Marine environment and biodiversity monitoring: from the shallow to the deep

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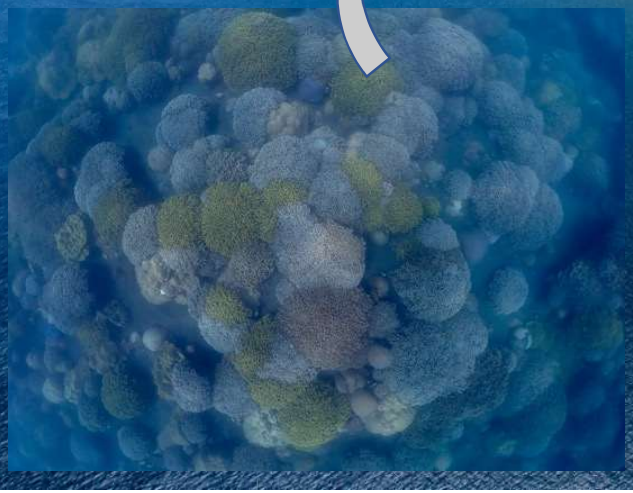
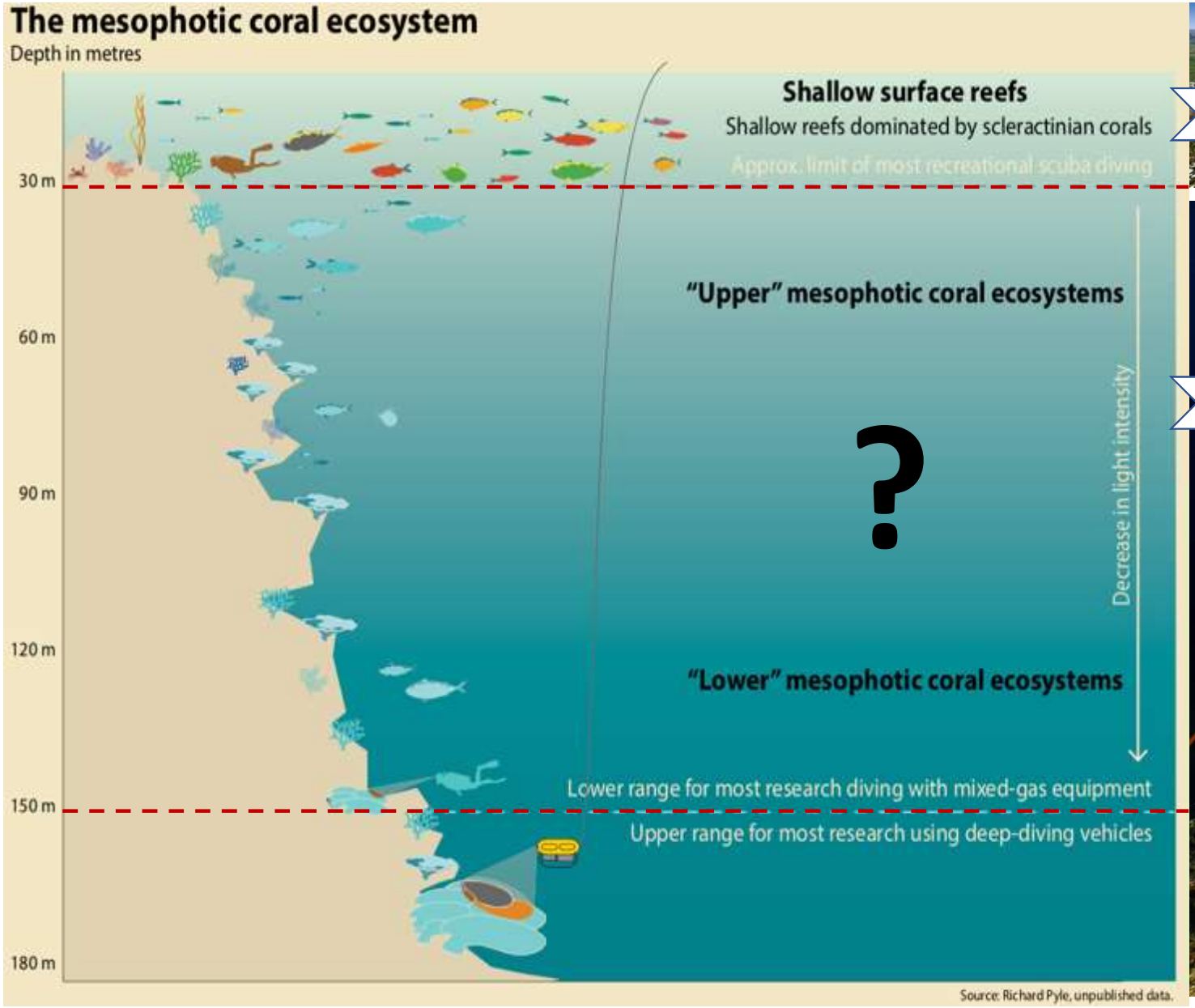
Port Reunion's Strategic Project

