

Census of Marine Life
Annual Project Reports for the Year 2006

Prepared for

The International Scientific Steering Committee

By

The OBIS, HMAP, Ocean Realm Field Project, and FMAP Teams



Census of Marine Life International Secretariat
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Ocean Biogeographic Information System (OBIS)

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OBIS web site: <http://iobis.org>

Web addresses of the Regional OBIS Nodes

Antarctic OBIS	http://www.scarmarbin.be/index.php
OBIS Australia	http://www.obis.org.au
OBIS Canada	http://www.marinebiodiversity.ca/
OBIS China	http://www.iobis.org.cn/index_e.htm
EurOBIS	http://www.marbef.org/data/eurobis.php
Indian Ocean Node of OBIS	http://www.indobis.org/
Southwestern Pacific OBIS	http://nzobis.niwa.co.nz/
OBIS South America	http://obissa.cria.org.br/
Sub-SaharanOBIS	http://afrobis.csir.co.za:8000
US OBIS	http://166.122.60.46:11000 (testing site)

1. 2006 ACCOMPLISHMENTS & SCIENTIFIC HIGHLIGHTS

1. OBIS has far exceeded its predictions and has grown to over 10 million records, 142 databases, and over 71,000 species.
2. OBIS has established 11 regional OBIS nodes (RONs) including a recently-established Antarctic Node. Together they have contributed 40 percent of the total OBIS records and continue to develop and contribute new data the global portal.
3. OBIS Portal has been redesigned and implemented to support improved user interface and functionality.
4. OBIS International, Management, and Technical Committee meetings were held in Manila, the Philippines in May, 2006 where new work plans were developed.

2. SOCIETAL BENEFITS, IMPACT & APPLICATIONS

OBIS data are being used by individual countries to meet their obligations under the Convention on Biological Diversity. OBIS is being used as a source of information by public and private environmental consultants but we presently have no way to quantify this. It will be used by the Global Ocean Observing System.

3. WORK PLANNED FOR 2007

Q1: Jan. 31, 2007

<u>Management</u>	An intensive search will be underway for the OBIS Executive Director. We expect this person to be on board by January 2 nd .
<u>Data Acquisition</u>	The OBIS Southern RONS will complete their contracts from the previous proposal adding an additional 300,000 records to OBIS
<u>User Community</u>	Develop a formal agreement on data exchange and relevant OBIS products with Conservation International
<u>RON Development</u>	Antarctic RON publishing data through OBIS (Zhang)
<u>Portal Service</u>	Mapping biological data in OBIS with World Ocean Atlas Data

Q2. Feb. 1, 2007 – Apr. 31, 2007

<u>Management</u>	OBIS Board will be established (Costello and Executive Director)
<u>Data acquisition</u>	UNEP/WCMC Marine Protected Areas will be provided for searching on the OBIS Portal (Costello, Zhang) Japan Node will be providing data (Shimura)
<u>User Communities</u>	Consider uses of OBIS data to assess the effects of an oil spill in support of a National Resource Damage Assessment in the U.S. (Executive Director)
<u>Portal Service</u>	A capability to find species in OBIS by physical and chemical properties of the water will be implemented on the OBIS portal using the San Diego Supercomputer Center's PAKT integration tool
<u>Partnerships</u>	Formal affiliation with Encyclopedia of Life (EoL) will be established.
<u>Public Education & Outreach</u>	Concepts and goals will be finalized (McDonnell)

Q3 May 1, 2007– July 31, 2007

<u>RON</u>	A RON in the Republic of Korea will be established (Exec. Director)
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<u>Portal Service</u>	A Global Marine Habitat Classification system will be adopted (Costello) A new version of the OBIS hierarchical classification using common names will be adopted (Rees, Costello) An outlier record detection tool will be integrated into the OBIS data quality report provided by OBIS (Zhang)
<u>Data Acquisition</u>	The ability to search for records in the Smithsonian National Museum of Natural History database will add at least 3 million records to OBIS
<u>Partnerships</u>	Formal affiliation with ZooBank will be established.
<u>Public Education & Outreach</u>	Teaching materials will go through final testing. (McDonnell)
Q4 August 1, 2007-October 31, 2007	
<u>User Community</u>	Ecological and fisheries survey data in metadata standard (Branton)
<u>Portal Service</u>	OBIS taxonomic name service will be dynamically interoperable with Catalogue of Life (ZooBank, UBio, GBIF, ECAT,)
<u>Data Acquisition</u>	Barcode of Life Specimen data will be interoperable with OBIS Field Museum of Natural History marine species data will be served by OBIS
<u>Education & Outreach</u>	On line tutorial of OBIS Portal will be provided to the general public Teaching material will be evaluated publicly

