

Publication list

Articles in peer-reviewed journals:

Steger K., Kim A., Ganzert L., Grossart H-P. and D.R. Smart (2019). Floodplain soil and its bacterial composition are strongly affected by depth. *FEMS Microbiology Ecology*, 95, doi: 10.1093/femsec/fiz014

Steger K., Fiener P., Marvin-DiPasquale M., Viers J.H. and D.R. Smart (2019). Human-induced and natural carbon storage in floodplains of the Central Valley of California. *Science of the Total Environment*, 651: 851-858.

Dybala K.E., **Steger K.**, Walsh R.G., Smart D.R., Gardali T. and N.E. Seavy (2018). Optimizing carbon storage and biodiversity co-benefits in reforested riparian zones. *Journal of Applied Ecology*, 56: 343-353, DOI: 10.1111/1365-2664.13272

Weise L., Ulrich A., Moreano M., Gessler A., Kayler Z.E., **Steger K.**, Zeller B., Rudolph K., Knezevic-Jaric J. and K. Premke (2016). Water level changes affect carbon turnover and microbial community composition in lake sediments. *FEMS Microbiology Ecology*, 92 (5): doi: 10.1093/femsec/fiw035

Attermeyer K., Flury S., Jayakumar R., Fiener P., **Steger K.**, Arya V., Wilken F., van Geldern R. and K. Premke (2016). Invasive floating macrophytes reduce greenhouse gas emissions from a small tropical lake. *Scientific Reports*, 6: 20424, DOI: 10.1038/srep20424

Gerbersdorf S.U., Cimadoribus C., Class H., Engesser K.-H., Helbich H., Hollert H., Kranert M., Kuch B., Metzger J., Nowak W., Seiler T.-B., **Steger K.**, Steinmetz H. and S. Wieprecht (2015). Anthropogenic Trace Compounds (ATCs) in aquatic habitats – Research needs on sources, fate, detection and toxicity to ensure timely elimination strategies and risk management. *Environment International*, 79: 85-105.

Steger K., Premke K., Gudas C., Boschker H.T.S. and L.J. Tranvik (2015). Comparative study on bacterial carbon sources in lake sediments: the role of methanotrophy. *Aquatic Microbial Ecology*, 76 (1): 39-47.

Fiener P., Gottfried T., Sommer M. and **K. Steger** (2014). Soil organic carbon patterns under different land uses in South India. *Geoderma Regional* (2-3): 91-101.

Jayakumar R., **Steger K.**, Chandra T.S. and S. Seshadri (2013). An assessment of temporal variations in physicochemical and microbiological properties of barmouths and lagoons in Chennai (Southeast coast of India). *Marine Pollution Bulletin*, 70 (1-2): 44-53.

Koehler B, Corre M.D., **Steger K.**, Well R., Zehe E., Sueta J.P. and E. Veldkamp (2012). An in-depth look into a tropical lowland forest soil: Nitrogen-addition effects on N₂O, CO₂ and CH₄ isotopic signatures down to 2-m depth. *Biogeochemistry*, 111 (1-3): 695-713.

Bartels P., Cucherousset J., **Steger K.**, Eklöv P., Tranvik L.J. and H. Hillebrand (2012). Reciprocal subsidies between freshwater and terrestrial ecosystems structure consumer-resource dynamics. *Ecology*, 93 (5): 1173-1182.

Gudas C., Bastviken D., Premke K., **Steger K.** and L.J. Tranvik (2012). Constrained microbial processing of allochthonous organic carbon in boreal lake sediments. *Limnology and Oceanography*, 57 (1): 163-175.

Articles in peer-reviewed journals (cont.):

Bartels P., Cucherousset J., Gudasz C., Jansson M., Karlsson J., Persson L., Premke K., Rubach, A., **Steger K.**, Tranvik L.J. and P. Eklöv (2011). Terrestrial subsidies to lake food webs: an experimental approach. *Oecologia*, 168 (3): 807-818.

Steger K., Premke K., Gudasz C., Sundh I. and L.J. Tranvik (2011). Microbial biomass and community composition in boreal lake sediments. *Limnology and Oceanography*, 56 (2): 725-733.