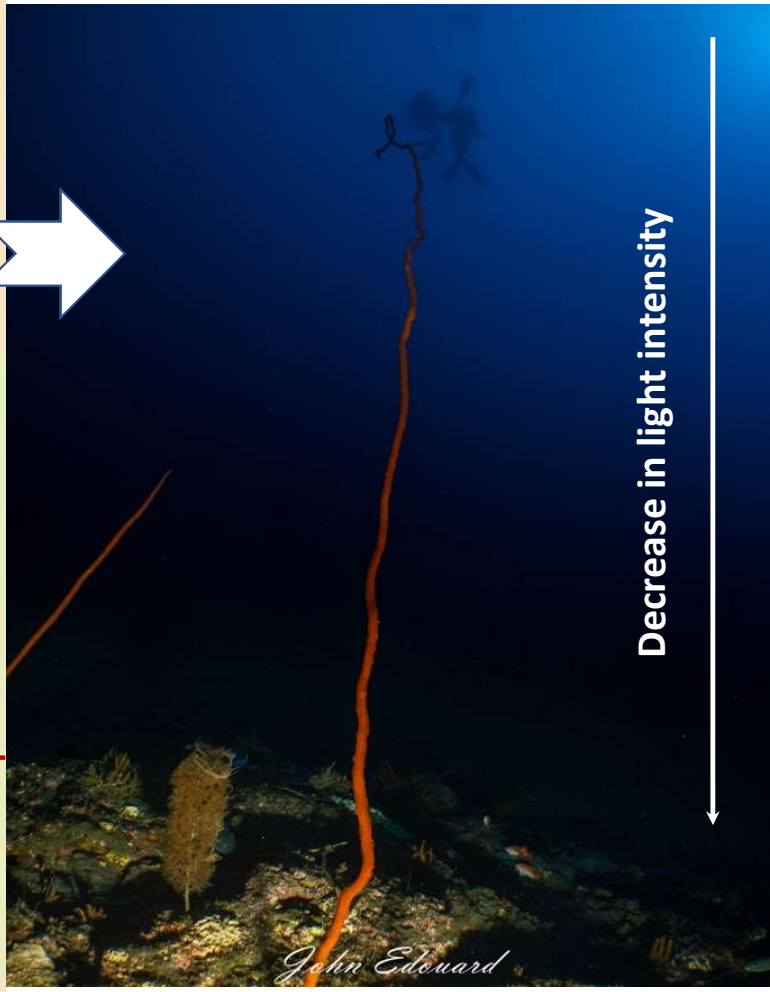
Natural Heritage Master Plan

- Inventories of terrestrial and marine diversity
- Surveys for assessing impacts port projects
- Action plan for biodiversity conservation



A voluntary environmental approach **Avoid** **Reduce/Mitigate** **Compensate**


The mesophotic coral ecosystem
Depth in metres
Shallow surface reefs
Shallow reefs dominated by scleractinian corals
Approx. limit of most recreational scuba diving
30 m
60 m
90 m
120 m
150 m
180 m
"Upper" mesophotic coral ecosystems
?
Decrease in light intensity
"Lower" mesophotic coral ecosystems
Lower range for most research diving with mixed-gas equipment
Upper range for most research using deep-diving vehicles
Source: Richard Pyle, unpublished data.

