Natural Values Common Language Ecosystem map 2026 update

Draft release notes

V0.4 October 2026

Key changes for the 2026 map (relative to previous published version [2022 version on Seamap], Dunstan and Hayes [2023])

- The updates made in this version follow the recommendations outlined in the final report of NESP MaC Hub Project 2.3 (Hayes et al 2024).
- The update takes advantage of updated and improved input layers that have become available since the previous release (the 2022 version, still available on SeaMap Australia; Dunstan and Hayes 2023).
- Input datasets, and notes on specific updates and changes are summarised in table 1.
- Because of updates to input datasets, the classification steps have also been updated (e.g. the Seamap Australia is now the 'point of truth' for seagrass and coral reefs, so several products that were used as inputs in the 2022 NVCL Ecosystem map [e.g. CAMRIS, WCMC, etc.] are no-longer used directly).
- The classification steps and notes on updates and changes are summarised in table 2.
- A simple latitude-based decision rule is no-longer used for differentiating shallow rocky vs. coral reef (as was the case for the 2022 NVCL Ecosystem map). These are now distinguished based on mapped occurrence. A latitude-based decision rule is still used differentiating rocky vs coral reefs in deeper waters (mesophotic and rariphotic).
- There have been several minor changes to the NVCL Ecosystem/Ecosystem complex hierarchy, including:
    - The *Oceanic vegetated sediment* ecosystem has been added, in line with the recommendations of NESP MAC Project 2.3 (Hayes et al 2024)
- Key changes relative to v0.1 draft/interim release (available as 2025 version on Seamap Australia):
    - Uses an updated national predicted reef layer (generated in June 2026, using latest-available data from GlobalArchive and Squidle+). Additional details on the generation of this national predicted reefs layer will be provided in then NESP Mac Hub Project 4.20 final report (Woolley et al *in prep*).

Notes and considerations

- Because coral reef and rocky reef are now classified based on mapped occurrence (from the SeaMap Australia National Benthic Habitat Layer; Lucieer et al 2026), there are now areas where rocky reef is adjacent to or surrounds

coral reef in tropical latitudes (e.g. where patches of live coral reef are surrounded by limestone pavement, with the latter being classified as rocky reef). Previously, any 'reef' in tropical latitudes was classified as 'coral reef', so this has resulted in substantial changes to coral and rocky reef extent.

- A subset of the 'unvalidated' National Benthic Habitat Layer dataset has been included in the classification as it incorporates several previously-used datasets (e.g. Allen Coral atlas) and high-quality targeted acoustic survey data (e.g. Tas Fracture marine park). The subset includes records where the 'NAT_HAB_CL' field includes the strings "coral", "hard", and "soft" (not case sensitive), classified to . Tier 2 data were excluded from this subset as these data introduce widespread linear artefacts.
- The new classification of shelf vegetated sediment based on the SeaMap national benthic habitat map excludes seagrass on hard substrate. This is noteworthy in the context of secondary use of the NVCL ecosystem product in National Ecosystem Accounts (which has previously crosswalked shelf vegetated sediment [NVCL] to seagrass [GET]). Direct extraction of seagrass extent from the NBHL layer is likely to be more appropriate for the purpose of Ecosystem Accounts going forward.
- The potential need for additional datasets for seagrass and non-observable reef requires additional consideration and discussion.

