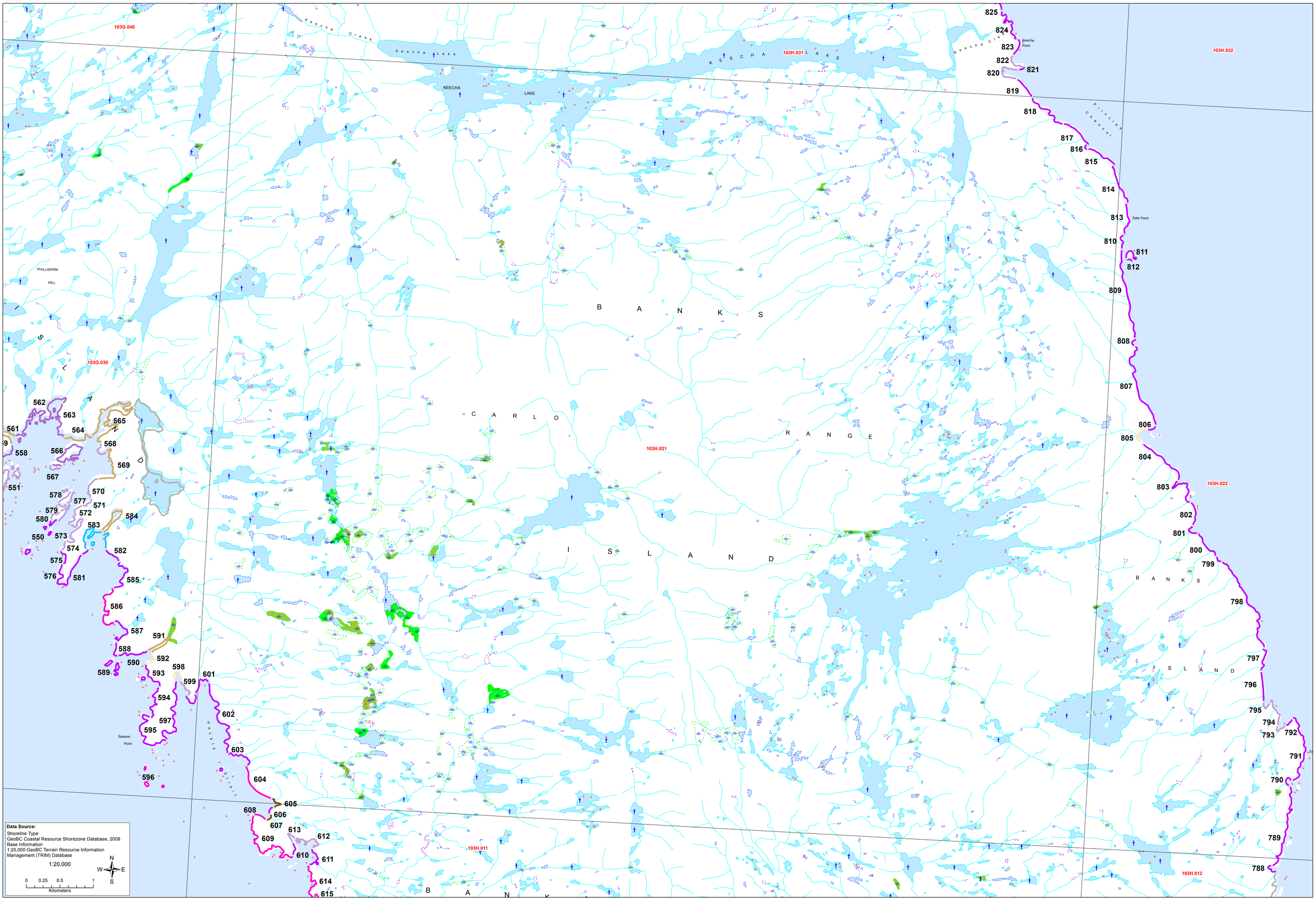
103H.021



Legend

- Unit Break Points
- Undefined

Immobile Substrates

- 1 - Bedrock - CC 1-20 - VE
- 2 - Bedrock - CC 1-20 - E
- 3 - Bedrock/Boulder - CC 1-23, 32, 33 - SE
- 4 - Bedrock/Gravel - CC 1-23, 33 - SP
- 5 - Bedrock/Gravel - CC 1-23,33 - P/VP

