jamil Raza<sup>5</sup>, Muhammad Naqash<sup>1</sup>, Bashirullah<sup>1</sup>**, COMPARATIVE ANALYSIS OF PHYSICO-CHEMICAL PROPERTIES OF SOIL UNDER DIFFERENT AGROFORESTRY SYSTEMS OF DISTRICT CHARASADA, page 123-136;

DOI: <https://doi.org/10.31407/ijeess12.316>

**A. T. Aimen<sup>1\*</sup>, E. C. Ahmetov<sup>2</sup>, F. R. Tashmukhamedov<sup>3</sup>, G. B. Demeuova<sup>4</sup>, G. Mussayeva<sup>5</sup>, L. Ukibayeva<sup>6</sup>, K. Golikova<sup>7</sup>, S. A. Aimenova<sup>8</sup>**, ECOLOGICAL REGULATION OF HYDROCHEMICAL PROCESSES OF GROUNDWATER LOCATED CLOSE TO THE SURFACE, page 137-146;

DOI: <https://doi.org/10.31407/ijeess12.317>