4. EDUCATION & OUTREACH

Three evaluations of the OBIS website were conducted and the website was revamped to make it more accessible to a wider audience. The success of this is evidenced in the increased usage.

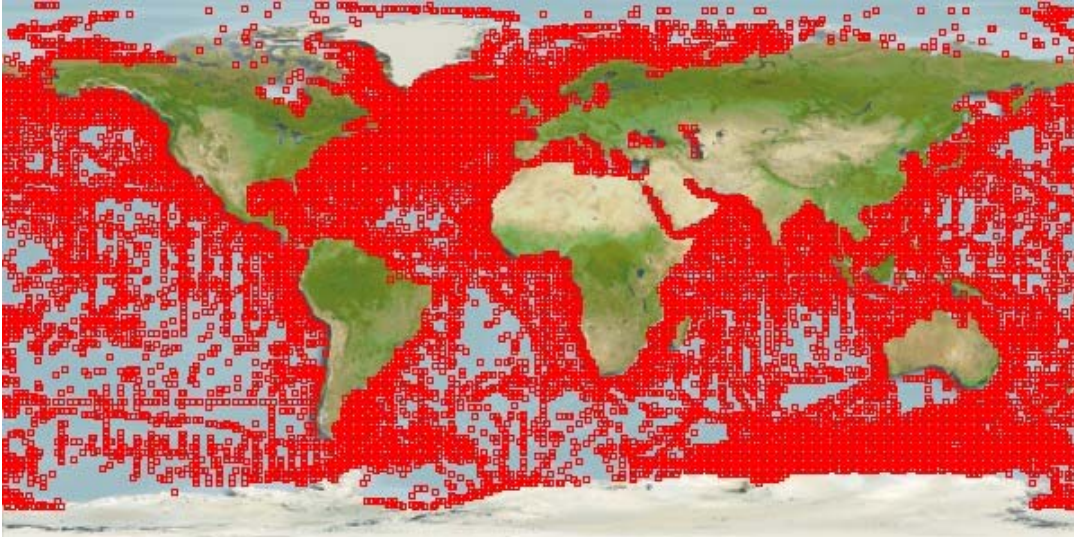
5. EXPANSION OF DATA SETS: ADDRESSING GAPS

The Global coverage of OBIS is described in the picture below. As shown in the picture, data from the Southern Oceans is needed and our continuing relationships with the 8 Regional OBIS Nodes (RON's) will work towards addressing these gaps.

