INTERNATIONAL JOURNAL OF ENVIRONMENT
Volume-3, Issue-2, Mar-May 2014 ISSN 2091-2854

AN ACADEMIC REVIEW OF THE FIRST TWO VOLUMES OF THE INTERNATIONAL JOURNAL OF ENVIRONMENT (IJE)

Mehraz Boolaky[1] and Surya P Sunkavalli [2]
[1]University of Liverpool/Laureate
[2]Geomega, Boulder, Colorado

The first contact with the journal was established by initiating a communication through "Author Aid Discussion Group", inviting interests for being a Board Member of the International Journal of Environment (IJE). The journal could not have had a better leader like **Govinda Bhandari**, who always prompted to communicate, and took various initiatives to propel the journal forward. The present paper forms a part of the initiatives of Editor-in-Chief to draw an article to review the momentous milestones achieved by the journal so far.

From the perspective of physical evidence, the journal cover is professionally designed to reflect its theme – the blue sky over-looking mountains and hills as a striking background, and lush trees in the foreground. The green logo is also conspicuously noticeable, highlighting the evident earmark of the journal.

There is no better way to commence this review with the mission statement of the journal that strongly conveys its aims and purposes:

> *The mission of PSD-Nepal is to provide a network for sharing technical information and expertise on agriculture, climate and environmental sectors. It aims to bring people with a common interest together, and act as a forum in publishing peer-reviewed papers in the field of environment, and in turn helping to disseminate the results of the studies and research. We hope that this journal will surely be an aided publication to all in addressing the global environmental issues to move ahead in complementing the current scientific and technical development with cross-disciplinary, integrated approach (PSD Nepal Website, 2013; http://www.nepjol.info/index.php/IJE).*

The *policies* of the journal are clearly stipulated, and it is good to earmark its contribution to the cause of education, research and knowledge-building through the following statement-

> *'This journal provides immediate open access to its contents making research freely available to the scientific community, supports an abyssal exchange of knowledge at global level.'*

It is most encouraging to note how the Editorial Board is growing and expanding in number and strength, which is endowed with knowledgeable academicians and eminent members of the research community and practitioners, accountable for sustainable development and 'green' machinery to dedicate always to save the world for better and healthier living.

The following is a brief review of some of the articles selected indiscriminately as follows:

Volume-1, Issue-1, Jun-Aug 2013 contains six articles having 8 to 17 pages.

Volume-2, Issue-1, Sep - Nov 2013 contains 24 articles with 7 to 22 pages.

Review of articles

Halim and Islam (2013) evaluated sweet pepper cultivation under four different protective structures in two consecutive seasons of 2007-08 and 2008-09 at the experimental field of Horticulture Research Center of BARI, Gazipur. The study reveals that the plants grown under protective structures had higher plant height compared to that of plants grown in open field with the highest individual fruit weight (65.30 g) was recorded form the plants grown under poly house condition while it was the lowest from open field grown plant (38.67 g). Thus the authors give strong support to using protective structures for cultivation of sweet pepper.

Kassim (2013) attempted to evaluate four methods of quantitative determination of soil carbonates. Calcium carbonates equivalent were determined by the acid neutralization, calcimeter and acetic acid methods. The acid neutralization method gave significantly higher estimates of total carbonates and different from each of the others. The calcimeter method gave the lower estimates of $CaCO_3$ equivalent. The results showed that the corrected values of $CaCO_3$ equivalent did not differ significantly from other three methods but the overall mean tended to be higher than the acetic acid and calcimeter methods. It was concluded that the acetic acid method is simple, can reasonably estimate the carbonate content and requires only a pH meter. It can be used for routine determination of soil carbonate.