Table 1: Data sources used to develop the 2026 Ecosystem Map

Input type	Specific input	Source for 2025 NVCL Ecosystems	Changes relative to Dunstan & Hayes (2023) and notes
Bathymetry	Bathymetry base grid	Geoscience Australia Bathymetry 2024, National 250m grid https://ecat.ga.gov.au/geonetwork/srv/api/records/880dbb6c-411d-487e-bfe0-40ef167afbeb?language=eng	Improved and extensively updated product relative to 2009 product used for 2021 map Another updated version of this grid was published in August 2026. This could not be used for the 2026 NVCL ecosystem map but should be used for future updates https://ecat.ga.gov.au/geonetwork/srv/eng/catalog.search#/metadata/151280
Geomorphology	National seamounts	*Seamounts and raised seabed features of the Australian Margin* (Flukes 2023) https://metadata.imas.utas.edu.au/geonetwork/srv/eng/catalog.search#/metadata/dc4c761f-eb4d-4fe4-b071-e110bbe7c8f3	More recent and detailed dataset. Inputs used for 2021 map are coarse in resolution and now outdated.
Geomorphology	CSIRO Seamounts	Seamount Reef estimated using the estimate of potential live Solenosmilia habitat mapped as vulnerable marine ecosystems as identified in Williams et al (2020). https://www.frontiersin.org/articles/10.3389/fmars.2020.00187/full	No change
Geomorphology	GA Geomorphology	Harris, P., Heap, A.D., Passlow, V., Sbaffi, L., Fellows, M., Porter-Smith, R., Buchanan, C., Daniell, J. 2005. Geomorphic Features of the Continental Margin of Australia. Record 2003/030. Geoscience Australia, Canberra https://ecat.ga.gov.au/geonetwork/srv/eng/catalog.search#/metadata/69797	No change (used for banks and shoals) Geoscience Australia has recently revised the classification scheme for geomorphology, with this update to be published in the near future. Future revisions of the NVCL ecosystem map will need to take account of the implications for this revised classification.
Geomorphology	GA Canyons	National Marine Canyons of Australia. https://ecat.ga.gov.au/geonetwork/srv/eng/catalog.search#/metadata/77010	No change (but note that classification of 'shelf-incising' has been revised based on updated bathymetry grid).
Seafloor habitats	Seamap Australia National Benthic Habitat Layer	Lucieer V, Walsh P, Monk J, Flukes E (2026). Seamap Australia National Benthic Habitat Layer (NBHL) 2026. Institute for Marine and Antarctic Studies (IMAS), University of Tasmania (UTAS).	Now includes all relevant data for - Seagrasss (including previous CAMRIS sources) - Coral reefs (including National Tropical Reef Features dataset and data previously sourced from CAMRIS, WCMC and the Allen Coral atlas)

Seafloor habitats	NESP MaC 2.3 Oceanic Vegetation	Lawrey, E. (2024). Coral Sea Oceanic Vegetation (NESP MaC 2.3, AIMS) [Data set]. eAtlas. https://doi.org/10.26274/709g-aq12	New ecosystem type of oceanic vegetated sediment (for vegetated reef flats in atolls)
Temperate reef observations	CSIRO Deep Reefs	Kloser RJ and Keith G (2010) Key Ecological Features of the East and South-east Marine Regions: “deep reefs” within 150-700 m depths. Draft report to the Department of the Environment, Water, Heritage and the Arts	No change. Uses rasters generated previously.
Temperate reef observations	NESP Surveyed Reefs	Heaney, B Davey C 2019. Hydrographic Survey of the Freycinet, Huon and Tasman Fracture Australian Marine Parks. BF2019_v01. CSIRO Report to IMAS and PA	No change. Uses rasters generated previously.
Temperate reef observations	NESP Surveyed Reefs	https://www.nespmarine.edu.au/document/seafloor-biota-rock-lobster-and-demersal-fishes-assemblages-tasman-fracture-commonwealth	No change. Uses rasters generated previously.
Temperate reef observations	NESP Surveyed Reefs	https://www.nespmarine.edu.au/document/biological-and-habitat-feature-descriptions-continental-shelves-australia's-temperate-water	No change. Uses rasters generated previously.
Temperate reef observations	NESP Surveyed Reefs	Ierodiaconou, D Young, Y O’Brien S 2020 Hydrographic Survey of Apollo Marine Park. Report to PA	No change. Uses rasters generated previously.
Temperate reef observations	NESP Surveyed Reefs	Lucieer, VL Porter-Smith, R Nichol, SL Monk, J Barrett, NS 2016 Collation of existing shelf reef mapping data and gap identification - Phase 1 Final Report Shelf reef key ecological features. Report to NESP	No change. Uses rasters generated previously.
Temperate reef observations	NESP Surveyed Reefs	Vandenbossche, P Davey, C 2018 Hydrographic Survey of the Boags Commonwealth Marine Reserve in Southwestern Bass Strait. BF2018_v01. Report to PA	No change. Uses rasters generated previously.
Temperate reef observations	NESP Surveyed Reefs	Additional locations were identified through conversations with local fishers. Neville Barret pers comm.	No change. Uses rasters generated previously.
Islands	NESP 3.17 50k coastlines	https://www.data.gov.au/data/dataset/australian-coastline-50k-2024-nesp-mac-3-17-aims	More recent and detailed dataset.