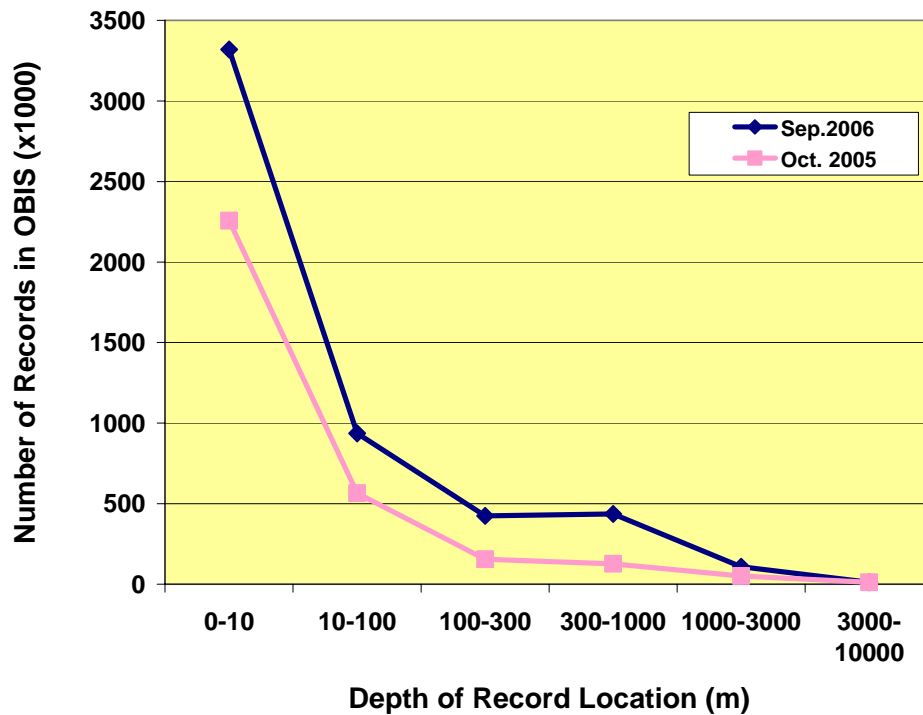
The ArcOD, CAML, CenSeam, ChEss, CMarZ, ICOMM, NaGISA, and MAR-ECO Realm Projects will make a major difference in increasing global coverage over the next year. We expect to receive significant amounts of new data from all the Realm Projects, the Regional OBIS Nodes, and the OBIS

Specialty Nodes (Biogeoinformatics of Hexacorals, CephBase, FishBase, SEAMAP (birds, turtles, and marine mammals), and ZooGene.

OBIS Global Coverage (September 2006)



OBIS Vertical Coverage



OBIS Taxonomic Coverage: see Appendix.

6. PARTNERSHIPS & COLLABORATION

a. Partnerships

Interactions in progress and planned between OBIS and external organizations

Continuing external relationships

Organization (person)

GBIF (Jim Edwards, Dave Remsen, Don Hobern)

ICES (Adi Kellerman, Julie Gillin),

SCOR WG New Technology

SCOR World Register Marine Species

FAO (Marc Taconet),

TDWG (Stan Blum)

IOOS

MMI (John Graybeal)

GCMD (Melanie Meaux)

GEOSS (Douglas Muchoney)

NatureServe (Denny Grossman)

uBIO (Paddy Patterson)

IOC (Peter Pissierssens), IODE (Leslie Rickards)

Diversitas (Dave Rafaellii & secretariat)

IABO (Mark Costello)

Deliverable

Data exchange standards, interoperability, sustainability plan, Intellectual Property policies.

Data publication from ICES members

Continuing dialogue on OBI

Established 1st quarter

Sharing polygon data and species pages

Develop marine metadata standards

Develop marine metadata standards

Develop marine metadata standards

Develop marine metadata standards and dissemination through GCMD

Marine habitat classification

Marine habitat classification

OBIS portal interoperable with uBIO tools

Foster data publication through OBIS from National Ocean Data Centres

Promoting data publication through OBIS

Promoting data publication through OBIS

New relationships with end-users initiated

Organization (person)

Exxon (Miskey Fealey)

IABIN (Douglas Beard, Ivan Valdespino)

WCMC (Ed McManus)

Conservation International (John Farrington, Kent Carpenter) & IUCN (Kristen Martin)

Biodiversity Heritage Alliance (Brewster Kahle)

ESRI (Jack Dangerman)

Deliverable

Data publication

User needs assessments

Working with Regional OBIS Nodes in data exchange and online tools

Use MPA maps as search tool on OBIS, export data

OBIS assist Global Marine Assessment

Develop links from OBIS to literature through the MacArthur Foundation sponsored Encyclopedia of Life.