Anup et al. (2013) did a study on soil using three different strata in Ghwangkhola Sapaude Babiyabhir Community Forest in Nepal to find the status of pH, organic matter (C), total nitrogen (N), available phosphorus (P) and available potassium (K) in forest soil. They found that the soil pH in all three strata was slightly acidic and gave actual figures of the range of pH. Accordingly they concluded that higher organic matter in the forest land indicate low activities of nitrogen losing process and thus recommended the addition of fertilizer rich in potassium and increasing pH to maintain potassium fertility and neutral pH in the forest soil.

Mhlanga and Mhlanga (2013) of the Department of Environmental Science, Bindura University of Science Education, Zimbabwe and the Department of Biological Sciences, University of Zimbabwe, Zimbabwe explore the small-scale (artisanal) fisheries in Zimbabwe that play an important role in income generation and food security at the household level. They are of the view that the "Top-down" approach has had very limited effectiveness in sustainably managing the fisheries resources and instead co-management in the fisheries sector was implemented. Their study discussed several factors within the institutional, ecological, human

and financial systems which had a negative impact on the implementation of co-management on the Zimbabwean side of Lake Kariba and proposed a more innovative and effective fisheries management approaches for the different categories of water bodies in Zimbabwe.

In a very interesting study conducted by Bajpai et al. (2013) on fresh water bodies in populated plains of tropical countries, the authors highlight that these bodies face various disturbances in the form of pollutant and nutrient inflow, heavy metal and elemental precipitation (wet or dry) and constant silt inflow (natural or anthropogenic). 31 species of Cyanobacteria were identified from the study site and were recommended as being a good indicator of the overall health of the water body.

Kamble, Walia and Thakare (2013) opine that India is one of the ten worst disaster prone countries of the world and this for various reasons such as both natural and anthropogenic. Ecosystem based disaster risk reduction builds on ecosystem management principles, strategies and tools in order to maximize ecosystem services for risk reduction. The authors brought forward how ecosystem-based approach can help in flood disaster risk reduction.

Akhter, Hossainn, and Karim (2013) investigated the effects of Ca^{2+} (Calcium ions) on water relation of two wheat cultivars (Akbar and Kanchan) under salt stress. The results obtained suggest that elevated Ca^{2+} increases salt tolerance by improving the plant water status.

Isa et al. (2013) studied the prevalence of urinary tract infection (UTI) among one hundred and twenty children attending primary schools in Maiduguri (Nigeria). They found that microbial culture on Cystein Lactose Electrolyte Deficient (CLED) ager and subsequent Biochemical tests revealed 31.7% of the samples with significant bacterial growth ($\geq 10^5$ CFU/ml). Several organisisms were identified with *Escherichia coli* being more prevalent (8.3%) followed by *Staphylococcus aureus* (6.7%) and *Corynebacterium* species (5.8%). Therefore, government needs to increase efforts toward creating awareness among the people, for effective treatment, control and prevention of the disease.

Prakash and Yumus (2013) acknowledged that the demand of the essential oil of mint species, widely used in food, pharmaceutical and cosmetic industries, is growing throughout the world. They examined the changes in chemical characteristics of the oil for economic value when the crop of *Mentha* is grown near highways, railway tracks or areas having heavy traffic loads and set up a study area under controlled conditions. They found that the quantity of the peppermint oil extracted from plants of site having highest traffic loads, in turn maximum ambient pollutants (NO^2, SO^2, O^3, SPM & RSPM) was found less as compared to plants grown in less polluted site.

Bashir, et al. (2013) studied the antifungal activity of aqueous and ethanol extracts obtained from seed and leaf of *Jatropha curcas in Nigeria*, using agar incorporation method *in*

vitro against *Aspergillus niger*, a microbe known to be resistant to some chemical agents. Pathogenicity test revealed that *A. niger* was the pathogenic fungus that cause black mould rot of onion bulbs. The result of the study suggests the potentials of *J. curcas* extracts as fungicidal agent that could be useful in management of black mould rot of onion bulbs caused by *Aspergillus niger*.

