

7. REFERENCES

- [1] J. Kim, J. kim and C. Lee, “Anaerobic co-digestion of food waste, human feces and toilet paper: Methane Potential and Synergistic Effect,” *Fuel*, Vols. 189-195, p. 248, 2019.
- [2] Q. Fan, Q. Long, V. D. Silva, N. Gunarathana, U. Jayathilaka, T. Dabrera, H. Lynn and T. Ostbye, “Prevalence and risk factors for postpartum depression in Sri Lanka: A population-based study,” *Asian Journal of Psychiatry*, vol. 47, no. 101855, 2020.
- [3] A. Oarga-Mulec, J. F. Hanssen, P. D. Jenssen and T. G. Bulc, “A comparison of various bulking materials as a supporting matrix in composting blackwater solids from vacuum toilets,” *Journal of Environmental Management*, vol. 243, pp. 78-87, 2019.
- [4] J. Stark, P. Corbett, G. Dunsea, C. King, J. Mondon, M. Power, A. Samuel, I. Snape and M. Riddle, “The environmental impact of sewage and wastewater outfalls in Antarctica,” *East Antarctica Water Resources*, vol. 105, pp. 602-614, 2016.
- [5] M. S. Monedero, A. R. M.L. Cayuela, K. Jindo and N. B. C. Mondini, “Role of biochar as an additive in organic waste composting,” *Bioresour. Technology*, vol. 247, pp. 1155-1164, 2018.
- [6] N. Tran-Thi, R. J. Lowe, J. M. Schurer, T. Vu-Van, L. E. MacDonald and P. Pham-Duc, “Turning poop into profit: Cost-effectiveness and soil transmitted helminth infection risk associated with human excreta reuse in Vietnam,” *Neglected Tropical Diseases*, vol. 11, 2017.
- [7] A. O. Mulec, R. Mihelic, J. Walochnik and T. G. Bulc, “Composting of the solid fraction of blackwater from a separation system with vacuum toilets - Effects on

- the process and quality,” *Journal of Cleaner Production*, vol. 112, pp. 4683-4690, 2016.
- [8] D. Eheliyagoda and N. Premathilaka, “Assesment of a planned Municipal Waste Management System in Sri Lanka,” *Environment Management*, vol. 20, no. 58061, 2016.
- [9] F. Meinzinger, “Resource efficiency of urban sanitation systems: A comparative assesment using material and energy flow analysis,” University of Hamburg, Hamburg, Germany, 2010.
- [10] R. Lal, “Soils and world food secuurity,” *Soil & Tillage Research*, vol. 102, pp. 1-4, 2009.
- [11] C. K. Anand and D. S. Apul, “Composting Toilet As a sustainable alternative to urban sanitation - A review,” *Waste Management*, vol. 34, pp. 329 - 343, 2014.
- [12] O. Coffe, J. Nikiema, R. Impraim, N. Adamtey, J. Paul and D. Kone, “Co-composting of Solid Waste and Fecal Sludge for Nutrient and Organic Matter recovery,” *Resourse Recovery and Reuse Series 3*; IWMI, Colombo, Sri Lanka, 2016.
- [13] P. W. Siriweera, “Sanitation and Healthcare in Ancient Sri Lanka,” 2012.
- [14] T. Kulathunga, “Abhayagiri Stupa,” Colombo 07, Central Cultural Funds, 200, pp. 30 - 40.
- [15] G. P. A. G. D. Feo, F. Fardin, A. Tamburrino, S. Khan, F. Tie, I. Reklaityte, E. Kanetaki, X. Y. Zheng, L. W. Mays and A. N. Angelakis, “Evolution of Toilets Worldwide through the Millennia,” *Sustainability*, 2016.
- [16] P. R.K., *Prehistory and Harappan Civilization*, Delhi: APH, 2004..