Close ties with ESRI

b. Links to CoML Ocean Realm Projects

Project Name	Liaison or Cross-over personnel	Nature of Relationship
NaGISA	Robin Rigby	
CReefs	Mary Wakeford	New records received in Aug 2006

GoMA	Nick Wolff	
POST	Bob Branton	
COMARGE	Marie-Claire Fabri	
CeDAMar	Bruno Danis	Data being vetted
CMarZ	Bob Groman	In preparations for adding new data
TOPP	Pat Halpin	
MAR-ECO	Edward Vandenberg	
CenSeam	Karen Stocks	
ChEss	Maria Blanco	
ArcOD	Falk Huettman	Some data in Aug 2006, expecting more early 2007
CAML	Bruno Danis	Several datasets late 2006
ICoMM	David Patterson	

c. Links to CoML National and Regional Implementation Committees (NRICs)

NRIC	Liaison or Cross-over personnel	Nature of Relationship
Australia	Ian Cresswell	
Canada	Paul Snelgrove	
Caribbean	Patricia Miloslavich	
China	SUN Song	
Europe	Graham Schemmield	
Indian Ocean	Mahideen Wafar	
Japan	Yoshihisa Sharayama	
South America	Victor Gallardo	
Sub-Saharan Africa	Charles Griffiths	
USA	Paul Sandifer	

d. Liaisons to CoML Cross-Cutting Groups

Project Name	Liaison Name & Institution	Nature of the Relationship
HMAP	Michaela Barnard	
FMAP	Bob Branton	
SCOR Tech Panel	David Farmer	
E&O	Janice McDonnell	
Barcoding	Phoebe Zhang	

e. Effectiveness of the Partnerships and collaborations

OBIS needs to have better communication with all elements of CoML.

7. APPENDIX

OBIS Taxonomic Coverage:

		Notes to users			
OBIS Taxonomic Categories					
<i>- details last updated 2006-09-20</i>					
<i>Total Records in cache : 10069424</i>					
<i>Number of Data Sources : 142</i>					
Category	No. of Names Held (chiefly marine species)	No. of Species with OBIS Point Data	Number of Records	Approx. no. of Global Species	
<i>All categories</i>	159424 list names	71252 list taxa	8068370	3.5 million? [200000+ marine]	clickable map
Vertebrates	24387 list names	21153 list taxa	3688989	40000 [14170 marine]	clickable map
Mammals	185 list names	156 list taxa	328492	4500 [115 marine]	clickable map
Cetaceans	133 list names	117 list taxa	176759	115 [110 marine]	clickable map
Whales	59 list names	54 list taxa	116692	72 [72 marine]	clickable map
Porpoises	9 list names	8 list taxa	24126	6 [6 marine]	clickable map
Dolphins, small toothed whales	65 list names	55 list taxa	35941	37 [32 marine]	clickable map
Seals, sea lions, walruses	44 list names	35 list taxa	149639	33 [33 marine]	clickable map
Dugongs, manatees	6 list names	2 list taxa	15	5 [5 marine]	clickable map
Sea otters	2 list names	2 list taxa	2079	1 [1 marine]	clickable map
Birds	756 list names	601 list taxa	788634	9000 [292 marine]	clickable map
Reptiles	49 list names	44 list taxa	22117	6000 [61 marine]	clickable map
Crocodyles	3 list names	2 list taxa	5	?? [1 marine]	clickable map
Snakes	30 list names	30 list taxa	35	?? [52 marine]	clickable map
Iguanas	1 list names	0	0	700 [1 marine]	

Turtles	15 list names	12 list taxa	22077	200 [7 marine]	clickable map
Amphibians	85 list names	1 list taxa	1	2500 [?? marine]	clickable map
Fishes	23312 list names	20351 list taxa	2549745	27000 [13713 marine]	clickable map
Ray-finned fishes	21750 list names	18984 list taxa	2287135	?? [?? marine]	clickable map
Lobe-finned fishes (coelacanths, lungfishes)	5 list names	4 list taxa	140	?? [?? marine]	clickable map
Sharks, rays and chimaeras	1457 list names	1279 list taxa	257390	?? [?? marine]	clickable map
Lampreys, hagfishes	100 list names	84 list taxa	5080	?? [?? marine]	clickable map
Invertebrates (any)	84304 list names	42505 list taxa	3044013	?? [?? marine]	clickable map
Lancelets	18 list names	12 list taxa	3206	20 [?? marine]	clickable map
Tunicates	784 list names	525 list taxa	58440	1286 [1286 marine]	clickable map
Larvaceans	0	0	0	?? [?? marine]	
Salps	39 list names	35 list taxa	2617	30 [30 marine]	clickable map
Sea squirts (ascidians)	700 list names	445 list taxa	45465	1200 [1200 marine]	clickable map
Appendicularians	45 list names	45 list taxa	10358	?? [?? marine]	clickable map
Acorn worms (hemichordates)	109 list names	28 list taxa	298	89 [89 marine]	clickable map
Echinoderms	2006 list names	1416 list taxa	92698	6199 [6199 marine]	clickable map
Ophiuroids (brittle, basket stars)	552 list names	379 list taxa	32960	2230 [2230 marine]	clickable map
Sea stars	500 list names	312 list taxa	32067	1300 [1300 marine]	clickable map
Crinoids	46 list names	31 list taxa	3827	618 [618 marine]	clickable map
Echinoids	240 list names	158 list taxa	16104	903 [903 marine]	clickable map
Sea cucumbers	668 list names	536 list taxa	7740	1147 [1147 marine]	clickable map
Arrow worms (chaetognaths)	184 list names	98 list taxa	56102	105 [105 marine]	clickable map
Entoprocts	22 list names	13 list taxa	201	151 [151 marine]	clickable map
Brachiopods	148 list names	95 list taxa	1276	239 [239 marine]	clickable map
Bryozoans	1375 list	704 list taxa	40740	6000 [6000]	clickable