Table 2: Classification steps used to define the 2025 NVCL Ecosystem map for benthic ecosystems

Step	Ecosystem	Decision rules	Class No.	Changes for 2025 update and notes
1	Shelf unvegetated sediments	GA Bathy < 0m AND >= - 200m	1	Uses updated (2024) GA 250m bathymetry grid
2	Upper slope unvegetated sediments	GA Bathy < -200m AND >= -700m	2	Uses updated (2024) GA 250m bathymetry grid
3	Mid-slope sediments	GA Bathy < -700m AND >= -2000m	3	Uses updated (2024) GA 250m bathymetry grid
4	Lower slope reefs & sediments	GA Bathy < -2000m AND >= -4000m	4	Uses updated (2024) GA 250m bathymetry grid
5	Abyssal reefs & sediments	GA Bathy < -4000m	5	Uses updated (2024) GA 250m bathymetry grid
6	Seamount sediments	Aus_seamounts_raised_features = TRUE	6	Uses updated (2024) GA 250m bathymetry grid
7	Seamount reefs	CSIRO Seamount Reefs = TRUE	18	No change
8	Shelf incising canyons	Select features by GA Canyons depth > -200m	7	Re-classified canyon depths based on updated GA250 layer
9	Shelf vegetated sediments	National Benthic Habitat Layer NAT_HAB_CL = “seagrass” OR “mixed macrophytes” OR (“mixed biota” and Hab_ORIG includes “seagrass”) and substratum NOT “hard”	9	CAMRIS seagrass data now no-longer directly used. Now based only on NBHL seagrass. Those areas with substrata classified as “Mixed Hard/Soft” are included with reefs as these are typically patchy reef separated by sediment at fine scale.
10	Oceanic shallow coral reefs	National ‘all coral reef’ = TRUE OR GA geomorphic feature = “bank/shoals” AND GA Bathy >= -30m AND continental shelf = F	8	No-longer directly using WCMC, Allen coral atlas or rule-of-thumb classification of coral/not coral based on latitude. Now based
11	Shallow coral reefs	National ‘all shallow coral reef’ = TRUE AND GA Bathy >= -30 m AND Continental Shelf = TRUE	10	No-longer uses latitude-based classification for coral vs rocky but based on mapped extent from NBHL. Also includes NBHL_unvalidated layer.
12	Shallow rocky reefs	National ‘all rocky reef’ = TRUE AND GA Bathy >= -30 m	11	No-longer uses latitude-based classification for coral vs rocky but based on mapped extent from NBHL. Also includes NBHL_unvalidated layer (with the exception of NESP Tier 2 multi beam collation).

13	Mesophotic coral reefs	National ‘all deep coral reef’ = TRUE AND GA Bath < -30m AND GA Bathy >= -70m AND Continental Shelf = TRUE	12	Mapped coral occurrence from the NBHL and National Tropical Reef Features is used directly. For predicted reef and banks/shoals inputs, latitude-based rules are retained to distinguish potential coral reef in deeper waters.
14	Mesophotic rocky reefs	National ‘all rocky reef’ = TRUE AND GA Bath < -30m AND GA Bathy >= -70m	13	No-longer uses latitude-based classification for coral vs rocky but based on mapped extent from NBHL. Also includes NBHL_unvalidated layer (with the exception of NESP Tier 2 multi beam collation).
15	Oceanic mesophotic coral reefs	National ‘all deep coral reef’ =TRUE OR National ‘all rocky reef’ = TRUE AND GA Bathy < -30m AND GA Bathy >= -70m AND IS NOT Coral (Latitude < -32.69) AND Continental Shelf = FALSE	14	No-longer uses latitude-based classification for coral vs rocky but based on mapped extent from NBHL. Also includes NBHL_unvalidated layer.
16	Rariphotic shelf reefs	National ‘all deep coral reef’ = TRUE OR National ‘all rocky reef’ = TRUE AND GA Bathy < -70m AND GA Bathy >= -200m	15	No-longer uses latitude-based classification for coral vs rocky but based on mapped extent from NBHL. Also includes NBHL_unvalidated layer (with the exception of NESP Tier 2 multi beam collation).
17	Upper slope reefs	GA Canyons = TRUE OR National ‘all coral reef’ =TRUE OR National ‘all rocky reef’ = TRUE AND GA Bathy < -200m AND GA Bathy >= -700m	16	Uses re-classified canyon depths based on updated GA250 layer
21	Mid-slope reefs	GA Canyons = TRUE OR National ‘all coral reef’ =TRUE OR National ‘all rocky reef’ = TRUE AND GA Bathy < -700m AND GA Bathy -2000m	17	Uses re-classified canyon depths based on updated GA250 layer
22	Islands (including cays and islets)	NESP MaC 3.17 AIMS Aus Coastline = T	27	
23	Oceanic vegetated sediments	NESP MaC 2.3 Oceanic veg = T	28	

