

DAFTAR PUSTAKA

- Al-Oufi, H., McLean, E., Kumar, A.S., Claereboudt, M., & Al-Habsi, M. (2004). The effects of solar radiation upon breaking strength and elongation of fishing nets. *Fisheries Research*, 66(1): 115-119
- Arthur, C., Baker, J., & Bamford, H. (2009). Proceedings of the International Research Workshop on the Occurrence, Effects, and Fate of Microplastic Marine Debris. *Group*, 530
- Afebrata, D. R., L. Santoso dan Suparmono. 2014. Substitusi tepung onggok singkong sebagai bahan baku pakan pada budidaya nila (*Oreochromis niloticus*). *e-Jurnal Rekayasa Dan Teknologi Budidaya Perairan*, 2 (2): 233-240.
- Alina, A. A., Soeprbowati, T. R. dan Muhammad, F. (2015). Kualitas air rawa Jombor Klaten, Jawa Tengah berdasarkan Komunitas Fitoplankton. *Jurnal Biologi*, 4(3): 41 – 52.
- Atmawati, S. N. (2012). *Perbedaan keanekaragaman zooplankton di daerah sekitar keramba dan sekitar warung apung Rawa Jombor hubungannya dengan kualitas perairan*. Skripsi. Universitas Negeri Yogyakarta.
- Baalkhuyur, F.M., Bin Dohaish, E.J.A., Elhalwagy, M.E.A., Alikunhi, N.M., Al Suwailem, A.M., Røstad, A., Coker, D.J., Berumen, Duarte, M.L., & C.M. (2018). Microplastic in the gastrointestinal tract of fishes along the Saudi Arabian Red Sea coast. *Marine Pollution Bulletin*, 131: 407–415. <https://doi.org/10.1016/j.marpolbul.2018.04.040>
- Ballent, A., Purser, A., de Jesus Mendes, P., Pando, S., & Thomsen, L. (2012). Physical transport properties of marine microplastic pollution. *Biogeosciences Discussions*, 9(12), 18755–18798. <https://doi.org/10.5194/bgd-9-18755-2012>
- Barboza, L. G. A., Vieira, L. R., Branco, V., Carvalho., & Guilhermino, L. (2018). Microplastics increase mercury bioconcentration in gills and bioaccumulation in the liver, and cause oxidative stress and damage in *Dicentrarchus labrax* juveniles. *Scientific Reports*, 8(15655): 1-9
- Bessa, F., Barria, P., Neto, J. M., Frias, J. P. G. L., Otero, V., Sobral, P. & Marques, J. C. (2018). Occurrence of Microplastics in Commercial Fish from a Natural Estuarine Environment. *Marine Pollution Bulletin*, 128, 575-584.
- Boerger, C.M., G.L. Lattin, S.L. Moore, C.J. Moore. (2010). Plastic ingestion by planktivorous fishes in the North Pacific Central Gyre. *Marine Pollution Bulletin*, 60:2275–2278.
- Browne, M. A., Crump, P., Niven, S. J., Teuten, E., Tonkin, A., Galloway, T., & Thompson, R. (2011). Accumulation of microplastic on shorelines worldwide: Sources and sinks. *Environmental Science and Technology*, 45(21), 9175–9179. <https://doi.org/10.1021/es201811s>
- Campanale, C., Massarelli, C., Savino, I., Locaputo, V., & Uricchio, V.F. (2020). A Detailed Review Study on Potential Effects of Microplastics and Additives of Concern on Human Health. *Environmental Research and Public Health*, 17(1212): 1-26. doi:10.3390/ijerph17041212
- Caldman, C. A., Shuker, I., Butler, K., Mitchell, L., Latuheru, J., Asquf, H., Pratomo, I. S. Y., Idrus, R. M., Pangermanan, P., Khirlan, Pratamasari, I., Noor, I., Prasetyawati, A., Sarah M., Utomo, K. P. & Acharya, A. (2018). *Hotspot*