	names			marine]	map
Phoronids	19 list names	16 list taxa	3617	10 [10 marine]	clickable map
Pentastomids	0	0	0	90 [3 marine]	
Arthropods	28765 list names	11040 list taxa	1655383	800000 [33961 marine]	clickable map
Crustaceans	27480 list names	10831 list taxa	1651372	39000 [30465 marine]	clickable map
Malacostracan crustaceans	20590 list names	7912 list taxa	350776	23000 [18931 marine]	clickable map
Decapods (shrimp, lobsters, crabs)	4953 list names	3044 list taxa	157545	10000 [8227 marine]	clickable map
Euphausiids (krill)	132 list names	122 list taxa	23657	85 [85 marine]	clickable map
Amphipods	3403 list names	2095 list taxa	91850	60000 [4172 marine]	clickable map
Isoopods	9798 list names	1520 list taxa	33138	4200 [4200 marine]	clickable map
Tanaidacean crustaceans	671 list names	262 list taxa	6317	?? [372 marine]	clickable map
Thermosbaenacean crustaceans	0	0	0	9 [4 marine]	
Spelaeogriphacean crustaceans	0	0	0	?? [?? marine]	
Cumaceans	576 list names	405 list taxa	19087	?? [800 marine]	clickable map
Mysids	911 list names	347 list taxa	18422	709 [709 marine]	clickable map
Mantis shrimps	124 list names	100 list taxa	271	344 [344 marine]	clickable map
Leptostracan crustaceans	21 list names	16 list taxa	488	12 [12 marine]	clickable map
Amphionid crustaceans	0	0	0	1 [1 marine]	
Barnacles	530 list names	355 list taxa	24995	1025 [?? marine]	clickable map
Branchyuran crustaceans	31 list names	9 list taxa	9	?? [?? marine]	clickable map
Copepods	4677 list names	1954 list taxa	1225283	8400 [7353 marine]	clickable map
Ostracods	1119 list names	433 list taxa	18255	5650 [3150 marine]	clickable map
Branchiopods (fairy shrimps etc.)	517 list names	154 list taxa	31982	820 [6 marine]	clickable map
Remipedian crustaceans	0	0	0	1 [1 marine]	
Cephalocarid crustaceans	5 list names	3 list taxa	31	9 [9 marine]	clickable map
Chelicerates	1285 list	209 list taxa	4011	30000 [976	clickable