Table 3: Classification steps used to define the 2025 NVCL Ecosystem map for pelagic ecosystems.

Step	Ecosystem	Decision rules	Class No.	Changes for 2025 update and notes
1	On shelf (neritic) epipelagic	GA Bathy < 50m AND GA Bathy >= -200m	23	Uses updated (2024) GA 250m bathymetry grid
2	Off-shelf (oceanic) epipelagic	GA Bathy < -200m	22	Uses updated (2024) GA 250m bathymetry grid
3	Mesopelagic	GA Bathy < -200m AND GA Bathy >= -1000m	21	Uses updated (2024) GA 250m bathymetry grid
4	Bathypelagic & Abyssopelagic	GA Bathy < -1000m	20	Uses updated (2024) GA 250m bathymetry grid

Table 4: Classification steps used to define the 2025 'all shallow coral reef' layer

Step	Decision rules	Comments
1	NBHL unvalidated NAT_HAB_CL CONTAINS "coral" AND NBHL (validated) SC_Level1 NOT "Soft Substrata"	Include coral habitat from unvalidated NBHL inputs; validated soft-substrate mapping takes precedence over unvalidated coral (unless classified as coral biota in subsequent steps)
2	NBHL (validated) NAT_HAB_CL CONTAINS "coral biota"	Use NBHL mapped coral biota occurrence
3	National Tropical Reef Features shallow/intertidal coral OR oceanic shallow coral = TRUE	Include mapped shallow, intertidal and oceanic shallow coral reefs from NESP MaC Hub Project 3.17 Tropical Reef Features datatset.
4	National Tropical Reef Features shallow rocky reef = FALSE	Explicit mapped rocky-reef classification overrides coral classification.

Table 5: Classification steps used to define the 2025 'all deeper coral reef' layer

Step	Decision rules	Comments
1	GA banks/shoals west of 140°E AND latitude > −24° = TRUE; OR east of 140°E AND ((continental shelf AND latitude > −27.62°) OR (off-shelf AND latitude > −32.69°)) = TRUE	Include banks and shoals within the regional limits used to identify likely coral reef.

2	National predicted reef west of 140°E AND latitude > −24° = TRUE; OR east of 140°E AND ((continental shelf AND latitude > −27.62°) OR (off-shelf AND latitude > −32.69°)) = TRUE	Include predicted reef within the regional limits used to identify likely coral reef.
3	GA Bathymetry ≥ −30 m = FALSE	Remove predicted and geomorphically inferred reef from shallow water, where mapped/observed habitat information is used instead.
4	NBHL coral = TRUE, except where validated NBHL soft substrate = TRUE	Include mapped coral habitat from validated and unvalidated NBHL inputs; validated soft-substrate mapping takes precedence over unvalidated coral, while validated mapped coral is retained.
5	National Tropical Reef Features mesophotic coral OR oceanic mesophotic coral = TRUE	Include mapped mesophotic and oceanic mesophotic coral reefs.

Table 6: Classification steps used to define the 2025 ‘all rocky reef’ layer

Step	Decision rules	Comments
1	National predicted reef west of 140°E AND latitude < −24° = TRUE; OR east of 140°E AND ((continental shelf AND latitude < −27.62°) OR (off-shelf AND latitude < −32.69°)) = TRUE	Include predicted reef within the regional limits used to identify likely rocky reef.
2	NBHL hard substrate = TRUE AND NBHL soft substrate = FALSE	Include mapped hard substrate and exclude mapped soft substrate. Validated NBHL mapping takes precedence over unvalidated classifications; NESP Tier 2 unvalidated hard-substrate data are excluded because of linear artefacts.
3	CSIRO deep reefs OR NESP mapped reefs = TRUE	Include mapped reef occurrence from existing national reef datasets. CSIRO deep reefs are restricted to east of 145°E.
4	National Tropical Reef Features shallow rocky reef = TRUE	Include mapped shallow rocky reefs in tropical waters.
5	Seamount/raised feature = TRUE AND continental shelf = TRUE	Include pinnacles and other relevant raised features occurring on the continental shelf.
6	National ‘all shallow coral reef’ OR national ‘all deeper coral reef’ = FALSE	Remove areas classified as coral reef from the final rocky reef composite.