- Sampah Laut Indonesia*. Jakarta: Laporan Sintesis WBG.
- Chang, S. (2012). *Analysis of Polymer Standards by Fourier Transform Infrared Spectroscopy-Attenuated Total Reflectance and Pyrolysis Gas Chromatography/Mass Spectroscopy and the Creation of Searchable Libraries*. Atlanta: Marshall University Forensic Science Program.
- Cheung, L. T. O., Lui, C. Y. & Fok, L. (2018). Microplastic Contamination of Wild and Captive Flathead Grey Mullet (*Mugil cephalus*). *Int. J. Environ. Public Health*, 15(597): 1-11.
- Claessens, M., Van Cauwenberghe, L., Vandegehuchte, M. B., & Janssen, C. R. (2013). New techniques for the detection of microplastics in sediments and field collected organisms. *Marine Pollution Bulletin*, 70(1–2), 227–233. <https://doi.org/10.1016/j.marpolbul.2013.03.009>
- Cole, M., Lindeque, P., Halsband, C., & Galloway, T. S. (2011). Microplastics as contaminants in the marine environment: A review. *Marine Pollution Bulletin*. 62 (12): 2588–2597.
- Dehaut, A., Cassone, A. L., Frère, L., Hermabessiere, L., Himber, C., Rinnert, E., ... Paul-Pont, I. (2016). Microplastics in seafood: Benchmark protocol for their extraction and characterization. *Environmental Pollution*, 215, 223–233. <https://doi.org/10.1016/j.envpol.2016.05.018>
- De-la-Torre, G. E. (2020, May 1). Microplastics: an emerging threat to food security and human health. *Journal of Food Science and Technology*. Springer. <https://doi.org/10.1007/s13197-019-04138-1>
- Dewi, I. S., Budiarsa, A. A., & Ritonga, I. R. (2015). Distribusi Mikroplastik pada Sedimen di Muara Badak, Kabupaten Kutai Kartanegara. *Depik*, 4(3): 121131.
- Eccles, D.H. (1992). *FAO species identification sheets for fishery purposes. Field guide to the freshwater fishes of Tanzania. Prepared and published with the support of the United Nations Development Programme (project URT/87/016)*. Rome: FAO, p. 145
- EFSA. (2016). Presence of Microplastics and Nanoplastics in Food, With Particular Focus on Seafood: EFSA Panel on Contaminants in the Food Chain (CONTAM). *EFSA Journal*, 14(6), 4501
- Eriksen, M., Mason, S., Wilson, S., Box, C., Zellers, A., Edwards, W., Farley, H., & Amato, S. 2013. “Microplastic pollution in the surface waters of the Laurentian Great Lakes”. *Marine Pollution Bulletin*, vol. 77 (1–2), pp. 177–182.
- Evans, D.H., Piermarini, P.M., Choe, K.P. (2005) The multifunctional fish gill: Dominant site of gas exchange, osmoregulation, acid-base regulation, and excretion of nitrogenous waste. *Physiological Reviews*. 85 (1): 97–177. <https://doi.org/10.1152/physrev.00050.2003>
- Frimodt, C., 1995. *Multilingual illustrated guide to the world's commercial warmwater fish*. Fishing News Books. Oxford, 215 p.
- Galgani F., Hanke G., & Maes T. (2015). *Global distribution, composition and abundance of marine litter*. Springer, Ch, pp. 29-56
- Gan, Z. & Zhang, H. (2019). PMBD: a Comprehensive Plastics Microbial Biodegradation Database. *Database*, Vol. 2019. Article ID baz119. [doi:10.1093/database/baz119](https://doi.org/10.1093/database/baz119).
- GESAMP Joint Group of Experts on the Scientific Aspects of Marine Environmental