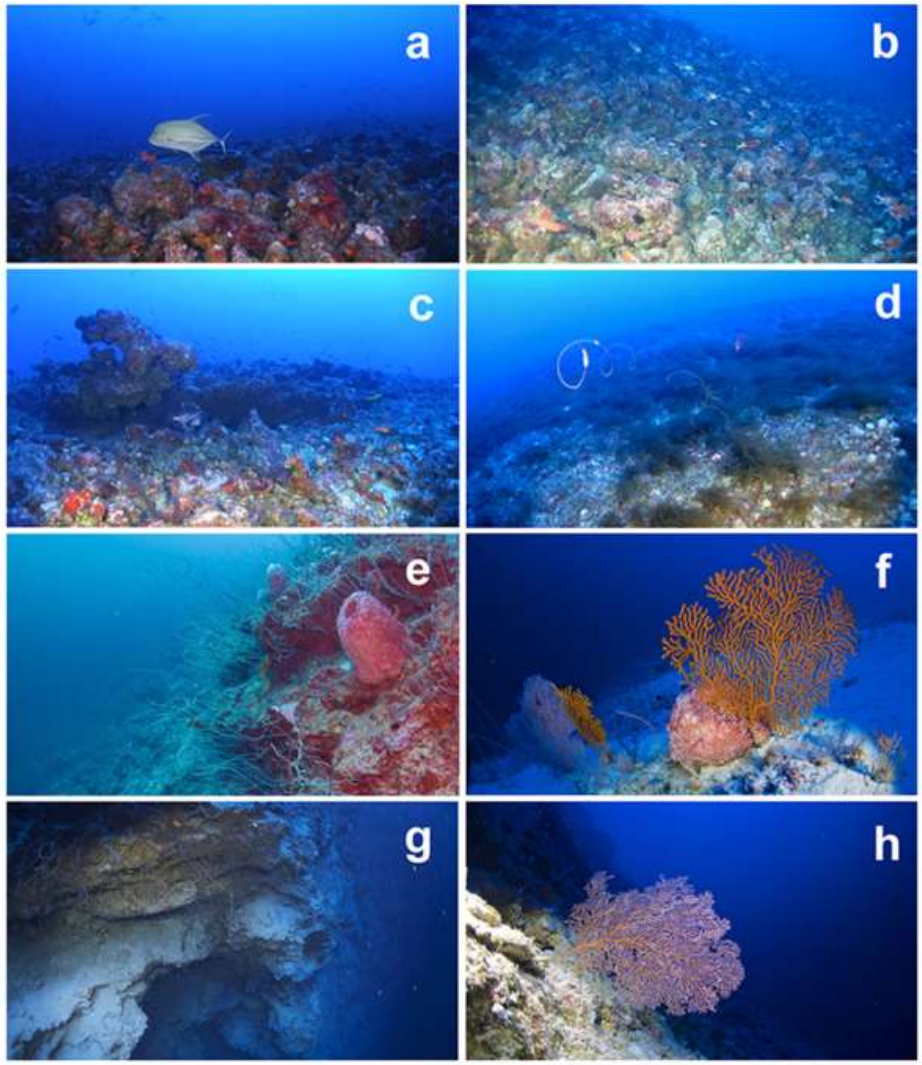

Decrease in light intensity
John Edouard

Mesophotic Coral Ecosystems (MCE): biodiversity & conservation

Habitats and communities characterization of MCE (30–100 m)

Demography and population dynamics of corals in MCE

Action plan for a sustainable management and conservation of MCE in Reunion Island