- [17] J. Kenoyer, "Mohenjo-Daro. In An Ancient Indus Valley Metropolis," University of Wisconsin: Madison, WI, 1998.
- [18] R. Vallet, *Habuba Kebira ou la naissance de l'urbanisme, Paleorient*, 1997.
- [19] J.-C. Margueron, "Notes d'archéologie et d'architecture orientales 15. In Installations Hygiéniques ou Artisanales? Syria: Archeologie, Art," *et Histoire*, vol. 85, pp. 175-221, 2008.
- [20] E. Banks, *Bismya or the Lost City of Adab*, New York: The Knickerbocker Press, 1912.
- [21] A. Angelakis, D. Koutsoyiannis and G. Tchobanoglous, "Urban Wastewater and Stormwater Technologies in the Ancient Greece.," *Water Resources*, vol. 39, pp. 210-220, 2005.
- [22] G. De Feo, G. Antoniou, H. Fardin, F. El-Gohary, X. Zheng, I. Reklaityte, D. Butler, S. Yannopoulos and A. Angelakis, "History of Sanitary Sewers Worldwide.," *Sustainability*, vol. 4, pp. 3936-3964, 2014.
- [23] G. Antoniou and A. Angelakis, "Wastewater and stormwater sanitation technologies in ancient Greece.," in *In Sanitation, Latrines and Intestinal Parasite in Past Populations*, UK, Farnham, 2015, pp. 41-48.
- [24] R. Wright, "The Ancient Indus: Urbanism, Economy, and Society," Cambridge University Press:, New York,, 2010.
- [25] S. Cheng, Z. Li, S. m. N. Uddin, H. -. P. Mang, X. Zhou, J. Zang, L. Zheng and L. Zhang, "Toilet Revolution in China," *Journal of Environmental Management*, vol. 216, pp. 347-356, 2018.
- [26] MFA and UN, "Report on Chinas Implementation of Millenium Development Goals," MFA, Beijing, 200 - 2015.

- [27] UNDP, UNESCAP and WHO, "Asia Water Watch," ADB, 2015.
- [28] Y. N., "Disease Prevention, Social Mobilization and Spatial Politics: The Anti Germ warfare Incident of 1952 and the "Patrotic Health Campaign"," *Chin. Historical* , vol. 11, pp. 155-182, 2004.
- [29] NPHCC, "National Urban and Rural Environment Sanitation Clean Action Plan," Beijing, 2015 - 2020.
- [30] U. Nations, "The Sustainable Development Goals Report 2016," United Nations, New York, 2016.
- [31] L. S. a. S. F. Hidenori Harada, "Challenges and Opportunities of Faecal Sludge," 2018.
- [32] A. D. Board, "Sanitation and Sustainable Development in Japan," Metro Manila, 2016.
- [33] Y. Shi, L. Zhou, Y. Xu, H. Zhou and L. Shi, "Life Cycle Cost and Enviironmental Assesment for Resource - Oriented Toilet Systems," *Journal of Cleaner Production*, vol. 196, pp. 1188-1197, 2018.
- [34] m. P.L., B. J. and K. J, "Domestic Waste Water Treatment as a Net Energy Producer," *Environment of Science and Technology*, vol. 45, no. 17, pp. 7100 - 7106, 2011.
- [35] E. J.D., W. T. and T. G., "Urban Net - Zero Water treatment and Mineralization: Experiment, Modeling and Design," *Water Resources*, vol. 47, no. 13, pp. 4680 - 4691, 2013.
- [36] Y. P., Q. R.C., G. J.S., Y. Q., C. Y.P., S. Y. and F. F, "Nutrients Recovery of Source seperated Urine by Forward Osmosis and a Pilot - Scale Resources Oriented Sanitation System," *Deasaling Water Treatment*, vol. 91, pp. 252 - 259, 2017.

- [37] L. T.A., H. S., L. C., T. B. and M. M., “Emerging solutions to the Water Challenges of an Urbanizing World,” *science(New York)*, vol. 352, no. 6288, p. 928, 2016.
- [38] T. J. C. R.D. and G. J.S., “Amplifying Progress Toward Multiple Development Goals Through resource Recovery From sanitation,” *Environment of Science and Technology*, vol. 51, no. 18, pp. 10765 - 10776, 2017.
- [39] M. R. Barbosa, “Chemical Composition and Formation of Human Feces,” *Recent Advances in Environmental Health Research*, p. 39, 2012.
- [40] B. E, N. D, L. T., S. B and S. P, “Life Cycle Assessment of Ecological Sanitation System for Small Scale Wastewater Treatment,” *Science of Total Environment*, vol. 407, no. 5, pp. 1506 - 1516, 2009.
- [41] M. d. Boer, M. Hammerton and J. Sloopweg, “Uptake of Pharmaceuticals by Sorbent - Amended Struvite Fertilizers Recovered from Human Urine and Their Bioaccumulation in Tomato Fruit,” *Water and Resources*, vol. 133, pp. 19-26, 2018.
- [42] E. B., T. E., K. R. and U. K.M., “Low cost Struvite Production Using Source Separated Urine in Nepal,” *Water and Resources*, vol. 45, no. 2, pp. 852 - 862, 2011.
- [43] C. K. and Hoffmann M.R, “Urea Degradation by Electrochemically Generated Reactive Chlorine Species: Products and Reaction Pathways,” *Environment, Science and Technology*, vol. 48, no. 19, pp. 11504 - 11511, 2014.
- [44] H. X., Q. Y., C. C.A., F. C., H. M.R., L. K. and J. S.C., “Electrochemical Disinfection of Toilet Wastewater Using Wastewater Electrolysis Cell,” *Water Resources*, vol. 92, pp. 164 - 172, 2016.