- Protection (2015). Source, Effect Microplastic in Marine Environment. *Journal Series GESAMP Report and Studies*, IMO
- Giani, D., M. Bani, M. Galli, S. Casini, & M.C. Fossi. 2019. Microplastics occurrence in edible fish species (*Mullus barbatus* and *Merluccius merluccius*) collected in three different geographical sub-areas of the Mediterranean Sea. *Marine Pollution Bulletin*, 140: 129–137. <https://doi.org/10.1016/j.marpolbul.2019.01.005>
- Guerrera, M.C., Aragona, M., Porcino, C., Fazio, F., Laura, R., Levanti, M., Montalbano, G., Germana, G., Abbate, F., & Germana, A. (2021). Micro and Nano Plastics Distribution in Fish as Model Organisms: Histopathology, Blood Response and Bioaccumulation in Different Organs. *Appl. Sci.*, 11(5768): 1-24. <https://doi.org/10.3390/app11135768>
- Güven, O., Gökdağ, K., Jovanović, B. & Kıdeys, A. E. (2017). Microplastic Litter Composition of the Turkish Territorial Waters of the Mediterranean Sea and its Occurrence in the Gastrointestinal Tract of Fish. *Environmental Pollution*, 223, 286–294.
- Handaryono, P. S. (2018). *Pencemaran Mikroplastik dan Akumulasi di Perairan Desa Labuhan Kecamatan Brondong Kabupaten Lamongan*. Tesis. Magister Ilmu Lingkungan Universitas Gadjah Mada, Yogyakarta.
- Hanif, K. H., Suprijanto J., & Pratikto, I. (2021). Identifikasi Mikroplastik di Muara Sungai Kendal, Kabupaten Kendal *Journal of Marine Research*, 10(1): 1-6. <https://doi.org/10.14710/jmr.v9i2.26832>
- Hasibuan, A. J., Patria, P. M., & Nurdin, E. (2021). Analisis Kelimpahan Mikroplastik Pada Air, Insang Dan Saluran Pencernaan Ikan Mujair *Oreochromis Mossambicus*. (Peters, 1852) Di Danau Kenanga Dan Danau Agathis, Universitas Indonesia, Depok, Jawa Barat. *Prosiding Seminar Nasional Aplikasi Sains & Teknologi (SNAST) 2021*
- Hastuti, A. R., Lumbanbatu, D. T. F. & Wardiatno, Y. (2019). The Present of Microplastics in the Digestive Tract of Commercial Fishes of Pantai Indah Kapuk coast, Jakarta, Indonesia. *Biodiversitas*, 20(5), 1233-1242.
- Hidalgo-Ruz, V., Gutow, L., Thompson, R. C., & Thiel, M. (2012). Microplastics in the marine environment: A review of the methods used for identification and quantification. *Environmental Science and Technology*, 46(6), 3060– 3075. <https://doi.org/10.1021/es2031505>
- Hu, L., Chernick, M., Lewis, A. M., Ferguson, P. L., and Hinton, D. E. (2020). Chronic microfiber exposure in adult Japanese medaka (*Oryzias latipes*). *Plos One*, 15(3): e0229962. <https://doi.org/10.1371/journal.pone.0229962>
- Imhof, H. K., Laforsch, C., Wiesheu, A. C., Schmid, J., Anger, P. M., Niessner, R., & Ivleva, N. P. (2016). Pigments and plastic in limnetic ecosystems: A qualitative and quantitative study on microparticles of different size classes. *Water Research*, 98, 64–74. <https://doi.org/10.1016/j.watres.2016.03.015>
- Indrayati, A. dan Setyaningsih, W. (2016). Karakteristik Air Tanah Di Sekitar Rawa Jombor, Klaten Dan Potensinya Sebagai Sumber Belajar Geografi Di Lapangan. *Jurnal Geografi*, 12(2): 191-224.
- Indrayani, E. dan Hadisusanto, S. (2008). *Biomassa zoobentos, kandungan nutrisi sedimen dan kualitas air berdasarkan zonasi di Rawa Jombor, Kabupaten Klaten, Jawa Tengah*. Tesis. Universitas Gadjah Mada. Yogyakarta
- Ioakeimidis, C., Fotopoulou, K. N., Karapanagioti, H. K., Geraga, M., Zeri, C.,

