

Harnessing New Technologies for Mapping Montserrat's Marine Megafauna

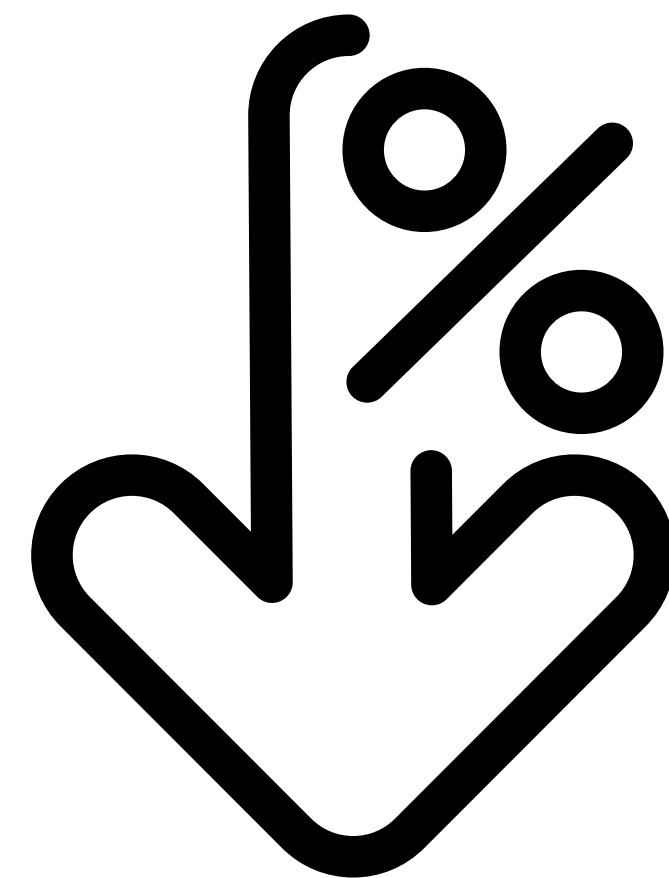


Source: Nautilus Live



Source:BSG/UKRI

Focus on Sharks



**71% SINCE
1970**

Pacoureau, N., et al. 2021

Current Situation

- Fishing Pressure.
- Presence of endangered species eg. Great Hammerhead Shark, (*Sphyrna Mokarran*).
(Estep, A., et al, 2018)
- No fisheries management, ie. no limits of catch, size, or species.
- Fear of sharks.

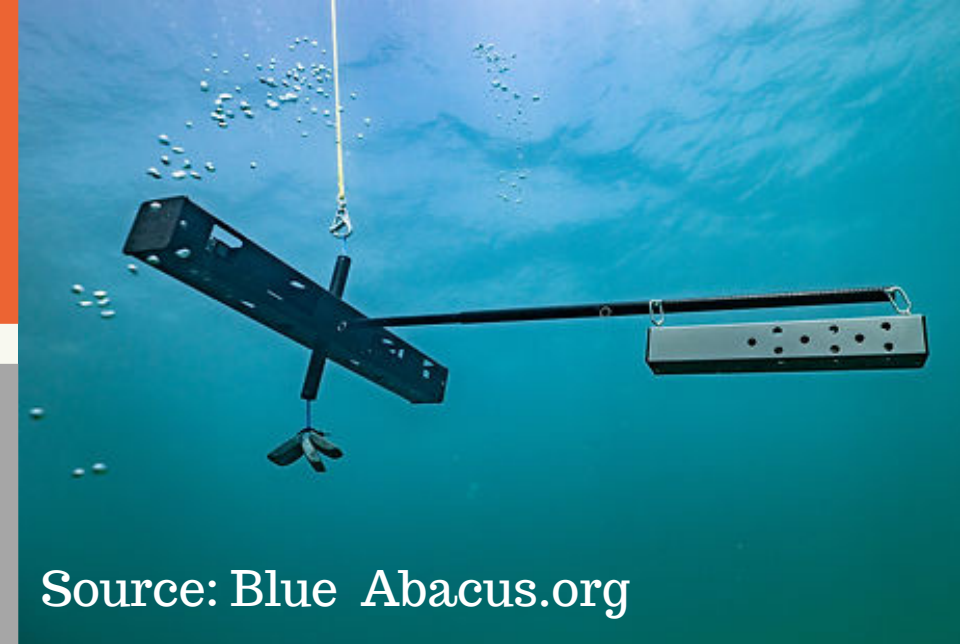


Knowledge Gaps

- Status of shark population unknown.
- Limited fisheries landing data.
- Lack of capacity for scientific data analysis.
- Limited baseline data at depths of >30m.
- Government of Montserrat unable to fulfil UK Government's requirements to CITES and CMS.
- Low community awareness on value of sharks.