	names			marine]	map
Sea spiders	1280 list names	205 list taxa	3994	972 [972 marine]	clickable map
Horseshoe crabs	5 list names	4 list taxa	17	4 [4 marine]	clickable map
Onychophorans	0	0	0	80 [?? marine]	
Tardigrades	204 list names	29 list taxa	56	400 [98 marine]	clickable map
Pogonophorans	155 list names	45 list taxa	327	150 [110 marine]	clickable map
Annelids	7064 list names	4892 list taxa	392738	11500 [8192 marine]	clickable map
Leeches	181 list names	53 list taxa	79	500 [?? marine]	clickable map
Oligochaetes	574 list names	178 list taxa	9690	3000 [611 marine]	clickable map
Polychaetes	6309 list names	4661 list taxa	382969	8000 [7365 marine]	clickable map
Echiurans	199 list names	67 list taxa	299	137 [137 marine]	clickable map
Mollusks	21615 list names	13325 list taxa	458620	100000 [32909 marine]	clickable map
Monoplacophora	2 list names	0	0	11 [11 marine]	
Aplacophora	78 list names	24 list taxa	2033	264 [264 marine]	clickable map
Chitons	331 list names	211 list taxa	5454	500 [?? marine]	clickable map
Gastropods	15351 list names	9278 list taxa	256299	75000 [25000 marine]	clickable map
Bivalves	4521 list names	2935 list taxa	139957	20000 [5824 marine]	clickable map
Scaphopods	288 list names	148 list taxa	3042	350 [350 marine]	clickable map
Cephalopods	1044 list names	729 list taxa	51835	786 [786 marine]	clickable map
Nautiluses	6 list names	3 list taxa	36	?? [?? marine]	clickable map
Squids	543 list names	397 list taxa	42295	?? [?? marine]	clickable map
Octopuses	350 list names	213 list taxa	3452	?? [?? marine]	clickable map
Cuttlefishes	142 list names	114 list taxa	6050	?? [?? marine]	clickable map
Sipunculans	218 list names	132 list taxa	6414	898 [898 marine]	clickable map
Priapulids	20 list names	6 list taxa	1068	17 [17 marine]	clickable map
Kinorhynchs	126 list	9 list taxa	10	120 [86 marine]	clickable

	names				map
Loriciferans	11 list names	7 list taxa	7	10 [10 marine]	clickable map
Acanthocephalans	977 list names	47 list taxa	70	700 [217 marine]	clickable map
Rotifers	1089 list names	87 list taxa	563	1700 [164 marine]	clickable map
Cycliophorans	1 list names	1 list taxa	4	?? [?? marine]	clickable map
Hairworms	17 list names	1 list taxa	1	80 [?? marine]	clickable map
Nematodes	4600 list names	2166 list taxa	10478	12000 [4220 marine]	clickable map
Gastrotrichs	717 list names	166 list taxa	199	200 [241 marine]	clickable map
Mesozoans	111 list names	0	0	50 [35 marine]	
Gnathostomulids	98 list names	12 list taxa	13	50 [50 marine]	clickable map
Nermerteans	307 list names	132 list taxa	4078	787 [787 marine]	clickable map
Flatworms	0	0	0	5600 [6795 marine]	
Comb jellies	169 list names	17 list taxa	2584	80 [80 marine]	clickable map
Cnidarians (sea anemones, corals, hydrozoans, jellyfishes)	9167 list names	6525 list taxa	215985	9400 [7598 marine]	clickable map
Anthozoans (sea anemones, corals, soft corals, etc.)	6407 list names	5239 list taxa	137719	6500 [?? marine]	clickable map
Hexacorals (sea anemones, stony corals, black corals)	5822 list names	5020 list taxa	126010	2187 [2187 marine]	clickable map
Sea anemones	2725 list names	2482 list taxa	44789	1000 [1000 marine]	clickable map
Stony corals	2841 list names	2435 list taxa	80794	?? [?? marine]	clickable map
Black corals	255 list names	102 list taxa	426	?? [?? marine]	clickable map
Octocorals (soft corals, sea pens and allies)	584 list names	218 list taxa	11708	?? [?? marine]	clickable map
Soft corals	56 list names	28 list taxa	6620	?? [?? marine]	clickable map
Sea fans, sea whips	285 list names	112 list taxa	658	?? [?? marine]	clickable map
Blue corals	7 list names	2 list taxa	14	?? [?? marine]	clickable map
Organ-pipe corals	3 list names	2 list taxa	15	?? [?? marine]	clickable