- [45] L. P., J. J., K. J. and f. S., “Recovering Nitrogen as a Solid Without Chemical Dosing: Bio - Electroconcentration for Recovery of Nutrients from Urine,” *Environment, Science and Technology*, vol. 4, no. 3, pp. 119-124, 2017.
- [46] S. C.D., B. N.G., B. G.E. and S. B.R., “Thermoelectric Energy Harvesting for a Solid Waste Processing Toilet: SPIE Sensing Technology,” *SPIE*, p. 5, 2014.
- [47] A. O.O.D., S. M. and T. C.P.I., “Microwawe Hydrothermal carbonization of Human Bio Wastes,” *Wastes and Biomass valoriz*, vol. 6, no. 2, pp. 147-157, 2014.
- [48] S. J. and V. B., “Urea Stabilisation and Concentration for Urine Diverting Dry Toilets: Urine Dehydration in ash,” *Science of Total Environment*, vol. 586, pp. 650-657, 2017.
- [49] G. H., W. Z., Z. X., J. Z., W. C., Z. L. and W. K., “Organics and Nitrogen Recovery from Sewage via membrane based pre concentration combined with ion exchanged process.,” *Journal of Chemical Engineering*, vol. 311, pp. 13-19, 2017.
- [50] D. D. Porto and C. Steinfeld, “Operating and Maintaining Your Composting Toilet System,” in *The Composting Toilet System*, Concord, 1998.
- [51] G. B. S. Hill, “Vermicomposting toilets, an alternative to latrine style microbial composting toilets, prove far superior in mass reduction, pathogen destruction, compost quality, and operational cost.,” *Waste Management*, vol. 32, no. 10, pp. 1811-1820, 2012.
- [52] K. T. V. A. M. Yadav, “Vermicomposting of source-separated human faeces for nutrient recycling.,” *Waste Management*, vol. 26, pp. 49-61, 2010.
- [53] T. T. M. Kitsui, “Environmentally-friendly toilets for the 21st century, biotoilet.,” in *Proceedings of the 10th ISWPC*,, Yokohama, 1999.

- [54] M. F. N. Zavala, "Design and operation of the bio-toilet system.," *Water Science Technology*, vol. 53, pp. 55-61, 2006.
- [55] A. Peasey, "Health Aspects of Dry Sanitation with Waste Reuse. Well Studies in Water and Environmental Health, London," USA, 2013.
- [56] D. S. C. Del Porto, *The Composting Toilet System Book*, MA: Concord, 1996.
- [57] S. G. J. R. D. S. R. S.-H. M. V. J. W. Esrey, "Ecological Sanitation," in *Sida*, 1998.
- [58] "Electrochemical disinfection of toilet wastewater using wastewater electrolysis cell," *Water Research*, vol. 92, pp. 164-172, 2016.
- [59] S. B. S. Hashemi, "Economic analysis and probability of benefit of implementing onsite septic tank and resource-oriented sanitation systems in Seoul, South Korea," *Environ. Technol. Innov.*, vol. 18, 2020.
- [60] T. P. P. Thammarat Koottatep, "Nouveau design solar septic tank: Reinvented toilet technology for sanitation 4.0," *Environmental Technology & Innovation*, vol. 19, pp. 93-100, 2020.
- [61] *A Study of the Low Cost Filter Media to be Used in the Modification of an Ancient Urine Filtration System in Sri Lanka*, 2013.
- [62] R. M. B. K. J. F. M. C. S. Priyanie Amerasinghe, "Urban Wastewater and Agricultural Reuse Challenges in India," IWMI, Colombo, 2013.
- [63] CPCB, "Status of water supply, wastewater generation and treatment in class-I cities and class-II towns of India. Control of Urban Pollution series: CUPS/70/2009-10. New Delhi: Central Pollution Control Board," Ministry of Environment and Forests, 2009.