- Papathanassiou, E., & Papatheodorou, G. (2016). The degradation potential of PET bottles in the marine environment: An ATR-FTIR based approach. *Scientific Reports*, 6. <https://doi.org/10.1038/srep23501>
- ITIS (2021). *Clarias batrachus* (Linnaeus, 1758). https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=164120#null (accessed on July 16, 2021)
- ITIS (2021). *Oreochromis niloticus* (Linnaeus, 1758). https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=553310#null (accessed on May 17, 2021)
- ITIS (2021). *Osphronemus goramy* Lacepede, 1801. https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=638762#null (accessed on May 17, 2021)
- ITIS (2021). *Pangasius nasutus* (Bleeker, 1846). https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=681696#null (accessed on May 17, 2021).
- Jabeen, K., L. Su, J. Li, D. Yang, C. Tong, J. Mu, & H. Shi. 2017. Microplastics and mesoplastics in fish from coastal and fresh waters of China. *Environmental Pollution*, 221: 141–149. <https://doi.org/10.1016/j.envpol.2016.11.055>
- Jambeck, J. R., Geyer, R., Wilcox, C., Siegler, T. R., Perryman, M., Andrady, A., Narayan, R., & Law, K. L. (2015). Marine pollution. Plastic waste inputs from land into the ocean. *Science (New York, N.Y.)*, 347(6223), 768–771. <https://doi.org/10.1126/science.1260352>
- Jung, M.R., Horgen, F.D., Orski, S.V., Rodriguez, V.C., Beers, K.L., Balazs, G.H., Jones, T.T., Work, T.M., Brignac, K.C., Royer, S., *et al.* (2018). Validation of ATR FT-IR to identify polymers of plastic marine debris, including those ingested by marine organisms. Validation of ATR FT-IR to identify polymers of plastic marine debris, including those ingested by marine organisms. *Marine Pollution Bulletin*, 127(2018): 704-716. <https://doi.org/10.1016/j.marpolbul.2017.12.061>
- Jiang, B., Kauffman, A. E., Li, L., McFee, W., Cai, B., Weinstein, J., ... Xiao, S. (2020, July 14). Health impacts of environmental contamination of micro- And nanoplastics: A review. *Environmental Health and Preventive Medicine*. BioMed Central. <https://doi.org/10.1186/s12199-020-00870-9>
- Karbalaei, S., Hanachi, P., Walker, T. R., & Cole, M. (2018). Occurrence, sources, human health impacts and mitigation of microplastic pollution. *Environmental Science and Pollution Research* 25 (36): 36046–36063. <https://doi.org/10.1007/s11356-018-3508-7>
- Kataoka, T. *et al.* (2019) ‘Assessment of the sources and inflow processes of microplastics in the river environments of Japan’, *Environmental Pollution*, 244, pp. 958–965. doi: 10.1016/j.envpol.2018.10.111.
- Katsanevakis, S., & Katsarou, A. (2004). Influences on the Distribution of Marine Debris on the Seafloor of Shallow Coastal Areas in Greece (Eastern Mediterranean). In *Water Air Soil Pollution*, 159(1): 325-327
- Khairuman & Amri, K. 2002. *Budidaya Ikan Nila secara Intensif*. Depok: Agromedia Pustaka.
- Kingfisher, J. (2011). Micro-Plastic Debris Accumulation on Puget Sound Beaches. *Port Townsend Marine Science Center*

