

## **B. G. N. Sewwandi**

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### **Educational qualifications**

#### **1. Postgraduate education**

- **Ph.D.** in Environmental Science and Infrastructure Engineering, Saitama University, Japan, 2014  
Dissertation title  
Development of a Permeable Reactive Barrier to treat landfill leachate from municipal solid waste dumpsites in Sri Lanka: An effective use of locally available materials  
Advisors  
Prof. Ken Kawamoto, Prof. Norio Tanaka, Assoc. Prof. Masahiko Osada, Department of Civil and Environmental Engineering, Graduate School of Science and Engineering, Saitama University, Japan. [kawamoto@mail.saitama-u.ac.jp](mailto:kawamoto@mail.saitama-u.ac.jp)
- **M. Phil.** in Integrated Water Resources Management, University of Peradeniya, Sri Lanka, 2011  
Thesis title  
Assessment of Locally Available Filter Materials for Removal of Heavy Metals in Landfill Leachate Treatment  
Advisors  
Prof. M. I. M. Mowjood, Department of Agric. Engineering, Faculty of Agriculture, University of Peradeniya, Sri Lanka. [mmowjood@pdn.ac.lk](mailto:mmowjood@pdn.ac.lk)  
Dr. Meththika Vithanage, Research Fellow, Institute of Fundamental Studies, Kandy, Sri Lanka. [meththikavithanage@gmail.com](mailto:meththikavithanage@gmail.com)

#### **2. University education**

- **B.Sc. (Hons)**, Agriculture, University of Peradeniya, Sri Lanka, 2008  
Thesis title  
Impact of Coconut Coir Pith as an Alternative Substrate Material on Water Reclamation in Submerged Plant Wetland Systems  
Advisor  
Prof. M. I. M. Mowjood, Department of Agric. Engineering, Faculty of Agriculture, University of Peradeniya, Sri Lanka. [mmowjood@pdn.ac.lk](mailto:mmowjood@pdn.ac.lk)

### **Professional qualifications**

- **Senior Lecturer (Contract)**  
Department of Zoology and Environmental Management, University of Kelaniya, Sri Lanka (Aug 2015 to Aug 2016)
- **Environment and Public Relations Officer**  
Waste Management Authority, Sri Lanka (Apr 2015-Jul 2015)
- **Teaching Assistant**  
Department of Civil and Environmental Engineering, Saitama University, Japan, (April 2013-September 2013)
- **Assistant Editor**  
Annual Research Journal of Sri Lanka Students' Association in Japan (2012). ISSN 2186-474
- **Research Assistant**

Department of Agricultural Engineering, Faculty of Agriculture, University of Peradeniya, Sri Lanka (April 2008- March 2009).

## **Awards**

- National Research Council of Sri Lanka merit award for scientific publications in 2010, received in 2014.

## **Scholarships**

- **Monbugakusho Scholarship**  
Ministry of Education, Culture, Sports, Science and Technology in Japan (2011-2014).
- **South Asian Water (SAWA) Fellowship**  
Crossing Boundaries Project, South Asia Consortium for Interdisciplinary Water Resources Studies (SaciWATERS), India (2008-2010).

## **Courses followed**

- Participated in the International PhD course on **Merging Measurement and Modelling in Soil Physics** organized by the International Research Education Program for Soil Technology and Interdisciplinary Research in Soil Sciences and Environmental Sciences (STAiR), Aarhus University, Denmark: 12-17 March 2012.
- Successfully completed a course on Computer Application (MS office, MS Excel, MS powerPoint and statistical packages-SAS, MINITAB) conducted by the Faculty of Agriculture, University of Peradeniya. Sri Lanka (2007).
- Successfully completed the courses on Technical Writing, Career Development and Proposal Formulation and Seminar offered by Faculty of Agriculture, University of Peradeniya. Sri Lanka (2007).

## **Trainings**

- South Asian Water (SAWA) Fellows training on **Participatory Field Research Methodologies**, organized by South Asian Consortium for Interdisciplinary Water Resources Studies (SaciWATERS), India, 2009
- Successfully completed the practical component of the course on **Interdisciplinary Field Research Methodologies** in Nepal as a fulfilment for the M. Phil. Degree, 2009
- Training on **Solid Waste Management** in Cecil Food (Pvt) Ltd. (CBL), Ratnapura, Sri Lanka, 2007
- Training on **Operation and Maintenance of Four Wheel Tractors** at Farm Mechanization Training Centre, Anuradhapura, Sri Lanka, 2007
- **Residential training in Agriculture** for six months period in Dry Zone of Sri Lanka- Mahailuppallama, Sub-Campus, Sri Lanka, 2006