Kushwaha, Hazarika and Srivastava (2013) conducted a pilot study in New Delhi, India, to assess the level of traffic related aerosol exposure, individually and associated metals. They also try to investigate and formulate an exposure risk assessment using different modes of transport on a typical journey to work route and compared Bus, Auto-rickshaws and Bike (Two Wheelers) during the journey. They found that the exposure of Particulate matter was observed maximum in the Bike ($502 \pm 176.38\ \mu gm^{-3}$) and minimum in the Auto-rickshaw ($208.15 \pm 61.38\ \mu gm^{-3}$). The findings indicated that the exposure to particulate bound elements have relatively more adverse health effects.

Aliyu, Manga and Isa (2013) explored the prevalence of hepatitis B virus infection among HIV patients attending Sokoto specialist Hospital, Sokoto state, Nigeria. The statistical analysis has shown that there was no observable statistical significant difference between demographic data, clinical characteristics and risk factors with respect to HBV infection. They suggest that HIV patients should be screened for HBV during their clinical visit in order to inform clinical management. They recommend that adequate care and support programs should be organized to help people living with both infections.

Pankaj et al. (2013) discussed the status and distribution of threatened and medicinal plant species in various types of habitats and ecosystems of Kachchh Desert Island, Gujarat, India. They also elaborated on opportunistic observations of floral elements, conservation and management of some medicinal and threatened plant species and the role of environmental, ecological, economical, social and ethological factors which help to enhance the productive potential of a particular plant species along with its associated communities involving local people, tribal communities and local NGOs.

Kumar and Kalavathy (2013) made phenological observations for 13 woody species for two years (Jan 2006 - Dec 2007) in dry deciduous forest of North Gujarat (India). They found that the phenological behavior of most of the woody species was almost similar in two different years. They concluded amongst others that 'selected tree species facing "seasonal threats" in the form of cutting, results early losses of tree branches, affects the flowering and fruiting pattern of NGR' and thus there is a need to develop awareness on rotational cutting, educating people about the value of forest and species usage.

Yadav et al. (2013) examined the role of shifting cultivation on deforestation and degradation with variant of slope and elevation to relate vegetation cover with slope and elevation in the Garo Hills landscape of Meghalaya using temporal remote sensing data of 1991, 2001 and 2010. It revealed that there is decrease in dense forest and open forest during the 1st decade while areas under dense forest and non-forest increased in 2nd decade. This increased forest area is confined in the high slopes, which are inaccessible. The study shows increase in shifting cultivation near-about double fold in high slope and more than a double fold in the high altitudinal area in last decade, which is negative sign in terms of Geomorphological protection.

Neupane and Neupane (2013) collected and analysed the data to enlighten the solid waste management of Hetauda Municipality in Makwanpur district. From the survey it was found that the major percentage of the waste included organic waste that could be composed. Various methods of reduction of the waste such as reuse and recycling has been promoted in the municipality. However due to the lack of infrastructures and the manpower, much needs to done for the effective solid waste management of the area.

Soni and Thomas (2013) conducted an experimental study to depict the phytoplankton composition of Sacred Palustrine Habitat (SPH), Anand District, Central Gujarat, India. Information on the characterization of aquatic ecosystems was provided by population dynamics. These organisms constitute the prime and the most imperative link in the food chain and food web representing the indispensable source of dissolved oxygen and radiant energy to the higher trophic level organisms of the aquatic environment.

Rao et al. (2013) conducted a review on more common environmental and pathogen related dermatologic diseases of the aquarium fishes. Disease prevention, control and various treatment methods also have been discussed.

The phytochemical screening and antibacterial activity of ethanolic and Methanolic leaves extract of *Vernonia amygdalina* against five clinical isolates was determined using standard method of analysis by Bukar et al. (2013). From these studies, it has clearly indicated that *V. amygdalina* extract may represent new sources of antibacterial drug, if the phytoactive components are purified and proper dosage are determined for administration.