- [64] F. N. macharia, "Biogas Production for domestic Use," Creative Commons Attribution, 2015.
- [65] F. Macharia, "Biogas Production for Domestic Use," Creative Commons Attributions, 2015. [Online].
- [66] H. Biogas, "Bio Toilet Kit," 2022. [Online]. Available: [https://www.homebiogas.com/product/bio-toilet-kit/..](https://www.homebiogas.com/product/bio-toilet-kit/)
- [67] Homebiogas, "Bio Toilet Kit," Homebiogas, 2022. [Online]. Available: <https://www.homebiogas.com/product/bio-toilet-kit/>. [Accessed January 2022].
- [68] L. J. B. J. Baum R, "Sanitation: A global estimate of sewerage connections without treatment and the resulting impact on MDG progress," *Environmental Science and Technology*, vol. 47, no. 4, pp. 1995-2000, 2013.
- [69] M. M. S. O. S. L. Dodane P-H, "Capital and operating costs of full-scale faecal sludge management and wastewater treatment systems in Dakar, Senegal," *Environmental Science & Technology*, vol. 46, no. 7, pp. 3704-3708, 2012.
- [70] I. Gunawardena, L. Galagedara and S. D. Silva, "Practical Issues of Partial Onsite Sanitation Systems," *Tropical Agricultural Reasearch*, vol. 22, no. 5, pp. 144-155, 2011.
- [71] H. G and R. U, "Guidelines for the Management of Septage in Sri Lanka," The Department of Civil Engineering, University of Peradeniya, Peradeniya, 2008.
- [72] C. B. o. S. Lanaka, "Annual Report," Colombo, 2018.
- [73] F. R. P. J. and R. R., "A Guide to Development of Onsite Sanitation," World Health Organization, 1992.
- [74] R. Feachem, D. Bradely, D. Garelick and D. Mara, "Sanitation and Disease : Health Aspects of Excreata and Waste Water Manageent," World Bank, 1992.

- [75] K. Raska, J. Helcl, J. Kubelka, Z. Litov, M. Novac, K. Radkovsky, J. Sery and V. Zejdl, A Milk Borne Infections Hepatitis Epidemic, 1992.
- [76] E. P. R. I. (EPRI), “US Water Consumption for Power Production – The Next Half Centur,” *Water and Sustainability*, vol. 3, 2002.
- [77] L. Tønner-Klank, “Microbiological assessments of compost toilets: in situmeasurements and laboratory studies on the survival of fecal microbialindicators using sentinel chambers.,” *Waste mangement*, vol. 27, pp. 1144-1154, 2007.
- [78] A. Vickers, Handbook of Water Use and Conservation. , Amherst.: Waterplow Press, 2001.
- [79] Wordometer, “Sri Lanka Population (LIVE),” Wordometer, [Online]. Available: <https://www.worldometers.info/world-population/sri-lanka-population/>.
- [80] Dilmah Conservation, “Sri Lankan Flora & Agricultural Heritage Presented in a Rare Dimension,” eBEYONDS, 2021. [Online]. Available: <https://www.dilmahconservation.org/arboretum/traditional-agriculture/the-paddy-field-kumbura--9efdbda3f4ea423817f0b89f95e6f499.html>.
- [81] R. R. a. D. Institute, “Rice Cultivation,” Non IT staff of Audion Visual Centre, [Online]. Available: https://doa.gov.lk/rrdi/index.php?option=com_sppagebuilder&view=page&id=42&lang=en.
- [82] M. Fan, “Sri Lanka’s Water Supply and Sanitation Sector: Achievements and a Way Forwa rd,” ASIAN DEVELOPMENT BANK, 2015.
- [83] J. Ministry of the Environment, “Solid Waste Management and Recycling Technology of Japan,” Ministry of the Environment.

- [84] B. L. S. K. P. A. Y. J. W. R. S. V. Suresh Kumar Rohilla, “Down To Earth,” 15 July 2016. [Online].
- [85] A. D. Bank, “SECTOR ASSESSMENT (SUMMARY): WATER SUPPLY AND OTHER MUNICIPAL INFRASTRUCTURE AND SERVICES (WATER AND WASTEWATER),” Greater Colombo Water and Wastewater Management Improvement Investment Program, 2014.
- [86] R. Verma, “Human excreta can make good fertiliser, but prejudice and laws stand in way,” 15 May 2019. [Online].
- [87] G. G. K. K. A. G. R. V. a. S. L. Eeva-Liisa Viskari1*, “Nitrogen Recovery With Source Separation of Human Urine—Preliminary Results of Its Fertiliser Potential and Use in Agriculture,” *Frontiers in Sustainable Food Systems*, vol. 2, pp. 1-14, 2018.
- [88] D. R. A. S. J. J. a. S. A. L. Cordell, “Towards global phosphorus security: a systems framework for phosphorus recovery and reuse options.,” *Chemosphere*, vol. 84, pp. 747-758, 2011.
- [89] D. o. Agriculture, “National Agriculture Information and Communication Centre Department of Agriculture - Sri Lanka,” [Online]. Available: http://doa.gov.lk/publications/athpathrika/Rice%20200bu_ac.pdf.
- [90] D. o. A. -. S. Lanka, “National Agriculture Information and Communication Centre Department of Agriculture - Sri Lanka,” 2013. [Online]. Available: <http://doa.gov.lk/ICC/images/publication/leaflets/pady/Paddy-fertilizer-recommendation-dry--intermediate.pdf>.
- [91] R. Wijesekara, D. S. Weerasinghe, A. Roshan and S. Bandara, Good Agricultural Practices for Banana Cultivation, Department of Agriculture, 2016.
- [92] D. o. Agriculture, “National Agriculture Information and Communication Centre,” [Online]. Available:

