

## Editorial

2024 is coming to a close but there seems to be no end to global political and environmental conflicts. Future does not appear too golden any more.

The current issue of AJWEP will be the last one with present editorial board and publisher. I will not be associated with the Journal any longer. On behalf of Capital Publishing Co and the Editorial Board and on my own behalf I take the opportunity to thank all contributors who together gave creditability to the journal for the last two decades.

Wishing everyone a Happy 2025!

November 30, 2024

A handwritten signature in black ink, appearing to read 'V. Subramanian', with a long horizontal line extending to the right.

(V. Subramanian)

Editor-in-Chief



Livestock-holding farmers and herders in Rafah, Gaza Strip, receive animal fodder distributed by FAO to support local food production in April 2024 ©FAO/Yousef Alrozzi  
(see Environment News Futures)



Will flights really reach net zero by 2050 - and at what cost to passengers?  
(see Environment News Futures)

# Contents

<i>Editorial</i>	i
☐ <i>Snapshots</i>	ii
<i>In-Vitro</i> Human Cell Experimental Models in Heavy Metal Research <i>Nik Syamimi Nik Yusoff, Nik Noorul Shakira Mohamed Shakrin, Victor Feizal Knight, Mohd Nor Faiz Norrrahim and Wan Md Zin Wan Yunus</i>	1
Assessing Water Quality in the Cooum River Basin: A Comprehensive Review of Methodologies and Findings <i>G. Venkatesan, S. Sasikumar, P. Karthick and R.S. Balamurali</i>	9
The Antibiotic Resistance Profile of <i>Escherichia coli</i> from Selected Estuaries in the City of Manila, Philippines <i>Aaron Jan Palmares, Jayme Jyles Rongalirios, Marticia Santos, Marc Joseph Siggaoat, Pauline Lourdes Sucgang, Nicole Niren Tipa, John Chrysler Adriane Torres, Caroline Anne Vasquez, Angela Mae Viernes and Francisco Gellecanao</i>	15
Characterization of Wood Plastic Composites (WPC) Based on High Density Polyethylene (HDPE), Hardwood Sawdust Residues and Butadiene Rubber (Tyre Dust) <i>Avijit N. Srivastava, Sankalp Purwar, Mihir Shah, Geeta Singh and S.K. Singh</i>	23
Total Nitrogen, Nitrate and Ortho-Phosphate Elimination Effect in Common Reed and <i>Typha angustifolia</i> from Wastewater <i>A. Sellal, R. Belattar, H. Khither, S. Boucheffa, N. Touati, N. Boussoualim and A. Diafat</i>	31
Experimental Investigation of Wastewater by Using Novel <i>Borassus flabellifer</i> Fiber and <i>Cocos nucifera</i> Fiber <i>Ganesan R., Latha A., Kavitha P. and Venkatesan G.</i>	39
Study of Operating Parameters on the Optimum Hydrogen Yield Through the Ethanol Steam Reforming <i>Aamir Baig, Vibha Goswami and Sonal</i>	49
Renewable Energy Based Stability Solution for Grid-Connected Distribution System <i>Abinash Singh and Balwinder Singh Surjan</i>	59
Role of <i>Ricinus communis</i> Plants: As Highly Adsorbent Surface for Removal of Dyes from Aqueous Solutions and Its Role of Biological Activity <i>Aseel M. Aljeboree, Uday Abdul-Reda Hussein, Mohammed Abed Jawad, Hussam Abdali Abdulridui, Buthaina Shabaan Shaheen, Israa Adnan Ibraheam and Ayad F. Alkaim</i>	69
Precipitation Disparity's Impact on Groundwater Fluctuation Using Geospatial Techniques in the Ranipet District of Southern India <i>G. Venkatesan, Tejavath Pavan Kalyan, Bodugu Sudheer and K. Mohith Kumar</i>	77
Characterisation of Power Plant Disposal Water from Two Distinct Regions in Bangladesh: A Comparative Assessment of Irrigation Feasibility <i>Debashree Halder Tuli, Md. Touhidul Islam, Nusrat Jahan, Nilima Das, Mohammed Mizanur Rahman and A.K.M. Adham</i>	91
Soil Contamination in the Aftermath of Industrial Disasters: Risk Assessment and Crisis Management <i>Sonam Taneja, Öznur Karaca and A.K. Haritash</i>	101
Wastewater Treatment by the Cyanobacterium Species: <i>Synechococcus elongatus</i> as Biosorption Material for Pb, Cr and Ni Heavy Metals <i>Saba S.B. Alshididi, Mahmood K.H. Al-Mashhadani and Ibrahim J. Abed</i>	111