## **Reviewer for international journals**

- Environmental Science and Technology
- Colloids and Surfaces A: Physicochemical and Engineering Aspects
- Bioremediation Journal
- Chemistry and Ecology

## Research publications

### Journal Publications

1. Meththika Vithanage, Yohan Jayawardhana, S.S. Mayakaduwa, Prasanna Kumarathilaka, and **Sewwandi Gamage**. 2016. Utilization of municipal solid waste derived biochar for the removal of volatile organic compound, benzene from landfill leachate. *Environmental Technology*. Under review.
2. **Sewwandi, B. G. N.**, Meththika Vithanage, S.S.R.M.D.H.R. Wijesekara, M.I.M. Mowjood, Shoichiro Hamamoto and Ken Kawamoto. 2014. Adsorption of Cd(II) and Pb(II) onto Humic Acid Treated Coconut (*Cocos nucifera*) Husk. *J. Hazard. Toxic Radioact. Waste*, 18 (2): 1-10. DOI: 10.1061/(ASCE)HZ.2153-5515.0000196.
3. **Sewwandi, B. G. N.**, M. Vithanage, S. S. R. M. D. H. R. Wijesekara, A. U. Rajapaksha, D. G. L. M. Jayarathna, and M. I. M. Mowjood. 2012. Characterization of Aqueous Pb(II) and Cd(II) Biosorption on Native and Modified *Alstonia macrophylla* Saw Dust. *Bioremediation Journal*. 16 (2): 1-12.
4. Weragoda, S. K., N. Tanaka, **B. G. N. Sewwandi** and M. I. M. Mowjood. 2010. Efficiency of coconut coir-pith as an alternative substrate in the treatment of submerged macrophyte wetland systems in tropical conditions. *Chemistry and Ecology*. 26 (6): 445-452.
5. **Sewwandi, B. G. N.**, S. K. Weragoda, M. I. M. Mowjood, N. Tanaka and S. Sasikala. 2009. Effect of Submerged and Floating Plants on Dissolved Oxygen Dynamics and Nitrogen Removal in Constructed Wetlands. *Tropical Agricultural Research*. 21(4): 355-362.

### Peer reviewed Conference Proceedings

1. M. S. Vithanage, B. M. Y. B. Jayawardhana, L. Weerasundara, P. Kumarathilaka and **B. G. N. Sewwandi**. 2016. Municipal Solid Waste Biochar to remediate its own waste; Removal of dissolved organic carbon and volatile organic compounds in landfill leachate. 16<sup>th</sup> conference of the Science Council of Asia: Science for the People: Mobilizing Modern Technologies for Sustainable Development in Asia. 31<sup>st</sup> May-1<sup>st</sup> June 2016.
2. G.N. Paravithana, **B.G.N. Sewwandi**, Takahashi Saito and Ken Kawamoto. 2014. Adsorption Characteristics of Cd(II) and Pb(II) onto Coconut Shell Biochar and Coconut Shell Activated Carbon as Media for Permeable Reactive Barriers in Sri Lanka. In proc. of 5<sup>th</sup> International symposium on Energy from Biomass and waste, Venice 2014. 17<sup>th</sup> to 20<sup>th</sup> November 2014.
3. Paravithana, G. N., **B. G. N. Sewwandi** and Ken Kawamoto. 2013. Soil characterization for the development of site-specific permeable reactive barrier in Sri Lanka: Mineralogical and surface charge properties for selected surface geologic media. 4<sup>th</sup> International Conference on Structural Engineering and Construction Management 2013: Capacity Building for Development. 13-15<sup>th</sup> Dec. 2013: 1-13.
4. **Sewwandi, B. G. N.**, Koide Takahiro, Ken Kawamoto, Shoichiro Hamamoto, Shingo Asamoto and Hiroyasu Sato. 2013. Evaluation of leachate contamination potential of municipal solid waste dumpsites in Sri Lanka using Leachate Pollution Index. 14<sup>th</sup> International Waste Management and Landfill Symposium. 30<sup>th</sup> Sep-4<sup>th</sup> Oct, 2013. Sardinia, Italy. pp. 222.

