



Clean before you count

Background reading for teachers

This reading explains where the data comes from and how it was changed for teaching.

The data

The teaching dataset is built from real MCP survey records from 11 sites in southern Negros Oriental. MCP uses stratified random sampling, with 30 m transects across three depth ranges, repeated through the year.¹ Benthic surveys record 120 points per transect. The fish file covers 2,720 surveys from 2022 to 2026, and the coral file covers 4,340 surveys from 2018 to 2026.

What was changed

Site and surveyor names were replaced with codes, and the enforcement levels in the Sites table are invented: they say nothing about the real sites. To make the patterns clear, values were adjusted so that protected reserves hold more fish biomass, more fished species and more coral, and less algae, than open reefs, with the difference driven mainly by enforcement; coral cover and bleaching show a clear 2024 marine heatwave, with less loss and faster recovery in reserves; one fictional surveyor (S217) was added, whose counts are exaggerated; and 17 errors were planted in the raw fish file. The dates, depths, survey design and natural variation come from the real records. Present the results as a teaching exercise, not as MCP's findings.

Why two divers

Two divers counting the same transect gives a built-in check on each other's counts. Large, consistent differences between a diver and their buddies are a standard warning sign in survey data.

Sources

1. Marine Conservation Philippines. Marine Monitoring. marineconservationphilippines.org/projects/conservation/monitoring/

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