



# The State of Knowledge on Microplastic Pollution in Australia: Sources, Sinks & Future Directions

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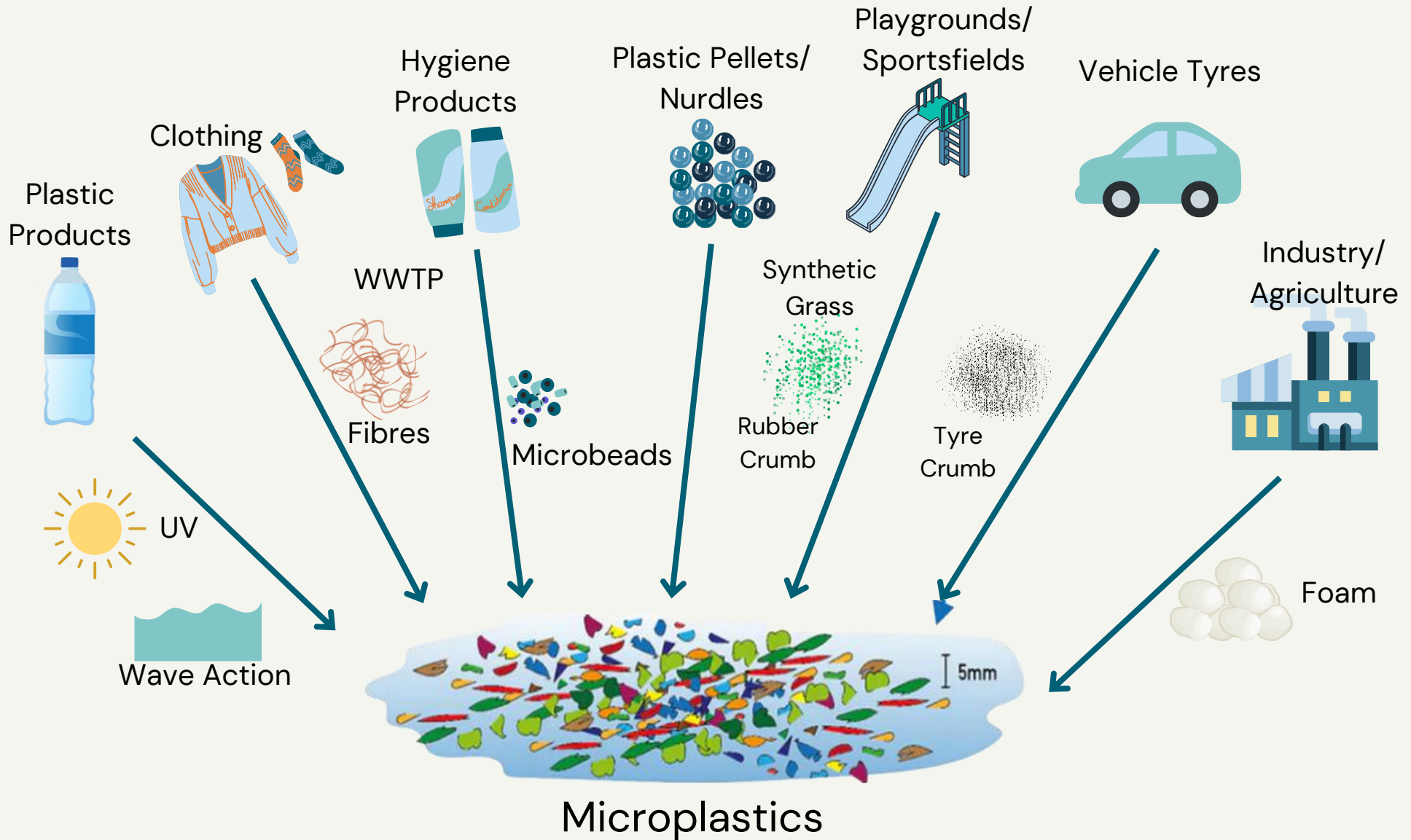


# The Plastic Crisis

A wide-angle photograph of a massive landfill of plastic waste. The foreground and middle ground are filled with a sea of discarded plastic items, including bottles, containers, and fragments in various colors like white, blue, red, and yellow. The waste extends to the horizon under a dramatic sky with soft, golden light from a low sun, creating long shadows and a hazy atmosphere.