- Kordi, G. M. H. (2010). *Budi Daya Ikan Nila di Kolam Terpal*. Yogyakarta: Lily Publisher.
- Kour, R., S. Bhatia and K.K. Sharma. (2014). Nile Tilapia (*Oreochromis niloticus*) as a successful biological invader in Jammu (J&K) and its impacts on native ecosystem. *International Journal of Interdisciplinary and Multidisciplinary Studies (IJIMS)*, 1(10):1-5.
- Kumar, M., Kumar, P., & Devi, S. (2015). To Study the Histopathological Changes in the Gills of *Clarias batrachus*, an Air Breathing Teleost after Short Term Exposure of Copper Sulphate. *J Aquac Res Development*, 6(10):1-4. DOI: 10.4172/2155-9546.1000369
- Law, K. L., Morét-Ferguson, S., Maximenko, N. A., Proskurowski, G., Peacock, E. E., Hafner, J., & Reddy, C. M. (2010). Plastic accumulation in the North Atlantic subtropical gyre. *Science*, 329(5996), 1185–1188. <https://doi.org/10.1126/science.1192321>
- Lebreton, L. C. M., Zwet, J. V. D., Damsteeg, J. W., Slat, B., Andrady, A. & Reisser, J. (2017). River Plastic Emissions to the World's Oceans. *Nature Communications*, 8(15611), 1-10.
- Lusher, A. L., Welden, N. A., Sobral, P., & Cole, M. (2017). Sampling, isolating and identifying microplastics ingested by fish and invertebrates. *Analytical Methods*. 9(1) 1346–1360 <https://doi.org/10.1039/c6ay02415g>
- McMahon, C. R., Holley, D., & Robinson, S. (1999). The diet of itinerant male Hooker's sea lions, *Phocarcos hookeri*, at sub-Antarctic Macquarie Island. *Wildlife Research*, 26(6), 839–846. <https://doi.org/10.1071/WR98079>
- Nagai, N., Okada, H., & Hasegawa, T. (2019). Morphology-sensitive infrared absorption bands of polymers derived from surface polaritons. *AIP Advances* 9, 105203(2019): 1-12. <https://doi.org/10.1063/1.5116280>
- Neves, D., Sobral, P., Ferreira J.L., & Pereira, T. (2015). Ingestion of microplastics by commercial fish off the Portuguese coast. *Marine Pollution Bulletin*, 101: 119–126. <https://doi.org/10.1016/j.marpolbul.2015.11.008>
- Ng, H. H., and Kottelat, M. (2008). The identity of *Clarias batrachus* (Linnaeus, 1758), with the designation of a neotype (Teleostei: Clariidae). *Zoological Journal of the Linnean Society* 153(1): 725–732.
- Ng, H.H. & Low, B.W. 2019. *Clarias batrachus*. The IUCN Red List of Threatened Species: e.T166613A1138872. <https://dx.doi.org/10.2305/IUCN.UK.2019-2.RLTS.T166613A1138872.en> (Accessed on July 29, 2021).
- Prabowo, N. P. (2020). *Identifikasi Keberadaan Dan Bentuk Mikroplastik Pada Sedimen Dan Ikan di Sungai Code, D.I Yogyakarta*. Skripsi. Universitas Islam Indonesia.
- Rahman, A.K.A. (1989). *Freshwater fishes of Bangladesh*. Zoological Society of Bangladesh. Dhaka: Department of Zoology, University of Dhaka, p. 364.
- Rina, T. R. (2020). *Pencemaran lingkungan perairan dan strategi pengelolaan untuk budidaya keramba jaring dan warung apung Rawa Jombor, Klaten, Jawa Tengah*. Tesis. Universitas Gadjah Mada
- Roberts, T.R., & Vidthayanon, C. (1991). Systematic Revision of the Asian Catfish Family Pangasiidae, with Biological Observations and Descriptions of Three New Species. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 143(1991): 97-143
- Roberts, T.R., (1992). Systematic revision of the Southeast Asian anabantoid fish