References

Dunstan, P. K., Woolley, S. N. C., Monk, J., Barrett, N., Hayes, K. R., Foster, S., Howe, S. A., Logan, D., Samson, C. R. and Francis, S. O. (2023) *Designing a targeted monitoring program to support evidence-based management of Australian Marine Parks: National Implementation*. Report to the National Environmental Science Program. CSIRO. https://www.nespmarinecoastal.edu.au/publication/designing-a-targeted-monitoring-program-to-support-evidence-based-management-of-australian-marine-parks/

Flukes, E. (2023). Seamounts and raised seabed features of the Australian margin. Institute for Marine and Antarctic Studies (IMAS), University of Tasmania (UTAS). https://metadata.imas.utas.edu.au/geonetwork/srv/eng/catalog.search#/metadata/dc4c761f-eb4d-4fe4-b071-e110bbe7c8f3

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Appendix A. Natural values common language ecosystems classification hierarchy.

Blue text indicates additions relative to Dunstan & Hayes 2023. Definitions for the terms are provided in Appendix B.

Ecosystem complexes	Ecosystems	Ecosystem components
Deep shelf reefs	Mesophotic coral reefs	Benthic and cryptic fish
		Demersal fish
		Demersal sharks and rays
		Macroalgae
		Marine reptiles
		Mobile macroinvertebrates
		Sessile invertebrates
	Mesophotic rocky reefs	Benthic and cryptic fish
		Demersal fish
		Demersal sharks and rays
		Macroalgae
		Mobile macroinvertebrates
		Sessile invertebrates
	Rariphotic shelf reefs	Benthic and cryptic fish
		Demersal fish
		Demersal sharks and rays
		Mobile macroinvertebrates
		Sessile invertebrates
Intertidal areas	Beaches	Infauna
		Shorebirds and waterbirds
	Intertidal coral reefs	Benthic and cryptic fish
		Macroalgae
		Mobile macroinvertebrates
		Sessile invertebrates
	Rocky shores	Benthic and cryptic fish

		Macroalgae
		Mobile macroinvertebrates
		Sessile invertebrates
Islands (including cays and islets)	Islands (including cays and islets)	Forest
		Grassland
		Herb field
		Marine reptiles
		Seabirds
		Shorebirds and waterbirds
		Shrubland
Lower-slope and abyssal reef and sediments	Abyssal reef and sediments	Benthic and cryptic fish
		Demersal sharks and rays
		Demersal fish
		Infauna
		Mobile macroinvertebrates
		Sessile invertebrates
	Lower-slope reef and sediments	Benthic and cryptic fish
		Demersal sharks and rays
		Demersal fish
		Infauna
		Mobile macroinvertebrates
		Sessile invertebrates
Oceanic reefs	Oceanic mesophotic coral reefs	Benthic and cryptic fish
		Demersal fish
		Demersal sharks and rays
		Macroalgae
		Mobile macroinvertebrates
		Sessile invertebrates
	Oceanic shallow coral reefs	Benthic and cryptic fish
		Demersal fish

		Demersal sharks and rays
		Macroalgae
		Mobile macroinvertebrates
		Seagrass
		Sessile invertebrates
	Oceanic vegetated sediments	Benthic and cryptic fish
		Demersal fish
		Demersal sharks and rays
		Macroalgae
		Mobile macroinvertebrates
		Sessile invertebrates
Seamounts (including guyots)	Seamount reefs	Benthic and cryptic fish
		Demersal sharks and rays
		Demersal fish
		Mobile macroinvertebrates
		Sessile invertebrates
	Seamount sediments	Benthic and cryptic fish
		Demersal sharks and rays
		Demersal fish
		Infauna
		Mobile macroinvertebrates
		Sessile invertebrates
Shallow reefs	Shallow coral reefs	Benthic and cryptic fish
		Demersal fish
		Demersal sharks and rays
		Macroalgae
		Mobile macroinvertebrates
		Seagrass
		Sessile invertebrates
	Shallow rocky reefs	Benthic and cryptic fish