Mishra et al. (2013) examined the regeneration potential of tree species in tropical moist deciduous forest at Katernia ghat Wildlife Sanctuary, Northern India. On the basis of importance value index *Mallotusphilippensis, Tectonagrandis, Shorea robusta, Syzygium cumini* and *Bombax ceiba* have been found as dominant species in the study area. As far as the regeneration status is concerned, the maximum tree species (64%) have been found in good regeneration category**.**

Khan et al. (2013) conducted experiments to assess the physico-chemical properties, heavy metal enrichment and fungal isolation and characterization of the top soil samples collected in-situ from aged refined kerosene contaminated as well as uncontaminated garden soil sites in Anand, Gujarat, India. In this study, it was recorded that the aged refined kerosene soil is highly contaminated with petroleum hydrocarbons which affected soil physicochemical properties, fungal population and heavy metal enrichment which are important indicators for assessing soil quality, fertility and productivity. Besides, high organic carbon and total nitrogen, PAHs, heavy metal concentrations, low soil fertility index, pH and low moisture contents probably dwindle the growth of fungal strains in the contaminated soil.

Patel et al. (2013) determined the consequences of Polynuclear aromatic hydrocarbon – Pyrene in response to growth, pigments and metabolic study on *Anabaena fertilissima Rao.* This study therefore suggests high molecular weight pyrene that decreases in metabolite content and enzyme activity can be used as a signal of PAHs toxicity in cyanobacteria.

Joshi et al. (2013) gathered a data of 38 medicinal plant species used for indigenous medications by local villagers such as pastoralists (*Maldharis*) and farmers of Tapkeshwari Hill Range (THR), BhujTaluka, Kachchh District, Gujarat, India and documented. The data clearly indicated that most of the villagers were fully or partially dependent on the forest produce for their primary healthcare requirements as well as for curing chronic or acute disorders and ailments. Plant parts such as bark, flowers, fruits, gum, latex, leaves, roots, seeds, and spadix, were found to be used for the cure of bronchitis, cold, cough, diabetes, diarrhea, dropsy, dysentery, earache, fever, fistula, gastric troubles, hypothermia, indigestion, piles, skin diseases, snake-bites, toothache, and ulcer.

Soni and Thomas (2013) investigated the physico-chemical characteristics of tropical pilgrimage wetland *viz.* Dakor Sacred Wetland (DSW), Anand District, Central Gujarat, India. The study highlighted the inadvertent contamination of an existing water body by domestic sewage influenced by anthropogenic interventions.

Bello et al. (2013) performed a study to investigate the effects of land use on the nature and population of microorganisms in soil from five different farms within University of Maiduguri, Borno State. The results from this study show that all cultivated lands and the grass land soils show consistently higher microbial populations than soil samples from land planted with gum-Arabic trees. The number of microorganisms was influenced by soil depths.

Rahman and Rashid (2013) examined the status of 28 endemic plants of Bangladesh and determined their conservation management strategies. This study revealed that 10 endemics are categorized as extinct since no reports of second collection have been made after type collections

for more than 100 years. On the other hand, remaining 18 endemics are categorised as endangered, rare and least concern by 6, 10 and 2 species respectively.

Neupane et al. (2013) assessed the tourism potential of Bhaktapur Durbar Square using Weighted Sum Method. This study was carried out from start of June to the end of July in 2013. The tourism potential was found to be high with strength of exceptionally rich cultural, historical and religious heritage, favourable geographical situation, positive image of local Newari food products and friendly and welcoming local people. The areas of weaknesses were lack of tourism infrastructures and services, lack of tourist information and weak management of tourist area.

