Utilizing Australian Native Plants in Constructed Floating Wetlands to Remove Nutrients to reduce Cyanobacteria formation in Urban Stormwater

# 8<sup>th</sup> ANZ Cyanobacteria Workshop

26 - 27 September 2023

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CSIRC

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Water Research AUSTRALIA



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#### **Background of Research**



- High nutrient concentrations and cyanobacteria formation are major concern in stormwater reuse i.e., colour change, salinity etc
- Evaluate the performance of Constructed Floating Wetlands in various environmental conditions
- Reduce pollution associated with urban runoff and remove excess nutrients within aquatic environments by using CFWs
- Using local plant species in a Mediterranean climate under various environmental conditions



Sharma, Vymazal and Malaviya, 2021

collaborate innovate impact

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### Novel approach to reduce nutrients level in water bodies



- CFWs are designed and constructed to mimic natural floating wetland systems and their water treatment capabilities
- ✓ Flexible to be incorporated into existing urban water bodies
- ✓ Setup and act as a hydroponic system
- Soil less planting innovation by coordination biological and building efficiently in feasible manner
- Microbial Analysis The proprietary and novel method by using the Dneasy PowerSoil Kit to isolate the genomic DNA from the collected samples







#### **Research findings**









## **Thank you for Listening**



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Buestions?