- genus *Osphronemus*, with descriptions of two new species. *Ichthyol. Explor. Freshwat.* 2(4):351-360.
- Rochman, C. M., Tahir, A., Williams, S. L., Baxa, D. V., Lam, R., Miller, J. T., Teh, F. C., Werorilangi, S., & Teh, S. J. (2015). Anthropogenic debris in seafood: Plastic debris and fibers from textiles in fish and bivalves sold for human consumption. *Scientific reports*, 5, 14340. <https://doi.org/10.1038/srep14340>.
- Respati, H & Santoso, B. (1993). *Petunjuk Praktis Budidaya Gurami*. Penerbit Kansius. Yogyakarta.
- Rummel, C. D., Loder, M. G. J., Fricke, N. F., Lang, T., Griebeler, E. M., Janke, M. & Gerdt, G. (2016). Plastic Ingestion by Pelagic and Demersal Fish from the North Sea and Baltic Sea. *Marine Pollution Bulletin*, 102(1), 134-141.
- Sarah, S., Suedy, S. W. A., dan Hastuti, E. D. (2017). Ciri Morfologi Polen Dan Spora Tumbuhan Dari Sedimen Rawa Jombor Klaten. *Bioma*, 19(1): 5-12.
- Sarasita, D., Yunanto, A., & Yona, D. (2020). Kandungan mikroplastik pada empat jenis ikan ekonomis penting di perairan Selat Bali. *J. Iktiologi Indonesia*, 20: 1-12.
- Sitanggang, M. & B. Sarwono. (2007). *Budidaya. Gurami*. Penebar Swadaya. Jakarta
- Smith, B. (2019, January 08). How are Microplastics Created. AZoCleantech. Retrieved on October 15, 2020 from <https://www.azocleantech.com/article.aspx?ArticleID=785>.
- Su, L., Deng H., Li, B., Chen, Q., Pettigrove, V., Wu C., & Shi, H. (2019). The occurrence of microplastic in specific organs in commercially caught fishes from coast and estuary area of east China. *J. Hazardous Material*, 365: 716-724. <https://doi.org/10.1016/j.jhazmat.2018.11.024>
- Sulistyo, E.N., Rahmawati, S., Putri, R. A., Arya, N., & Eryan, Y. A. (2020). Identification of the Existence and Type of Microplastic in Code River Fish, Special Region of Yogyakarta. *Eksakta*, 1(1):85-91. DOI: 10.20885/EKSAKTA.vol1.iss1.art13
- Suseno P. (2020). *Jijik! Rawa Jombor Klaten banyak pengunjung tapi juga banyak sampah*. Solopos. <https://www.solopos.com/jijik-rawa-jombor-klaten-banyak-pengunjung-tapi-juga-banyak-sampah-1077912> (Diakses pada 19 Mei 2021).
- Suwarningsih, N., Setyowati, I., & Astuti, R. (2020). Microplastics in Pelagic and Demersal Fishes of Pantai Baron, Yogyakarta, Indonesia. *Jurnal Biodjati*, 5(1), 33-49. <https://doi.org/10.15575/biodjati.v5i1.7768>
- Talwar, P.K., & Jhingran, A.G. (1991). *Inland fishes of India and adjacent countries Volume 2*. Rotterdam: A.A. Balkema.
- Vendel, A. L., Bessa, F., Alves, V. E. N., Amorim, A. L. A., Patrício, J. & Palma, A. R. T. (2017). Widespread Microplastic Ingestion by Fish Assemblages in Tropical Estuaries Subjected to Anthropogenic Pressures. *Marine Pollution Bulletin*, 117(1-2): 448-455.
- Verreth, J., Eding, E. Rao, G., Huskens, F., & Segner, H. (1993). A review of feeding practices, growth and nutritional physiology in larvae of the catfishes *Clarias gariepinus* and *Clarias batrachus*. *Journal of the World Aquaculture Society*, 24/2: 135-144.
- Viršek, M. K., Palatinus, A., Koren, Š., Peterlin, M., Horvat, P., & Kržan, A. (2016). Protocol for Microplastics Sampling on the Sea Surface and Sample Analysis.

Journal of Visualized Experiments: JoVE, (118).
<https://doi.org/10.3791/55161>

Widianarko, B. & Hantoro, I. (2018). *Mikroplastik dalam Seafood dari Pantai Utara Jawa*. Unika Soegijapranata. Semarang, pp. 15-16.

Yona, D., Maharani, M. D., Cordova, M. R., Elvani, Y., & Dharmawan, I. W. E. (2020). Analisis Mikroplastik Di Insang Dan Saluran Pencernaan Ikan Karang Di Tiga Pulau Kecil Dan Terluar Papua, Indonesia: Kajian Awal. *J. Ilmu dan Teknologi Kelautan Tropis*, 12(2): 495-505.
<http://doi.org/10.29244/jitkt.v12i2.25971>

Zettler, E. R., Mincer, T. J., & Amaral-Zettler, L. A. (2013). Life in the “plastisphere”: Microbial communities on plastic marine debris. *Environmental Science and Technology*, 47(13), 7137–7146.
<https://doi.org/10.1021/es401288x>