Mamman and Isa (2013) conducted experiments to determine the preliminary phytochemical component and antibacterial activity of the leaves extract of *Guierasenegalensis lam* (Combretaceae) against three clinical isolates (*Staphylococcus aureus, E. coli and Klebsiella species*) using standard method of analysis. This study revealed that the leaves extract of *Guierasenegalensis lam* could be useful in the treatment of infections caused by *Staphylococcus aureus, E. coli and Klebsiella species*

Bhandari (2013) analysed the trend of rainfall and temperature and their effect on the yield of major cereals Paddy/rice (*Oryzasativa* L.), wheat (*Triticumaestivum* L.), maize (*Zea mays* L.), millet (*Eleusinecoracana* Gaertn.) and barley (*Hordeumvulgare* L.) in Doti and Surkhet districts of Nepal. A very good relationship of cereals yield with rainfall and temperature has been observed in 1985 in Doti and Surkhet. Rice yield and rainfall also have good relation, whereas maize and wheat showed fluctuating and constant trend with the decrease or increase in rainfall.

Besides these strengths in the articles, the continuity in quality and quantity of the journal of PSD-Nepal is more important than anything else. Therefore, we encourage all the authors, reviewers and readers to continue their support in the days to come.

References

A.M., Isa, M.A., Bello, H.S., Abdullahi, A.S., 2013. Antibacterial Activity of Aqueous and Ethanolic Leaf Extracts of Vernonia Amygdalina on Selected Species of Gram Positive and Gram Negative Bacteria. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 147-152.

Akhter, N., Hossainn, F., Karim, A., 2013. Influence of Calcium on Water Relation of Two Cultivars of Wheat Under Salt Stress. *International Journal of Environment.* Vol. 2, Iss. 1. Pp. 1-8.

Aliyu, B., Manga, B., Isa, M.A., 2013. Prevalence of Hepatitis B Virus Among HIV Positive Patients Attending Specialist Hospital Sokoto, Nigeria. *International Journal of Environment.* Vol. 2, Iss. 1. Pp. 37-44.

Bajpai, O., Mishra, S., Mohan, N., Mohan, J., Gupta, R.K., 2013. Physico Chemical Characteristics of Lakhna Devi Temple Water Tank, Lakhna, Bakewar, Etawah, U.P. with reference to Cyanobacterial Diversity. *International Journal of Environment.* Vol. 1, Iss. 1. Pp. 20-28.

Bashir, L.U., Gashua, I.B., Isa, M.A., Ali, A., 2013. The Antifungal Activity of Aqueous and Ethanol Extracts of Jatropha Curcas L. against Aspergillus Niger (Van Tieghem) that cause Black Mould Rot of Onion Bulbs in Sokoto, Nigeria. *International Journal of Environment.* Vol. 2, Iss. 1. Pp. 83-90.

Bello, H.S., Isa, T., Isa, M.A., Akinmuisere, K., 2013. Effects of Land Use on the Nature and Population of Microorganisms in the Semi-Arid Region of North-Eastern Nigeria. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 224-230.

Bhandari, G., 2013. Trends in Seasonal Precipitation and Temperature – A Review in Doti and Surkhet Districts of Nepal. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 269- 279.

Bukar, Halim, GMA and Islam, M.S., 2013. Performance of Sweet Pepper under Protective Structure in Gazipur of Bangladesh. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 269-279.

Isa, M.A., Ismail, H.Y., Allamin, I.A., Shettima, A., Mustapha, A., 2013. Prevalence of Urinary Tract Infection among Primary School Children in Maiduguri, Borno State, Nigeria. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 9-15.

Joshi, E.B., Jain, B.K., Joshi, P.N., Soni, H.B., 2013. Prevalence of Traditional Medications Through Native Floral Elements Among Tribal Communities of Kachchh Arid Ecosystem, Gujarat, India. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 184-201.

Joshi, P.N., Soni, H.B., Wesley Sunderraj, S.F., Joshua, J., 2013. Conservation and Management Strategies For Threatened Plant Species of Kachchh Desert Island, Gujarat, India. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 45-59.

Kamble, R.K., Walia, A., Thakare, M.G., 2013. Ecosystem Approach to Flood Disaster Risk Reduction. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 70-82.

Kassim, J.K., 2013. Method for Estimation of Calcium Carbonate in Soils from Iraq. *International Journal of Environment*. Vol. 1, Iss. 1. Pp. 9-19.