Premke K., Karlsson J., **Steger K.**, Gudasz C., von Wachenfeldt E. and L.J. Tranvik (2010). Stable isotope analysis of benthic fauna and their food sources in boreal lakes. *Journal of the North American Benthological Society*. 29 (4): 1339-1348.

Gudasz C., Bastviken D., **Steger K.**, Premke K., Sobek, S. and L.J. Tranvik (2010). Temperature-controlled organic carbon mineralization in lake sediments. *Nature* 466: 478-482.

Steger K., Jarvis Å., Vasara T., Romantschuk M. and I. Sundh (2007). Effects of differing temperature management on development of Actinobacteria populations during composting. *Research in Microbiology* 158: 617-624.

Eklind Y., Sundberg C., Smårs S., **Steger K.**, Sundh I., Kirchmann H. and H. Jönsson (2007). Carbon turnover and ammonia emissions during composting of biowaste at different temperatures. *Journal of Environmental Quality* 36: 1512-1520.

Steger K., Sjögren Å.M., Jarvis Å., Jansson J.K. and I. Sundh (2007). Development of compost maturity and Actinobacteria populations during full-scale composting of organic household waste. *Journal of Applied Microbiology* 103: 287-298.

Goedkoop W., Widenfalk A., Häglund A., **Steger K.** and S. Bertilsson (2005). Microbial characterization of artificial sediment and comparisons with natural sediments-Implications for toxicity testing. *Environmental Toxicology and Chemistry* 24 (11): 2725-2733.

Steger K., Eklind Y., Olsson J. and I. Sundh (2005). Microbial community growth and utilization of carbon constituents during thermophilic composting at different oxygen levels. *Microbial Ecology* 50 (2): 163-171.

Steger K., Jarvis Å., Smårs S. and I. Sundh (2003). Comparison of signature lipid methods to determine microbial community structure in compost. *Journal of Microbiological Methods* 55: 371-382.

In preparation:

Premke K., Dharanivasan, Nitzsche K., **Steger K.**, Jayavignesh V., Indumathi and S. Seshadri. Urbanization influences greenhouse gas emissions and microbial community in the River Cauvery, South India.

Gelaw F.A., Smart D.R. and **K. Steger**. Carbon dynamics in two Ethiopian forest ecosystems.

Jayakumar R., Fiener P., Krueger A., Premke K. and **K. Steger**. Disconnection of terrestrial and aquatic microbial communities in a small Indian agricultural catchment are triggered by environmental factors.

Articles in NON peer-reviewed journals:

Steger K., Premke K., Jayakumar R. and P. Fiener (2013). Microbial communities and carbon fluxes in a small agricultural catchment in South-East India. *Proceedings of International conference on "Building bridges in ecology - linking systems, scales and disciplines"* by the German Society of Limnology. Tagungsband Berlin-Potsdam.

Jayakumar R., Mhatre S., **Steger K.**, Chandra T. S., Shouche Y. S. S. and S. Seshadri (2011). Culture Independent Bacterial Diversity Analysis of Marine Water Samples Collected from a Coastal Village Near Chennai, Southeast Coast of India. *Proceedings of International conference on "Impact of Climate Change on Coastal Ecosystems"*. 181ff.

Monographies:

Steger K. (2006). Composition of microbial communities in composts - A tool to assess process development and quality of the final product. (Doctoral thesis No. 2006:31, Acta Universitatis Agriculturae Sueciae)

Steger K. (1996). Identification of the cosmid clone containing the *karA* gene of *Aspergillus nidulans*". (Diploma thesis, Technical University Berlin)

OTHER PUBLICATIONS:

Editor of the IGCS Bulletin, a quarterly published newsletter about features on sustainability and the activities of the Indo-German Centre for Sustainability at IIT Madras (2011-2012).

Journal of the Swedish Association for Wastewater Treatment Plants (RVF nytt 11/06) "Bakterier berättar när komposten är mogen" (Bacteria tell when compost is mature.)

REVIEWER:

Microbial Ecology; Applied Soil Ecology; FEMS Microbiology Ecology; Pedosphere; European Journal of Soil Biology; Hydrobiologia; Compost Science & Utilization; Aquatic Ecology; Environment, Development and Sustainability; PLOS ONE.

Reviewer for a book chapter entitled "Microbes at work - from wastes to resources".