



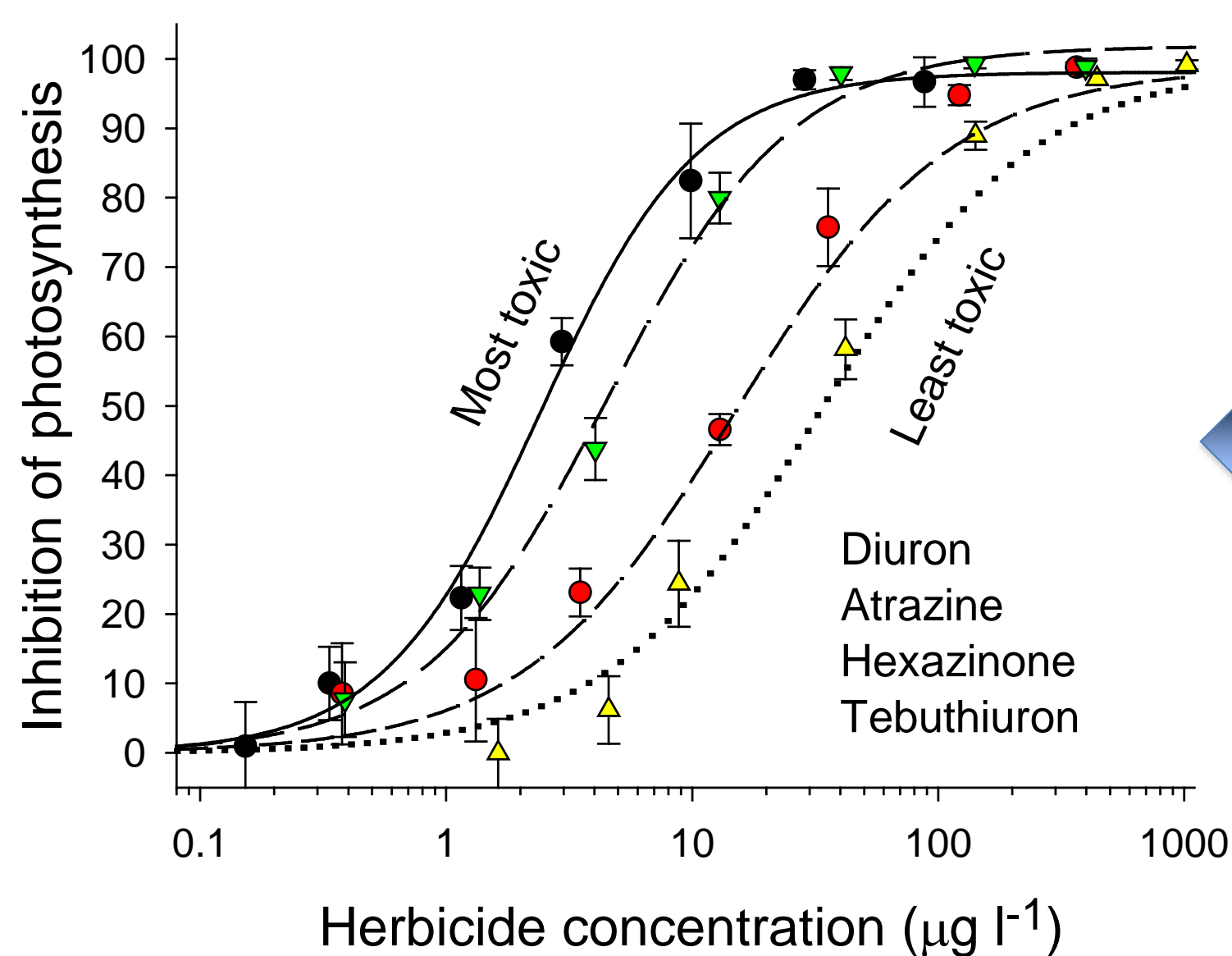
# The chronic effects of pesticides and their persistence in tropical waters

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## Project summary

Herbicides from agricultural sources, have been detected in nearshore sites of the Great Barrier Reef (GBR) year round but the actual impacts from herbicides remains unclear. This project will:-

1. Examine how seagrass and corals are affected by herbicides in the water in conjunction with other stressors such as temperature and low salinity.
2. Determine how long herbicides persist and how they are transformed as they travel into coastal waters.



## Example results

Two seagrass species were shown to be as sensitive as corals and algae to four priority herbicides found in the GBR.

The majority of herbicides detected in the GBR have very long half lives of over 150 days in tropical seawater.

## Outcomes

*Contribute to cumulative risk models, pollution targets and ultimately policy development to protect the GBR from the effects of pollution and climate change by:-*

- Determining threshold concentrations for herbicides on seagrass.
- Testing whether managing herbicide exposures can protect seagrasses from ocean warming.
- Measuring half-lives of herbicides at multiple temperatures.
- Identifying herbicide breakdown products and their toxicity.

Our **Pesticide Working Group** has already had a great success in fostering communication between researchers, regulators, managers, industry and NGOs.