		Demersal fish
		Demersal sharks and rays
		Macroalgae
		Mobile macroinvertebrates
		Seagrass
		Sessile invertebrates
Shelf vegetated sediments	Shelf vegetated sediments	Benthic and cryptic fish
		Demersal fish
		Demersal sharks and rays
		Infauna
		Macroalgae
		Mobile macroinvertebrates
		Seagrass
Shelf, upper and mid-slope unvegetated sediments	Mid-slope sediments	Benthic and cryptic fish
		Demersal fish
		Demersal sharks and rays
		Infauna
		Mobile macroinvertebrates
		Sessile invertebrates
	Shelf unvegetated sediments	Benthic and cryptic fish
		Demersal fish
		Demersal sharks and rays
		Infauna
		Mobile macroinvertebrates
		Sessile invertebrates
	Upper-slope sediments	Benthic and cryptic fish
		Demersal fish
		Demersal sharks and rays
		Infauna
		Mobile macroinvertebrates

		Sessile invertebrates
Upper and mid-slope reefs (including canyons)	Mid-slope reefs	Benthic and cryptic fish
		Demersal fish
		Demersal sharks and rays
		Mobile macroinvertebrates
		Sessile invertebrates
	Shelf-incising canyons	Benthic and cryptic fish
		Demersal fish
		Demersal sharks and rays
		Mobile macroinvertebrates
		Sessile invertebrates
	Upper-slope reefs	Benthic and cryptic fish
		Demersal fish
		Demersal sharks and rays
		Mobile macroinvertebrates
		Sessile invertebrates
Water column	Bathypelagic & Abyssopelagic	Abyssopelagic fauna
		Bathypelagic fauna
	Mesopelagic	Mesopelagic fish
		Mesopelagic micronekton
		Pelagic mobile invertebrates
		Pelagic sharks and rays
		Plankton
	Off-shelf (oceanic) epipelagic	Marine mammals
		Marine reptiles
		Oceanic epipelagic fish
		Pelagic mobile invertebrates
		Pelagic sharks and rays
		Plankton
		Seabirds

	On-shelf (neritic) epipelagic	Coastal epipelagic fish
		Marine mammals
		Marine reptiles
		Pelagic mobile invertebrates
		Pelagic sharks and rays
		Plankton
		Seabirds

Appendix B - Common language hierarchy and definitions

Ecosystem - A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.

Ecosystem complexes - A collection of ecosystems with similar characteristics, functions, and drivers that shape their ecological character. The ecosystems in an ecosystem complex also have similar types of pressures and management needs.

Ecosystem component – Natural values that are core elements of an ecosystem – these are mostly species assemblages or communities but may also include habitat features.

Ecosystem complexes

Deep shelf reefs - Rocky and/or coral reef formations found on the continental shelf from 30 m to the shelf break (nominally 200 m).

Intertidal areas – the area between the highest and lowest tides.

Islands (including cays and islets) – Island - Relatively small body of land surrounded by water; Cay – a low bank or reef of coral or sand; Islet – a little island.

Lower slope and abyssal reef and sediments - Reef and sediment habitats deeper than 2000 m on the lower continental slope (including the continental rise) and in the abyssal zone.

Oceanic reefs - Reefs occurring seaward of the continental shelf break at depths from the surface to 200m.

Seamounts (including guyots) - Large, steep underwater mountains rising hundreds to thousands of metres from the surrounding seafloor but not reaching the water's surface. They are often extinct volcanoes; Guyots - an isolated underwater volcanic mountain with a flat-top more than 200 metres below the sea surface

Shallow reefs - Rocky and/or coral formations occurring in continental shelf areas shallower than 30 m.

Shelf, upper and mid slope unvegetated sediments - Sediment habitats on the continental shelf that lack marine macroalgae or seagrass and sediment habitats on the upper (200 m - 700 m) and mid (700 m - 2000 m) continental slope.

Shelf vegetated sediments - Sediment habitats on the continental shelf that support marine macroalgae or seagrass. Typically, these occur in depths of less than 30 m but can extend beyond this in areas with very clear waters.

Upper and mid slope reefs (including canyons) - Reef habitats on the upper section of the continental slope between 200m (shelf break) and 2000m.