Features	BRUVs (Thompson C.D.H., et, al 2021)	Maka Niu (Bell, K. et al, 2022)	eDNA (von der Heyden, S 2022)
Depth	>30-50m	>1500m	Variable
Battery time	90 mins	16 hrs	N/A
Deployment Time	60 mins	> 6 hrs	N/A
Unique Features	Fish size	Salinity, temp, depth, pressure	Tracks the genetic trail of a fish, cetacean or mammals
Weaknesses	<ul style="list-style-type: none"> • Bait Bias • Underestimates abundance 	<ul style="list-style-type: none"> • Lack of accessories • Beta testing 	<ul style="list-style-type: none"> • Overseas Logistics • Expensive



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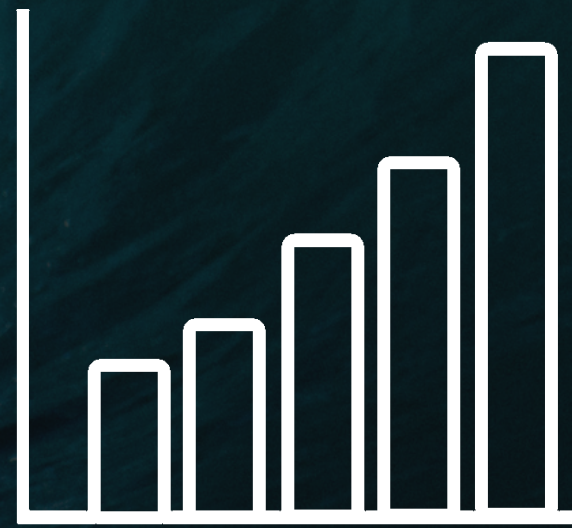
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AIMS & METHODS