<http://doa.gov.lk/publications/books/kesel%20wagawata%20waladena%20roga.pdf>.

- [93] B. M. . A. P. . R. S. . B. Mesa1, “Evaluating the Efficacy of Fertilisers Derived from Human Excreta in Agriculture and Their Perception in Antananarivo, Madagascar,” *Waste Biomass Valor*, vol. 10, pp. 941-952, 2019.
- [94] C. R. I. o. S. L. -. Lunuwila, “Planting of Coconut,” Coconut Reserch Istitute of Sri Lanka, Lunuwila, 2018.
- [95] C. R. i. o. S. Lanka, “Intercropping Banana in Coconut Lands,” Coconut Research institute of Sri Lanka.
- [96] N. L. W. A. M. B. Ranathilaka, “PRODUCTION AND MARKETING OF BANANA: ESTIMATING THE PROFITABILITY USING WALAWA REGIO SRI LANKA,” *Journal of Buisness and Finance in Emerging Markets*, pp. 24-32, 2018.
- [97] C. P. Hathursinghe, R. Vidanapathirana, R. Rambukwella and T. Somaratne, “A Study on Value Chain of Pineapple and Banana in Sri Lanka,” Hector Kobbekaduwa Agrarian Research and Training Institute, Colombo 07, 2012.
- [98] D. O. C. A. STATISTICS, “PADDY STATISTICS,” DEPARTMENT OF CENSUS AND STATISTICS, 2019.
- [99] M. LLC, “Colombo, Sri Lanka Metro Area Population 1950-2021,” Macrotrends LLC, [Online]. Available: <https://www.macrotrends.net/cities/20414/colombo/population>.
- [100] E. P. Agency, “Greenhouse Gas Emissions from a Typical Passenger Vehicle,” July 2021. [Online]. Available: <https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle>.
- [101] M. B. Ranathilaka, N. Lashmi and W. Atukorala, “PRODUCTION AND MARKETING OF BANANA: ESTIMATING THE PROFITABILITY USING

WALAWA REGIO SRI LANKA,” *Journal of Business and Finance in Emerging Markets*, pp. 24-32.

- [102] G. C. W. a. W. M. I. Program, “ECONOMIC ANALYSIS: INVESTMENT PROGRAM AND PROJECTS,” Asian Development Board, 2016.
- [103] J. R. Buchanan, “Wastewater Basics,” Department of Biosystems Engineering & Soil Science.
- [104] X. M. J. L. W. J. K. Y. C. J. S. Huang, “Evaluation of methods for reverse osmosis membrane integrity monitoring for wastewater reuse,” *Journal of Water Processing Engineering*, vol. 7, no. 0, pp. 161-168, 2015.
- [105] D. Wiist, C. R. Correa, K. U. Suwelack, H. Kohler and A. Kruse, “Hydrothermal carbonization of dry toilet residues as an added-value strategy - Investigation of Process Parameters,” *Journal of Environmental Management*, vol. 234, pp. 537-545, 2019.
- [106] *Fecal Sludge and Munciple Solid Waste Composting for Cost Recovery (Balangoda Copost Plant, Sri Lanka)*, 2017.
- [107] H. M., F. B., W. H., Q. B. and Z. S., “Constructing the Ecological Sanitation: A review on Technology and Methods,” *Journal of Clean Production*, vol. 125, pp. 1-21, 2016.
- [108] Ecovita, “www.ecovita.net,” Ecovita, 2018. [Online]. Available: <http://www.ecovita.net/>.
- [109] T. P. S. P. T. P. A. P. C. Koottatep, “Modeling of pathogen inactivation in thermal septic tanks,” *Journal of Water Sanitation Hygiene*, vol. 4, no. 1, pp. 81 - 88, 2020.