5. **Sewwandi, B. G. N.**, Koide Takahiro, Ken Kawamoto, Shoichiro Hamamoto, Shingo Asamoto and Hiroyasu Sato. 2012. Characterization of Landfill Leachate from Municipal Solid Waste Landfills in Sri Lanka. In Proc. 2<sup>nd</sup> International Conference on Sustainable Built Environment. 14-16 December 2012. Kandy, Sri Lanka. pp 21.
6. **Sewwandi, B. G. N.**, Koide Takahiro, Ken Kawamoto, Shoichiro Hamamoto, Shingo Asamoto and Hiroyasu Sato. 2013. Impact of landfill leachate from municipal solid waste dumpsites on environmental pollution. Japan Geoscience Union Meeting. Japan Geoscience Union, Makuhari Messe, Japan. 19-24 May 2013 (20<sup>th</sup> May).
7. **Sewwandi, B. G. N.**, Meththika Vithanage, M. I. M. Mowjood and Ken Kawamoto. 2012. Removal of Heavy Metals from wastewater Using Agricultural Waste Materials. Water and Environment in Asia's Developing Communities. Lien Foundation and Singapore Membrane Technology Centre, Marina Bay Sands, Singapore. 1<sup>st</sup> July 2012.
8. **Sewwandi, B. G. N.**, M. I. M. Mowjood, Meththika Vithanage, and Ken Kawamoto. 2012. Heavy Metal Removal in Landfill Leachate Using Agricultural Waste Materials: A Case Study in Sri Lanka. Japan Geoscience Union Meeting. Japan Geoscience Union, Makuhari Messe, Japan. 20-25 May 2012 (20<sup>th</sup> May).
9. **Sewwandi, B. G. N.**, S. S. R. M. D. H. R. Wijesekara, A. Rajapaksha, M. I. M. Mowjood and M. Vithanage. 2011. Risk of Soil and Water Pollution by Heavy metals in Landfill Leachate. In Proc. International Conference on Agricultural Engineering "Novelty, Clean and Sustainable". Thailand, 31<sup>st</sup> March-1<sup>st</sup> April 2011: pp 43.
10. Weragoda, S. K., N. Tanaka, **B. G. N. Sewwandi**, M. I. M. Mowjood and Y. Sasaki. 2010. Sequential Impact of Integrated Submerged-Floating Macrophyte Wetland Systems on Dissolved Oxygen Concentration and Nitrogen Removal Efficiency. In Proc. International Conference on Wetland Ecosystem Services: Biodiversity, Livelihoods and Sustainability. Thailand, November 17-21: pp 54.
11. Weragoda, S. K., N. Tanaka, **B. G. N. Sewwandi** and M. I. M. Mowjood. 2009. Evaluation of Sequential Impact of Integrated Submerged-Floating Macrophyte Wetland Systems in Wastewater Treatment. In Proc. 11<sup>th</sup> International Summer Symposium, Tokyo: 309-312.
12. Weragoda, S. K., N. Tanaka, M. I. M. Mowjood, **B. G. N. Sewwandi** and K. B. S. N Jinadasa. 2008. Impact of Coconut Coir-Pith as an Alternative Substrate Material on Water Reclamation in Submerged Wetland Systems. In Proc. 11<sup>th</sup> International Conference on Wetland Systems for Water Pollution Control, IWA Conference: 469-474.
13. **Sewwandi, B. G. N.**, S. K. Weragoda, M. I. M. Mowjood, N. Tanaka and S. Sasikala. 2009. Pre and Post Anoxic Denitrification on Nitrogen Removal in Wetland Systems Using Submerged and Floating Macrophytes. In Proc. International Exchange Symposium on Sustainable Infrastructure Development in Asia. Sri Lanka: 187-192.
14. Weragoda, S. K., **B. G. N. Sewwandi**, M. I. M. Mowjood and N. Tanaka. 2008. Effect of Coconut Coir-Pith Supplement on enhanced water Reclamation activity in submerged plant wetland systems, In Proc. Sustainable Infrastructure Development in Asia, International Exchange Symposium: University of Peradeniya, Sri Lanka : International Collaborative Graduate Program. 124-129.
15. **Sewwandi, B. G. N.**, K. N. K. R. Wickramaratne, D. M. R. R. Jayasinghe, M. Sangeetha, L. W. Galagedara and N. D. K. Dayawansa. 2010. Water Allocation of Begnas Lake in Nepal among

Different Sectors: A comparison with Sri Lankan Dry Zone Small Irrigation Systems. Water Resources Research in Sri Lanka. Geo-Informatics Society of Sri Lanka: 95-103.

16. **Sewwandi, B. G. N.**, S. K. Weragoda and M. I. M. Mowjood. 2008. Performance Evaluation of Coconut Coir-Pith in Free Water Surface Constructed Wetlands. In Proc.National Symposium on Water Supply, Sanitation and Wastewater Management: Progress and Prospects Towards Clean and Healthy Society. University of Peradeniya: 39-51.

### **Personal profile**

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### **Referees**

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I certify that the details given above are accurate and true to the best of my knowledge.

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