*Nearly every  
piece of  
plastic ever  
created exists  
today*

# Sources (both primary and secondary)



# Microplastic Studies in Australia

Air

5



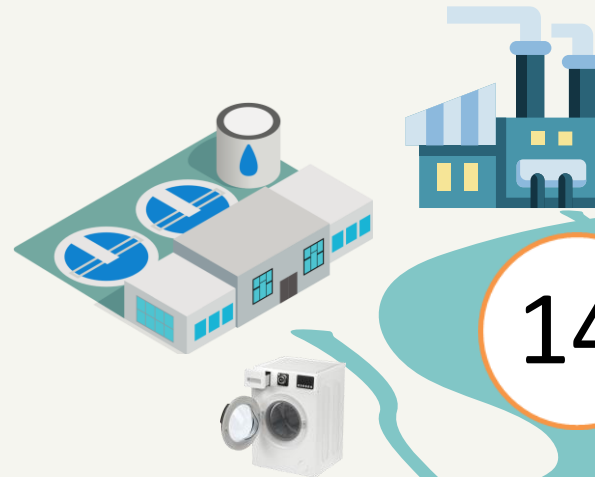
Soil

12



14

Freshwater

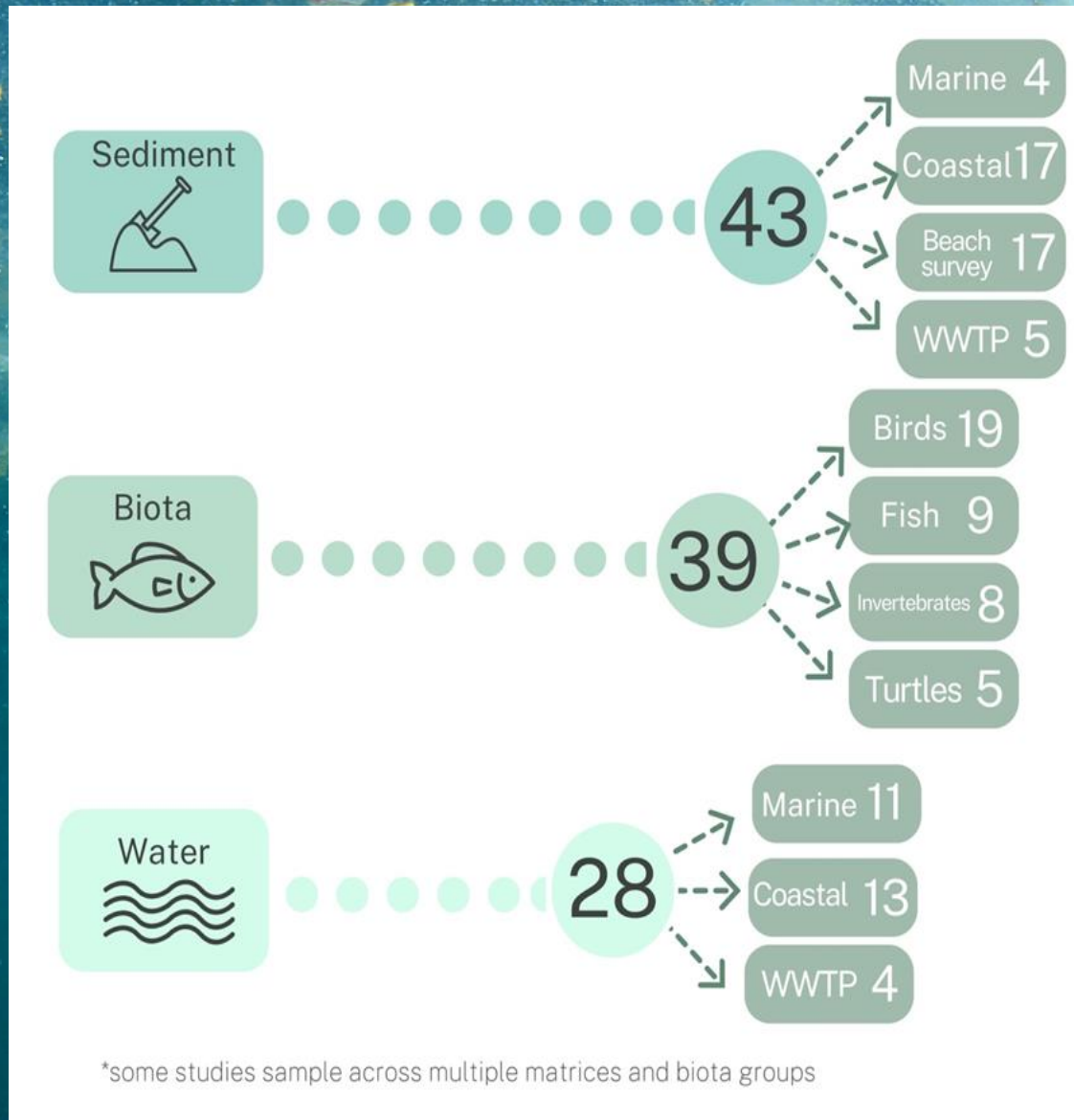


93

Marine & Coastal