Mobile/Partially Mobile Substrates

- 6 - Sand & Gravel - CC 24-26, 32 -SP
- 7 - Sand & Gravel - CC 24-26,32 - VP/P
- 8 - Estuary or Sand/Mud - CC 27-31 - VP/P/SP
- 9 - Sediment - CC 21 - 30 - SE/E

Current Dominated

- 10 - Bedrock or Sediment - CC 34 - VP/P/SP

Tidal Lagoon

- 11 - Bedrock or Sediment - CC 35 - VP/P/SP

CC	Type
Rock Shore Types - characterized by a lack of clastic sediments such as gravel or sand.	
1	Rock Ramp, Wide
2	Rock Platform Wide
3	Rock Cliff Narrow
4	Rock Ramp, Narrow
5	Rock Platform Narrow
Rock and Sediment Shore Types - rock and pockets of clastic sediments	
6	Ramp with Gravel Beach, Wide
7	Platform with Gravel Beach, Wide
8	Cliff with Gravel Beach
9	Ramp with Gravel Beach, Narrow
10	Platform with Gravel Beach, Narrow
11	Ramp with Sand and Gravel Beach, Wide
12	Platform with Sand and Gravel Beach, Wide
13	Cliff with Sand and Gravel Beach
14	Ramp with Sand and Gravel Beach, Narrow
15	Platform with Sand and Gravel Beach, Narrow
16	Ramp with Sand Beach, Wide
17	Platform with Sand Beach, Wide
18	Cliff with Sand Beach
19	Ramp with Sand Beach, Narrow
20	Platform with Sand Beach, Narrow

CC	Type
Sediment Shore Types - have substrates that have little or no bedrock cropping out	
21	Gravel Flat, Wide
22	Gravel Beach
23	Gravel Flat or Fan
24	Sand and Gravel Flat or Fan, Wide
25	Sand and Gravel Beach
26	Sand and Gravel Flat or Fan, Narrow
27	Sand Beach, Wide
28	Sand Flat
29	Mud Flat
30	Sand Beach, Narrow
31	Estuaries
Man-Made Materials	
32	Man-made, permeable
33	Man-made, impermeable
Current Dominated	
34	Channel
35	Tidal Lagoon

Shoreline Habitat

The Habitat Type provides a simplified picture of the "look" of the unit overall, based on the detailed biophysical attributes that have been mapped. The Habitat Type category is a summary of the observations of both the unit's biologial and geomorphological features.
Each Habitat Type has a definition that includes the typical substrate, wave exposure and biobands. For example, for the Semi-exposed, Immobile substrate Habitat Type, part of the definition of that class is a certain combination of the most likely biobands and indictor species present at a bedrock shoreline with no mobile sediment present.

How is Habitat Type determined?
Each Habitat Type has typical biological features (including both an indicator species list and typical associated biobands).
To determine the Habitat Type, the biomapper looks at the along-shore Units as designated and described by the physical mapper, and
1. records the observations of the biobands in the unit and looks for indicator species,
2. assigns a bio-(wave) exposure category,
3. reviews the physical mapped information, and
4. assigns the Habitat Type that best describes the unit.

The Habitat Type is based on the whole unit and is similar to the physical mappers use of the 'Coastal Class' category, in that the detailed across-shore data are summarized into one attribute. The simplified category describes the features of the whole unit.

Habitat Type is a summary of the biophysical classification of the whole shore unit, based on:
- the biobands observed,
- the wave exposure as indicated by the bands, and
- the substrate types in the unit.

Legend Definitions
CC - Coastal Classification number

Wave Exposure
E - Exposed - Very high wave exposure, open ocean swellsm usually fetches >500km
VE - Very Exposed - Extreme high wave exposure
SE - Semi Exposed - High wave exposure, open shorelines, areas between fully exposed and more sheltered, usually fetches 50 to 500km
P - Protected - Low wave exposure, sheltered inlets, usually fetches less than 10km
SP - Semi Protected - Moderate wave exposure, partly sheltered, usually fetches 10-50km
VP - Very Protected - Very low wave exposure, fethces < 1km, sheltered anchorages at heads of bays and inletes

Table MIDCOAST and NORTH COAST project area which includes BIO_AREAS CC, JS and NC.
The Species/ wave exposure/ substrate table for Habitat Classification (HAB_OBS)., for the Mid-coast BC study area, from Johnstone Strait/Central Coast Mapping Regions 5, 6 and 7.