Assessing Seasonal Changes in Groundwater Quality in a South Indian Industrial Centre: A Geospatial Approach to Evaluate Drinking Water Safety and Health Risks <i>G. Venkatesan, Kamsala Madhurya, H. Mithun and C.A. Prakalya</i>	119
Groundwater Prospect Zone Mapping: A Geospatial Investigation with Decision Making in Mahendergarh District, Haryana <i>Manju Kumari, Surender Singh and Anil Kumar</i>	131
The Ecological Crisis of the Noyyal River: A Comprehensive Analysis <i>V. Johnpaul, Venkatesan Govindaraj and A. Mohanarathinam</i>	143
Assessment of Water Quality for Drinking and Domestic Use from Three Sources in the Mila Region, Northeastern Algeria <i>M. Lalaoui, N. Bouchareb, S. Bousbia, A.C. Rebbah, M. Baali, D. Belmekimah and R. Fekraoui</i>	151
Assessment of Spatio-Temporal Changes in Land Use and Land Cover – A Case Study of Yamunanagar District (Haryana), India <i>Anuradha and Sandeep Gupta</i>	161
Study of the Vertical Dispersion Coefficient of Air Pollution Under Different Atmospheric Stability Conditions over Baghdad <i>Ruqaya A. Al-Naser and Monim H. Al-Jiboori</i>	173
Analysing the Composition and Behaviour of Manufacturing Industry Effluents <i>Kalpna Manoharan, Venkatesan Govindaraj, Padma Srinivasa Perumal, Harishankar Paramasivam, Mudinour Lokeshwary and Anbarasu Annamalai</i>	181
Outsourcing of Fire Inspection Services: An Analytical Approach <i>Atul Garg, Amarjeet Kaur and Hamendra Dangi</i>	189
Interfering Effect of Silicate in the Quantification of Phosphate by the Molybdenum-blue Method <i>Debashis Kumar Barman, Rashedul Islam, Gautam Kumar Dash, Sumon Ganguli, Ashok Kumar Chakraborty, Mahbub Kabir and Md Abdus Sabur</i>	195
Comparative Review of Solid Waste Management Scenarios in India and Swaziland <i>Nkululeko Sabelo Dlamini and Pawan Kumar Jha</i>	203
Role of Artificial Intelligence in Modernisation of Fire Risk Management <i>Rajesh Kumar, Amarjeet Kaur and Hamendra Dangi</i>	213
Effect of <i>Cladophora glomerata</i> Extract Against Some Fungal Pathogens <i>Rand Haider Ali, Maarb Salih Al-Maoula and Adel Hamdan Alwan</i>	221
Assessing Environmental Impact of Shoreline Changes Along the Odisha Coast Using DSAS and Satellite Imagery – A Study of Erosion and Accretion Patterns <i>Padma S., Venkatesan G. and M. Kalpana</i>	229
Effect of Combined Sericulture Waste Compost on Nutrient Uptake, Flower Quality and Yield of <i>Tagetes erecta</i> Linn. (Asterales: Asteraceae) <i>Palanisamy Jothimani, Chidamparam Poornachandhra, Govindaraj Kamalam Dinesh, Joseph Ezra John, Kandasamy Senthilraja and S Hemalatha</i>	239
Assessment of the Bacteriological and Physicochemical Water Quality of the Inaouene and Larbaa Rivers (Taza, Morocco) <i>F.E Sghiouer, A. Nahli, H. Bouka and M. Chlaida</i>	249
Contribution Based on Neurons Networks for the Prediction of Greenhouse Gas Emissions in a Handling Port <i>Kone Bakary, Dosso Mouhamadou and Traore Seydou</i>	261
Environmental Impact Mitigation of Jarosite Waste Through Advanced Thermal Treatment Techniques <i>Om Prakash Gared, Jeetendra Singh Khichad, Arun Gaur and Ruchi Sharma</i>	271
<i>Environment News Futures</i>	281