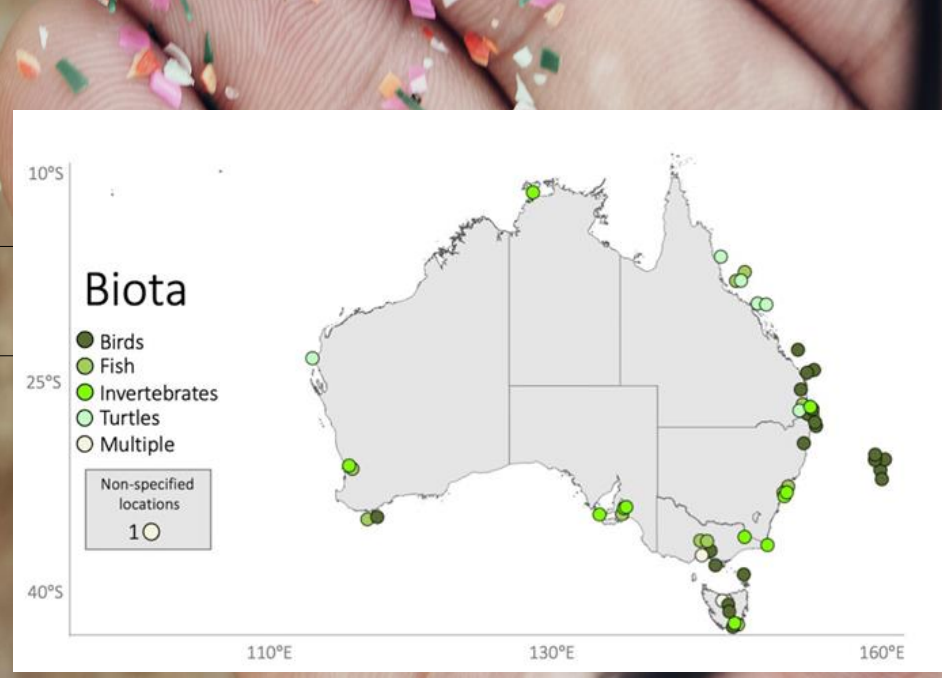
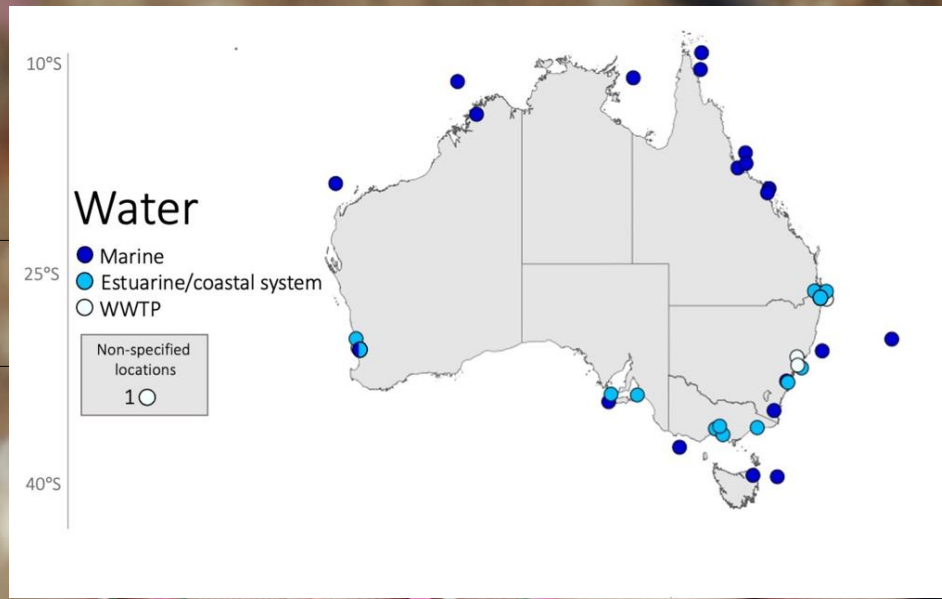
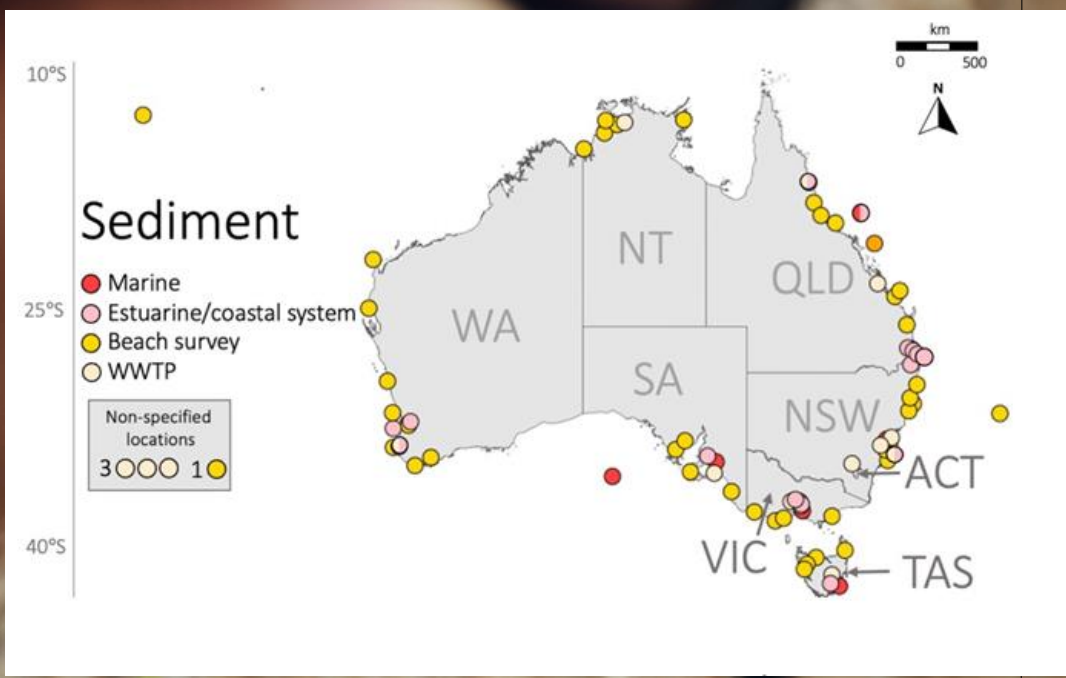
# Marine & Coastal Data