SUBSTRATE STABILITY	IMMOBILE SUBSTRATES				MOBILE OR PARTIALLY MOBILE SUBSTRATES				CURRENT-DOMI-NATED	TIDAL lAGOON
MAJOR SUBSTRATE	BEDROCK	BEDROCK/BOULDER	BEDROCK/GRAVEL	BEDROCK/GRAVEL	SAND & GRAVEL	SAND & GRAVEL	SAND/MUD	SEDIMENT	BEDROCK OR SEDIMENT	BEDROCK OR SEDIMENT
COASTAL CLASSES	1-20	1-23, 32, 33	1-23, 33	1-23, 33	24 – 30, 32 no SAL band	24 – 30, 32 no SAL band	24 - 30, 31 has SAL band	24-30	34	35
EXPOSURE (ISP_BIO)	E	SE	SP	VP, P	SP	VP, P	VP, P, SP	SE, E	VP, P, SP	VP, P, SP
COMMUNITY CODE (HAB_OBS)	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
upper	*Verrucaria* *Balanus glandula*	*Verrucaria* *Enteromorpha* *Balanus glandula* *Fucus distichus*	*Verrucaria* *Enteromorpha* *Balanus glandula* *Fucus distichus*	*Verrucaria* *Enteromorpha* *Balanus glandula* *Fucus distichus*	*Verrucaria* *Enteromorpha* *Balanus glandula* *Fucus distichus*	*Verrucaria* *Enteromorpha* *Balanus glandula* *Fucus distichus*	**grasses & rushes** ***Salicornia virginica*** *Balanus glandula* *Fucus distichus*	no visible macrobiota due to sediment mobility	BEDROCK OR SEDIMENT tidal current dominated; may be a Protected wave exposure but shows an assemblage of indicator species from higher wave exposures. A ssemblage observed is 'anomalous' for the wave energy of the site.	BEDROCK OR SEDIMENT *Balanus glandula* *Fucus distichus* ponded water in lagoon creates narrow interbtidal and a reduced biota in brackish water, may have associated current dominated at outflow
middle	***Pollicipes polymerus*** *Mytilus californianus* *Semibalanus carrionus*	*Mytilus californianus* *Semibalanus carrionus*	*Mytilus trossulus** *Semibalanus carrionus* ***Ulva/ Ulvaria spp.***	*Mytilus trossulus ** ***Ulva/ Ulvaria spp.***	*Semibalanus carrionus* ***Ulva/ Ulvaria spp.***	*Semibalanus carrionus* ***Ulva/ Ulvaria spp.***	*Mytilus trossulus** *Ulva/ Ulvaria*			
mid/low	*Alaria 'nana' morph*	***Hedophyllum sessile*** ***Phyllospadix scouleri***								
lower	***Lessoniopsis littoralis*** *Lithothamnion*	*Alaria 'marginata' morph* *Lithothamnion*	*Laminaria groenlandica* ***Laminaria saccharina*** *Alaria 'marginata' morph* *Lithothamnion*	***Laminaria saccharina***	*Laminaria groenlandica* ***Laminaria saccharina*** *Alaria 'marginata' morph* *Lithothamnion*	***Laminaria saccharina***				
subtidal	*Nereocystis luetkeana*	*Nereocystis luetkeana* ***Macrocystis integrifolia*** *Agarum spp.* ***Strongylocentrotus franciscanus***	*Nereocystis luetkeana* *Macrocystis integrifolia* *Agarum spp.* ***Strongylocentrotus franciscanus*** ***Zostera marina***	*Macrocystis integrifolia* *Agarum spp.* ***Zostera marina***	*Nereocystis luetkeana* *Macrocystis integrifolia* *Agarum spp.* ***Strongylocentrotus franciscanus*** ***Zostera marina***	*Macrocystis integrifolia* *Agarum spp.* ***Zostera marina***	***Zostera marina***