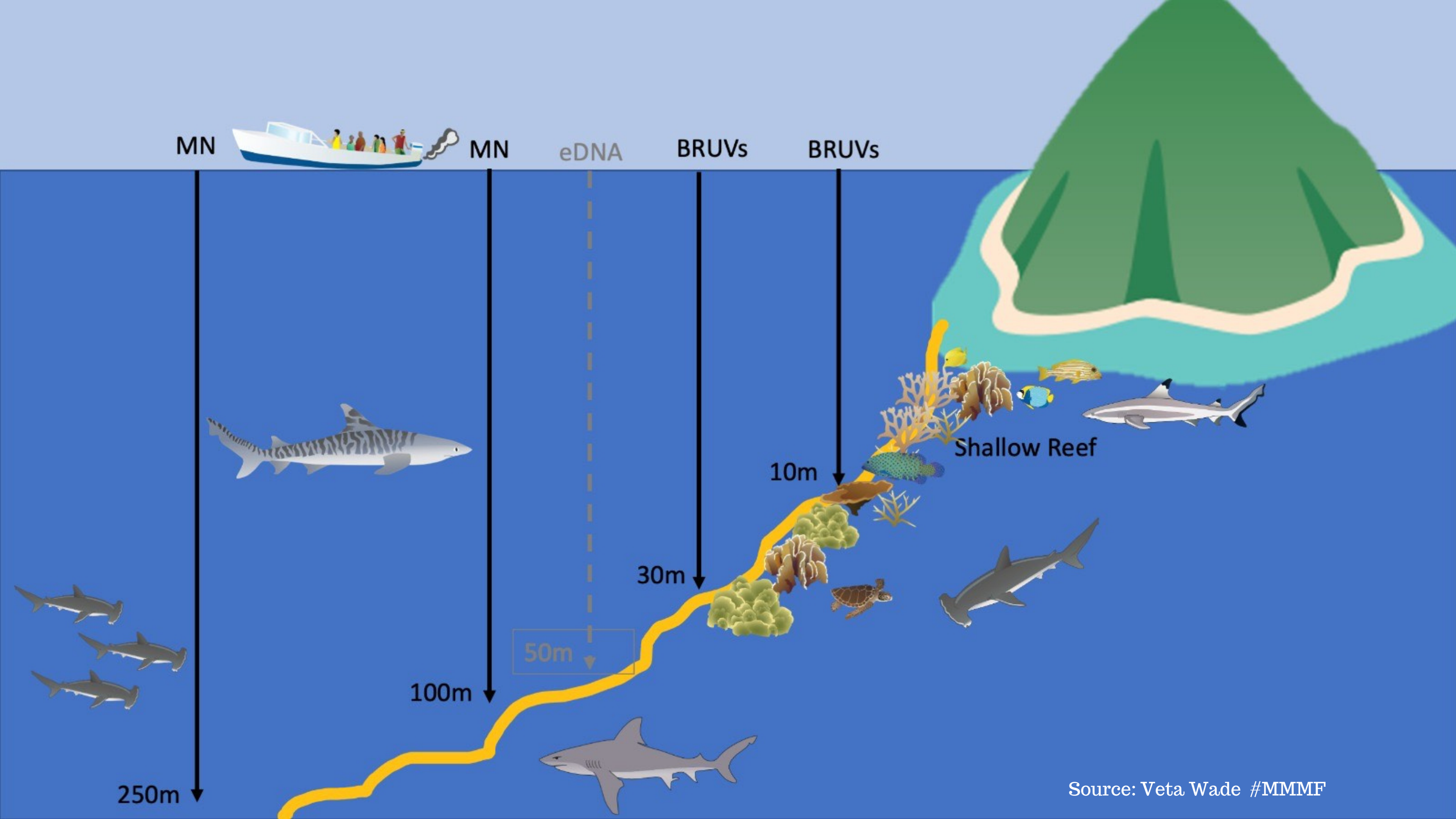
PRESENCE/ABSENCE



DATA

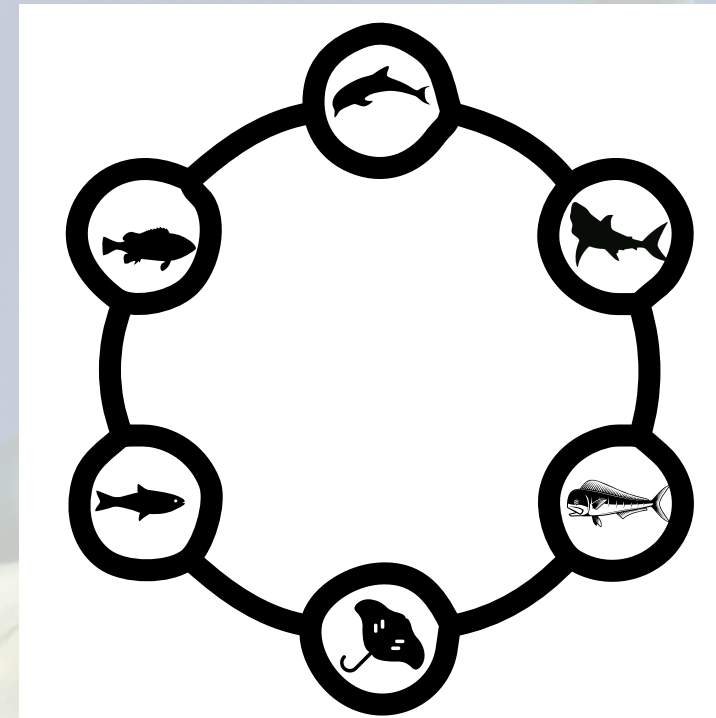


DISTRIBUTION

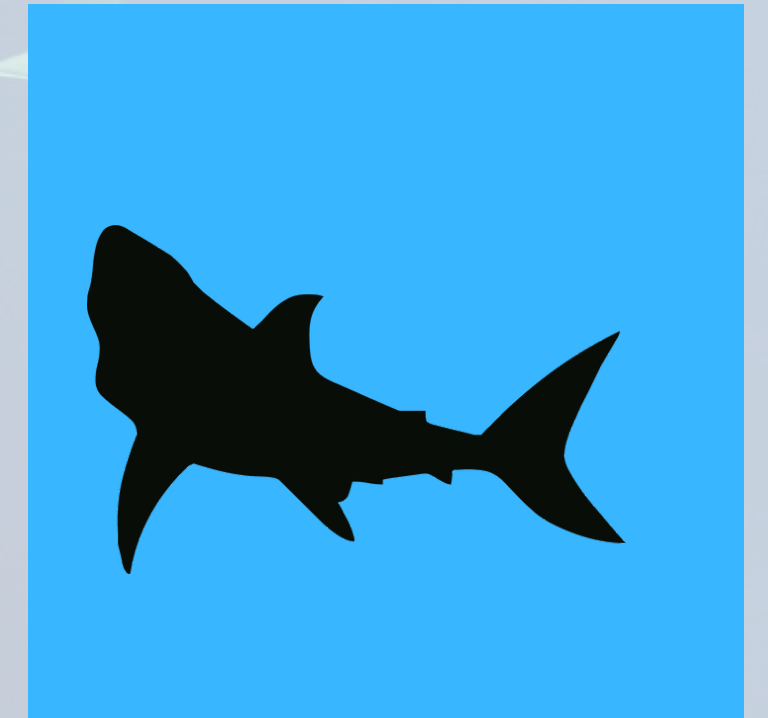


Expected Outcomes

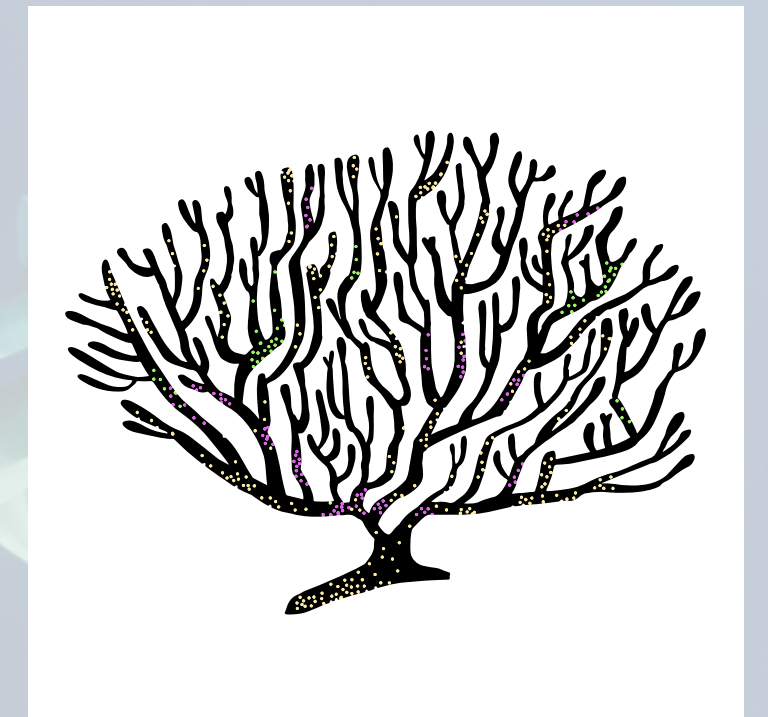
species richness



species abundance



distribution map



seabed features affecting presence/absence

IMPLICATIONS

1

Conservation

Identifying areas that could be protected

2

Fisheries Management

Supporting fisheries plans and policies

3

Participatory Research

Empowers Montserratians to inform MSP

4

Community Awareness

Social Media, Infographics, Radio

MONTSERRAT MARINE MEGAFAUNA PROJECT

#MMMMF

Using a **combination of technologies** we aim to engage **local blue champions**, who often have **limited access** to **ocean data** and **technology**. By contributing to and supporting **collaborative science**, we can **accelerate** research, encourage **transparency, community awareness** and **stewardship**.



Meet the Team



Source: Montserrat Marine Megafauna Project



VETA WADE

Student Researcher
University of Exeter



SHELDON CARTY

President of Montserrat Fishers & Boaters
Association



JASON WILLET

Fisher / Research Assistant
Fish 'N Fins Inc.



**Thank You for
listening!**

