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Reef ecosystem monitoring using the GCRMN method

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DIDEM program

Regional thematic school on the Vulnerability of Reef heritage

Reef ecosystem monitoring using the GCRMN method

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June 10, 2024 – Blue Economy Research University of Seychelles



FONDS FRANÇAIS POUR
L'ENVIRONNEMENT MONDIAL



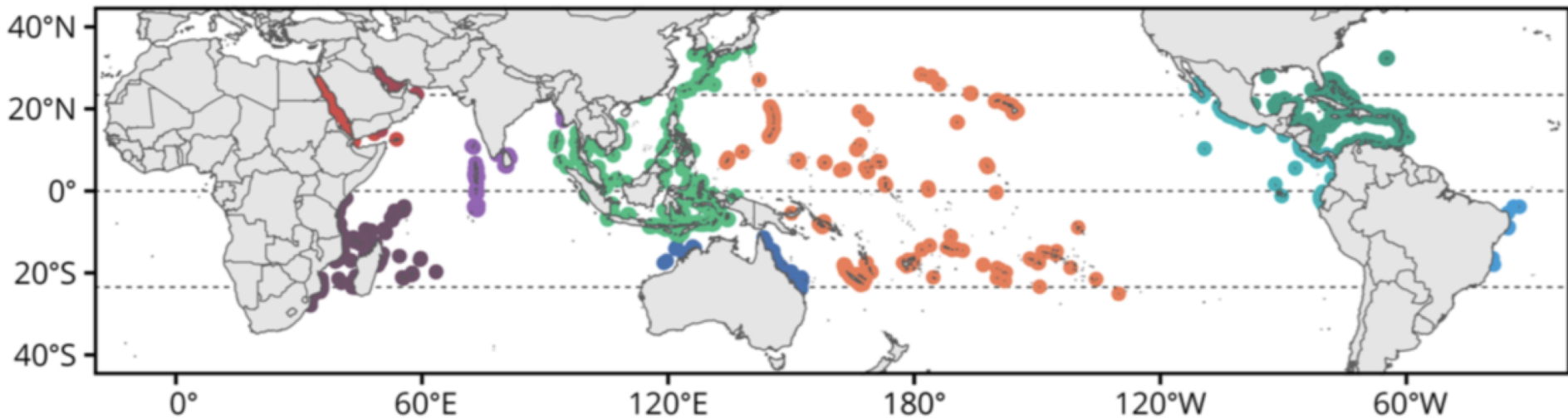
UNIVERSITY OF
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Knowledge hub of the Indian Ocean



GCRMN – Global Coral Reef Monitoring Network



- Australia
- Caribbean
- ETP
- PERSGA
- South Asia
- Brazil
- EAS
- Pacific
- ROPME
- WIO

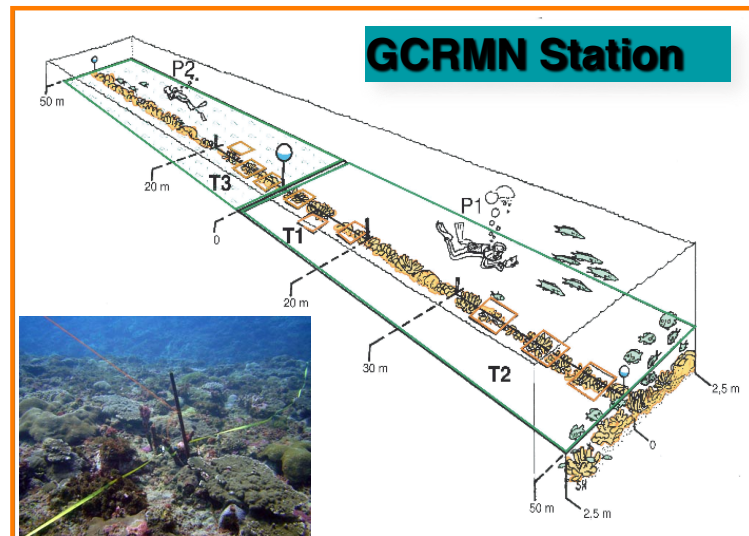


Distribution of monitoring sites within each of the 10 GCRMN regions. EAS: East Asian Seas. ETP: Eastern Tropical Pacific, PERSGA: Red Sea, Gulf of Aden, ROPME: Kuwait Sea Area, WIO: Western Indian Ocean.

GCRMN – Global Coral Reef Monitoring Network



GCRMN - Standardized methodology



Underwater Visual Census (UVC)



BENTHOS transect LIT (20 m) x 3 –
benthic categories & coral species

Line Intercept Transect (LIT)

This method consists to measure the distance occupied by benthic categories along a transect tape.

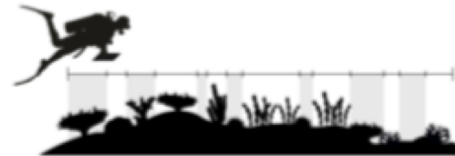
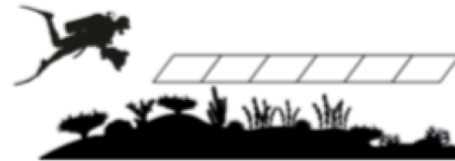


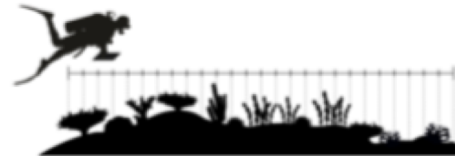
Photo-quadrat

This method consists to take photographs of fixed quadrats, usually along a transect, and later estimate the percentage cover of benthic categories in the lab.



Point Intercept Transect (PIT)

This method consists to identify the benthic category below a given number of equidistant points along a transect.



Visual estimation

This method consists to visually estimate the percentage cover of main benthic categories (e.g. by using a manta tow).



Video transect

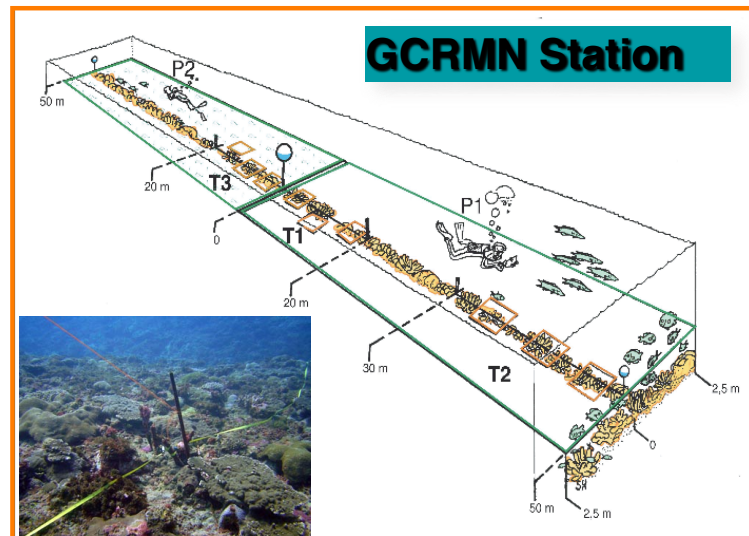
This method consists to take a video along a transect, and later estimate the percentage cover of benthic categories in the lab.



Context & Objectives



GCRMN - Standardized methodology at highest taxonomy level



Underwater Visual Census (UVC)

- **FISH belt transect** (50 x 5 m) x 3 – species, abundance & size

Selection of fish families according to objectives (health, fishing pressure, resilience, ...) and expertise