Water column - The entire water body between the surface of the ocean and the seafloor.

Ecosystems

Abyssal reef and sediments - Reef and sediment habitats in the abyssal zone, between 4000 m and 6000 m.

Bathypelagic and Abyssopelagic – The layers of the ocean between 1000 m and 4000 m (bathypelagic) and 4000 m and 6000 m (abyssopelagic), not influenced by the seafloor.

Beaches - Gently sloping zone of sand and/or gravel sized rock and/or biological fragments along the shore, extending from the highest high-tide point to the lowest low-tide point.

Intertidal coral reefs - Coral reefs found in the intertidal zone (i.e. between the highest and lowest tides)

Islands (including cays and islets) – Island - Relatively small body of land surrounded by water; Cay – a low bank or reef of coral or sand; Islet – a little island.

Lower slope reef and sediments - Reef and sediment habitats on the lower continental slope and continental rise (i.e. between 2000 m and nominally 4000 m).

Mesopelagic - The layer of the ocean between 200 m and 1000 m, not influenced by the seafloor.

Mesophotic coral reefs - Coral reef formations on tropical continental shelf areas in the mesophotic zone: a reduced light zone between 30 m and the maximum depth at which there is sufficient penetration of sunlight to support photosynthesis. The maximum depth is variable dependent upon water clarity and may extend to 150 m in the clearest of waters however, as a national average it is nominally defined as 70 m.

Mesophotic rocky reefs - Rocky reef formations on temperate continental shelf areas in the mesophotic zone: a reduced light zone between 30 m and the maximum depth at which there is sufficient penetration of sunlight to support photosynthesis. The maximum depth is variable dependent upon water clarity and may extend to 150 m in the clearest of waters however, as a national average it is nominally defined as 70 m.

Mid-slope reefs – Reef habitats on the mid-continental slope between 700 m and 2000 m.

Mid-slope sediments - Sediment habitats on the mid continental slope (700-2000 m).

Oceanic shallow coral reefs - Coral reefs occurring seaward of the continental shelf break in depths shallower than 30 m.

Oceanic vegetated sediment – vegetated sediment occurring on oceanic reefs, seaward of the continental shelf break, in depths shallower than 30 m (typically in the reef lagoon on atolls).

Oceanic mesophotic coral reefs - Coral reefs occurring seaward of the continental shelf break in in the mesophotic zone: a reduced light zone between 30 m and the maximum depth at which there is sufficient penetration of sunlight to support photosynthesis. The maximum depth is variable dependent upon water clarity and may extend to 150 m in the clearest of waters however, as a national average it is nominally defined as 70 m.

Off-shelf (oceanic) epipelagic - The uppermost layer of the ocean extending from the surface to 200 m, that occurs seaward of the continental shelf break.

On-shelf (neritic) epipelagic - The uppermost layer of the ocean extending from the surface to 200 m, that occurs above the continental shelf.

Rariphotic shelf reefs - Rocky reef formations found on the continental shelf below the mesophotic zone where light is so scarce it is not enough to support photosynthesis. Nominally rariphotic shelf reefs occur between 70 m and 200 m (the nominal depth of the shelf break).

Rocky shores - An intertidal area composed of rock platforms, boulders or cobbles.

Seamount reefs - Rocky and deep-sea cold-water coral formations occurring on seamounts.

Seamount sediments - Sediment habitats occurring on seamounts.

Shallow coral reefs - Coral reefs occurring in continental shelf areas shallower than 30 m.

Shallow rocky reefs - Rocky reefs occurring in continental shelf areas shallower than 30 m.

Shelf-incised canyons – Steep sided valleys in the seabed that extend onto the continental shelf at least 500 m shoreward of the shelf break.

Shelf unvegetated sediments - Sediment habitats on the continental shelf (0-200 metres) that lack marine macroalgae or seagrass.

Shelf vegetated sediments - Sediment habitats on the continental shelf that support marine macroalgae or seagrass. Typically, these occur in depths of less than 30 m but can extend beyond this in areas with very clear waters.

Upper-slope reefs - Reef habitats on the upper section of the continental slope between shelf break (nominally 200 m) and 700 m.

Upper-slope sediments - Sediment habitats on the upper continental slope (200 m-700 m).

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Wolley S.N.C. et al (*in prep*) NESP Marine and Coastal Hub Project 4.20: