

Plants, plastic and rivers

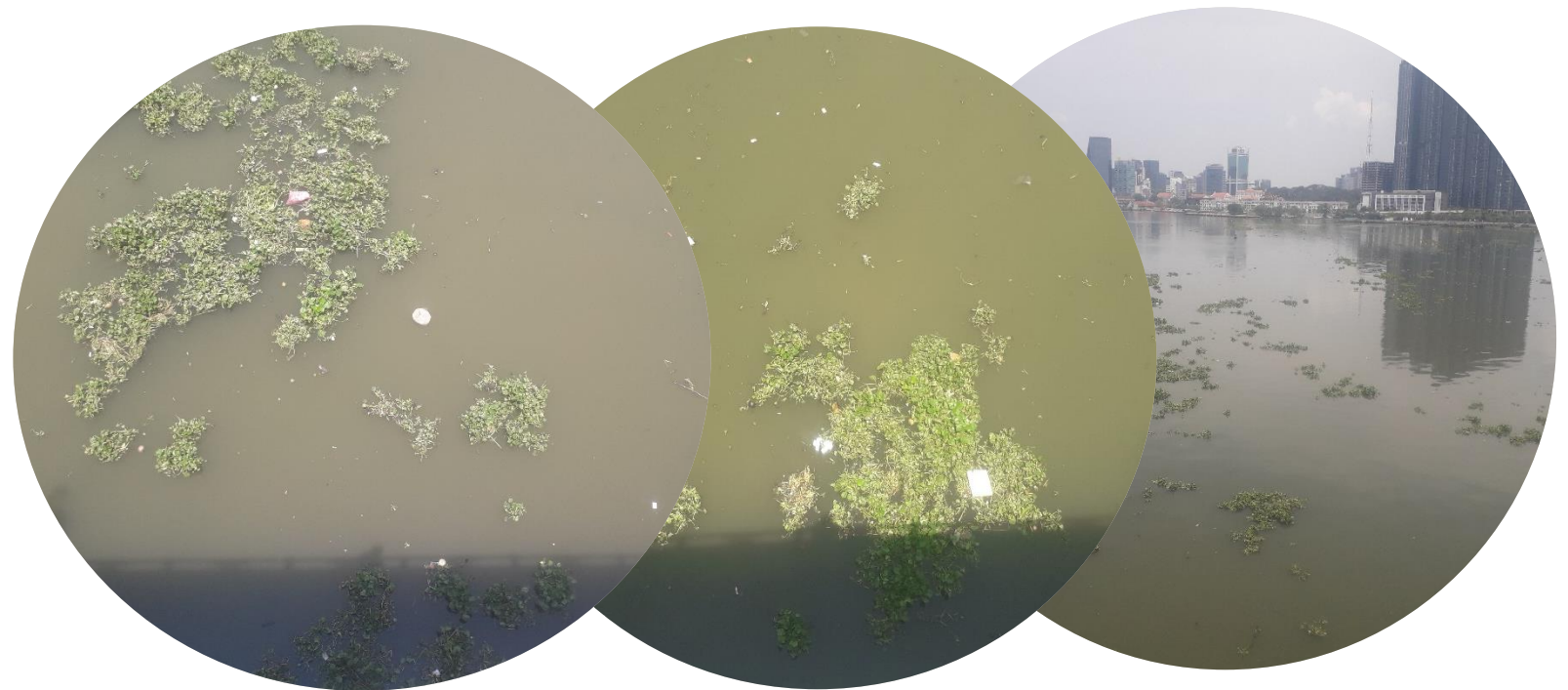
Do water hyacinths play a role in riverine macroplastic transport?

Who are you talking to?

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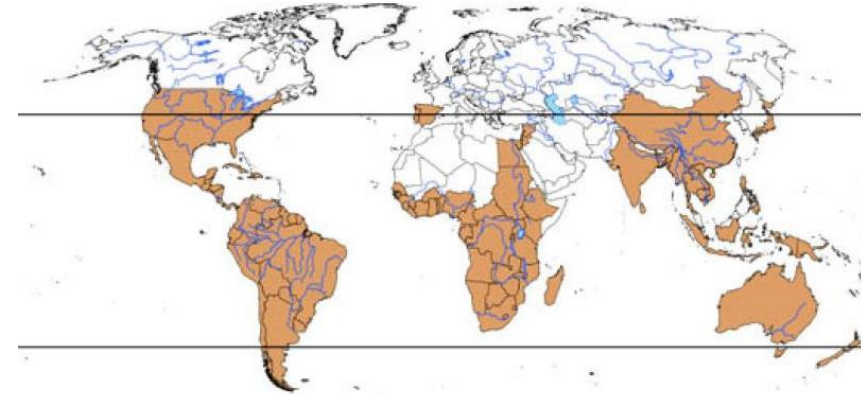
Where am I based?

Hydrology and Quantitative Water Management, Wageningen University, Wageningen, Netherlands

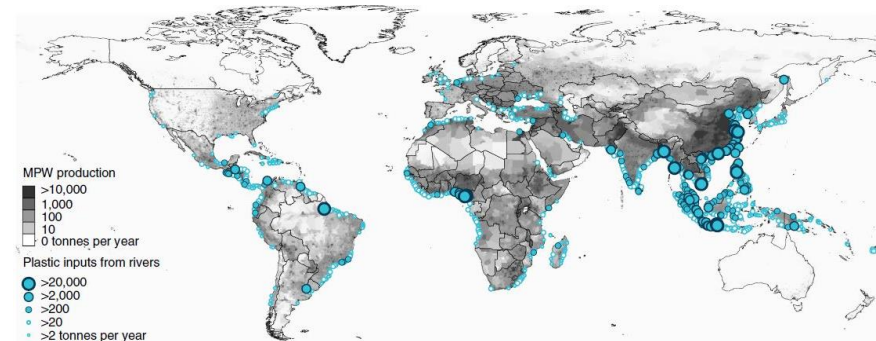


Introduction, What do we know?

- Rivers as major pathways for macroplastic.
- Correlation found between organic material and plastic flux in the Saigon river, Vietnam ([van Emmerik et al., 2019](#))
- Organic material is dominated by water hyacinth patches.
- Water hyacinths grow in patches on top of water surfaces
- Water hyacinths can be free-floating.



worldwide extent of Water hyacinths, *Eichhornia Crassipes* (Tellez et al., 2008)



The top 30 plastic litter polluting rivers (Lebreton et al., 2017)



Main research question

What is the effect of water hyacinths on the macroplastic flux?

Research goals

- Development of a monitoring strategy to measure macroplastic accumulation in water hyacinths patches.
- Collect and analyse data for the Saigon river, Vietnam.



Preliminary results

- Plastic and water hyacinths can be identified and compared via images.
- First result indicate plastic entrapped in water hyacinths patches have a large contribution (up to 90 %) to the total macroplastic flux.

Outlook

- With local support, we are currently collecting data in the Saigon River. We will use this to optimize the method and further explore the role of water hyacinths on plastic transport.
- This exploratory study will lead to new questions regarding the interaction of plants and plastic, and what new possibilities arise to mitigate the plastic problem.