Pinheiro et *al*. 2016. Upper and lower mesophotic coral reef fish communities

Le Port

Sainte-Rose

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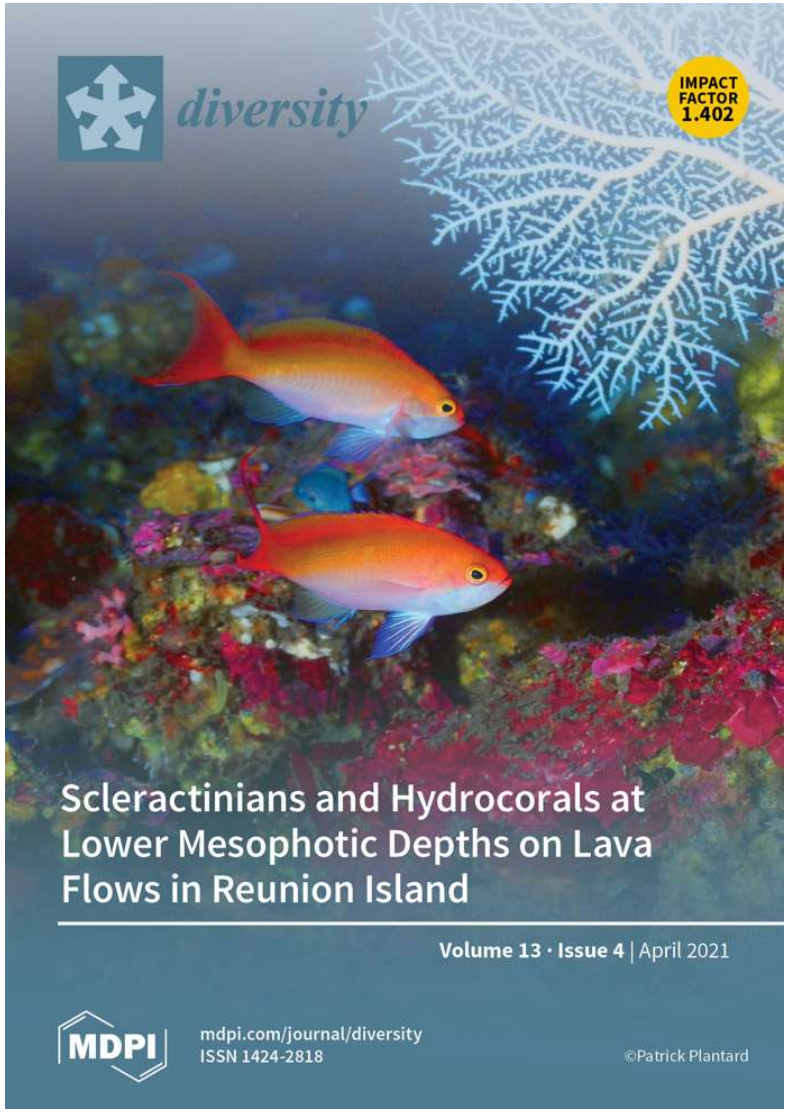
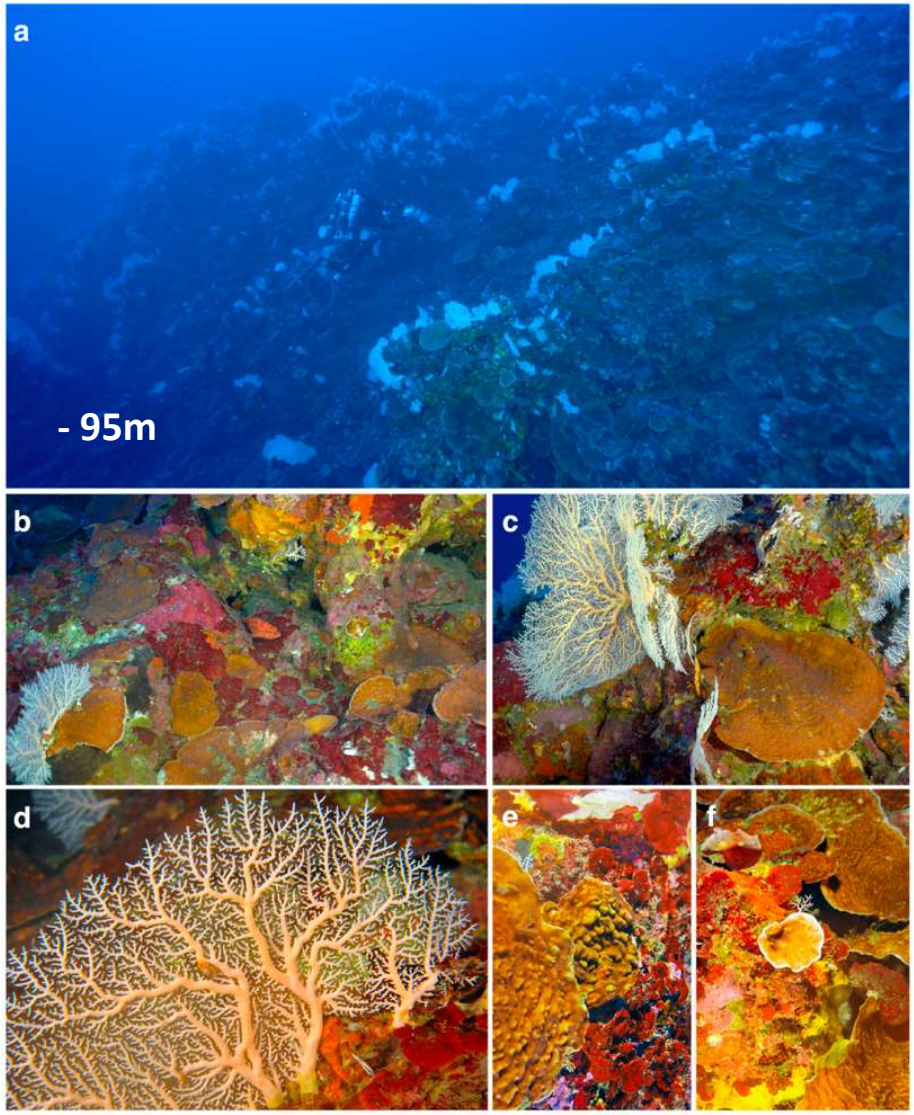
Vie océane

CRIOBE

BIORECIF

Poisson Lune





Hoarau, L. et *al*. Unexplored Refugia with High Cover of Scleractinian *Leptoseris* spp. and Hydrocorals *Stylaster flabelliformis* at Lower Mesophotic Depths (75–100 m) on Lava Flows at Reunion Island (Southwestern Indian Ocean). *Diversity* **2021**, *13*, 141

Thank you

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