KC, A., Bhandari, G., Wagle, S.P., Banjade, Y., 2013. Status of Soil Fertility in a Community Forest of Nepal. *International Journal of Environment*. Vol. 1, Iss. 1. Pp. 56-67.

Khan, S.R., Kumar, N., Kumar, R.N., Patel, J.G., 2013. An Assessment of Physicochemical Properties, Heavy Metal Enrichment and Fungal Characterization of Refined Kerosene Impacted Soil in Anand, Gujarat, India. *International Journal of Environment.* Vol. 2, Iss. 1. Pp. 164-174.

Kumar, R., Kalavathy, S., 2013. Human Threat on Phenological Cycle of Selected Dry Deciduous Tree Species in North Gujarat Region (NGR), Gujarat, India. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 60-69.

Kushwaha, R., Hazarika, N., Srivastava, A., 2013. Traffic Related Aerosol Exposure and Their Risk Assessment of Associated Metals in Delhi, India. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 26-36.

Mamman, I.A., Isa, M.A., 2013. Phytochemical and Antibacterial Activity of Leave Extracts of Guiera Senegalensis Lam on Selected Species of Gram Positive and Gram Negative Bacteria. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 262-268.

Mhlanga, W. and Mhlanga, L., 2013. Artisanal Fisheries in Zimbabwe: Options for Effective Management. *International Journal of Environment*. Vol. 1, Iss. 1. Pp. 29-45.

Mishra, A.K., Bajpai, O., Sahu, N., Kumar, A., Behera, S.K., Mishra, R.M., Chaudhary, L.B., 2013. Study of Plant Regeneration Potential in Tropical Moist Deciduous Forest in Northern India. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 153-163.

Neupane, B., Neupane, S., 2013. Scenario of Solid Waste Management in Hetauda Municipality, Nepal. *International Journal of Environment*. Vol. 2, Iss. 1. Pp.105-114.

Neupane, R., KC, A., Pant, R.R., 2013. Assessing Tourism Potential in Bhaktapur Durbar Square, Nepal. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 250-261.

Patel, J.G., Nirmal Kumar, J.I., Kumar, R., Khan, S., 2013. Chronic Toxicity of High Molecular Weight Polynuclear Aromatic Hydrocarbon- Pyrene on Freshwater Cyanobacterium Anabaena Fertlissima Rao. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 175-183.

Prakash, N., Yumus, M., 2013. Fourier Transform Infrared Spectroscopy Analysis of Oil of Menthaarvensis Grown at Sites Varying With Vehicular Traffic Loads in Lucknow City, India. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 16-25.

Rahman, M.A., Rashid. M.E., 2013. Status of Endemic Plants of Bangladesh and Conservation Management Strategies. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 231-249.

Rao, M.V., Kumar, A., Badhul, M.A., 2013. Diseases in the Aquarium Fishes: Challenges and areas of Concern: An Overview. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 127-146.

Soni, H.B. and Thomas, S., 2013. Preliminary Data on Occurrence of Zooplanktons of Fresh Water Lentic Ecosystem - A Case Study of Dakor Sacred Wetland, Central Gujarat, India. *International Journal of Environment*. Vol. 1, Iss. 1. Pp. 46-55.

Soni, H.B., Thomas, S., 2013. Preliminary Assessment of Surface Water Quality of Tropical Pilgrimage Wetland of Central Gujarat, India. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 202-223.

Soni, H.B., Thomas, S., 2013. Preliminary Observations on Phytoplankton at Sacred Palustrine Habitat, Central Gujarat, India. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 115-126.

Yadav, P.K., Sarma, K., Mishra, A.K., 2013. Geospatial Modeling to assess Geomorphological Risk for Relentless Shifting Cultivation in Garo Hills of Meghalaya, North East India. *International Journal of Environment*. Vol. 2, Iss. 1. Pp. 91-104.