Wootton et al 2024

Mar Poll Bull. 205, 116660

# Coastal Microplastic Distribution



Wootton et al 2024

Mar Poll Bull. 205, 116660

# AUSMAP



750+

Samples Collected



2018-2024 IMPACT

1,500+

Citizen scientists trained



350+

Sites sampled across Australia

40+

Microplastic hotspots identified



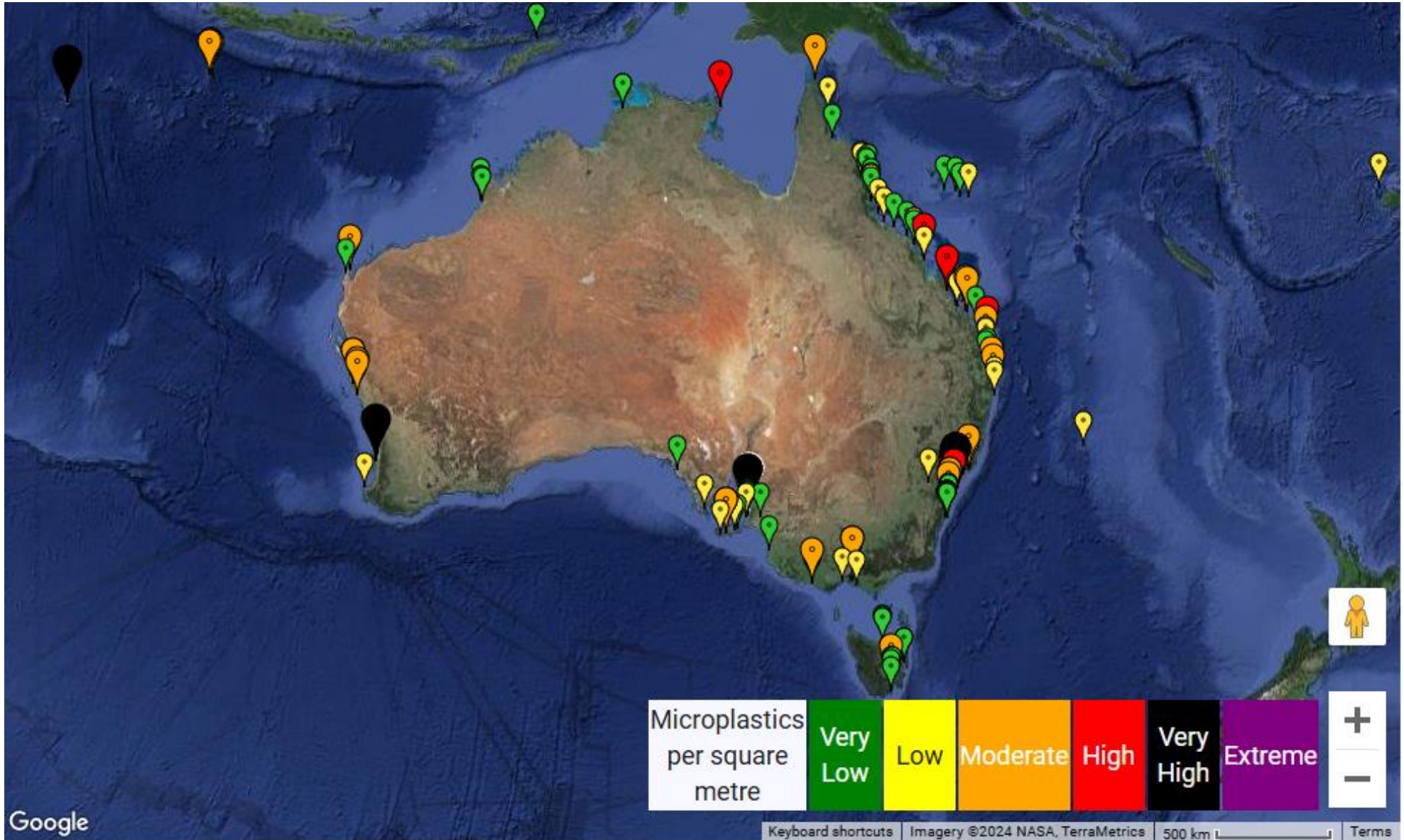
8000+

Volunteers engaged

3,000,000+

Microplastics removed!

# AUSMAP Microplastic Hotspot Data





# Future Directions

Method harmonisation

Advanced technology for in situ measurements

Reliable small particle measurement

Understand risks to individuals and ecosystems

Long term monitoring

Vectors of contamination

Fill gaps in data for other matrices



# Acknowledgements

Data presented from  
a NESP Marine and  
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(1.18 2021) and the  
AUSMAP database