					map
Sea pens	233 list names	74 list taxa	4401	?? [?? marine]	clickable map
Scyphozoan jellyfishes	199 list names	93 list taxa	2056	250 [250 marine]	clickable map
Box jellies	13 list names	10 list taxa	54	?? [?? marine]	clickable map
Hydrozoans	2548 list names	1183 list taxa	76156	3000 [?? marine]	clickable map
Placozoans	1 list names	0	0	1 [1 marine]	
Sponges	1889 list names	612 list taxa	38133	5000 [5000 marine]	clickable map
Angiosperms	56 list names	16 list taxa	957	230000 [50 marine]	clickable map
Seagrasses	56 list names	16 list taxa	957	50 [50 marine]	clickable map
Gymnosperms	0	0	0	?? [?? marine]	
Ferns and allies	0	0	0	?? [?? marine]	
Bryophytes	0	0	0	?? [?? marine]	
Charophytes	0	0	0	?? [?? marine]	
Macroalgae (seaweeds)	12505 list names	2485 list taxa	185195	?? [?? marine]	clickable map
Green algae (green seaweeds)	2729 list names	548 list taxa	21247	6000 [1104 marine]	clickable map
Brown algae (brown seaweeds)	2507 list names	649 list taxa	56877	1000 [?? marine]	clickable map
Red algae (red seaweeds)	7269 list names	1288 list taxa	107071	2500 [?? marine]	clickable map
Microalgae (pigmented protists)	21926 list names	4272 list taxa	1092769	?? [?? marine]	clickable map
Dinoflagellates	1725 list names	972 list taxa	343315	2500 [2000 marine]	clickable map
Euglenoids	606 list names	131 list taxa	807	450 [10 marine]	clickable map
Chrysophytes	746 list names	46 list taxa	26245	?? [62 marine]	clickable map
Glaucophytes	11 list names	0	0	?? [?? marine]	
Raphidophytes	5 list names	0	0	?? [5 marine]	
Diatoms	10346 list names	2743 list taxa	705870	10000 [8000 marine]	clickable map
Eustigmatophytes	3 list names	0	0	?? [3 marine]	
Xanthophytes	209 list names	7 list taxa	226	?? [100 marine]	clickable map
Prymnesiophytes	163 list names	43 list taxa	6605	?? [500 marine]	clickable map
Cryptomonads	90 list	22 list taxa	682	?? [28 marine]	clickable

	names				map
Unicellular green microalgae	4200 list names	135 list taxa	4487	?? [?? marine]	clickable map
Microalgae - unassigned	3822 list names	173 list taxa	4532	?? [?? marine]	clickable map
Protozoans (colourless protists)	2380 list names	749 list taxa	48859	32000 [?? marine]	clickable map
Choanoflagellates	40 list names	11 list taxa	266	?? [?? marine]	clickable map
Amoeboid protozoa	1645 list names	434 list taxa	38297	?? [?? marine]	clickable map
Amoebae	86 list names	14 list taxa	18	?? [19 marine]	clickable map
Foraminifera	1558 list names	419 list taxa	38257	4000 [4000 marine]	clickable map
Kinetoplastid protozoans	19 list names	2 list taxa	27	?? [?? marine]	clickable map
Ebridians	6 list names	2 list taxa	367	?? [?? marine]	clickable map
Ciliates	589 list names	288 list taxa	9631	7200 [1667 marine]	clickable map
Apicomplexa (protozoans)	0	0	0	?? [866 marine]	
Bicosoecids (protozoans)	2 list names	0	0	?? [?? marine]	
Protozoa - unassigned	79 list names	12 list taxa	271	?? [?? marine]	clickable map
Fungi	0	0	0	?? [?? marine]	
Bacteria (including Cyanobacteria)	75 list names	72 list taxa	7588	?? [?? marine]	clickable map
Green nonsulfur bacteria	0	0	0	?? [?? marine]	
Gram positive bacteria	0	0	0	?? [?? marine]	
Purple bacteria	0	0	0	?? [?? marine]	
Cyanobacteria	61 list names	59 list taxa	7251	1500 [?? marine]	clickable map
Flavobacteria	0	0	0	?? [?? marine]	
Archaea	0	0	0	?? [?? marine]	
Halophiles	0	0	0	?? [?? marine]	
Methanophiles	0	0	0	?? [?? marine]	
Thermophiles	0	0	0	?? [?? marine]	
Viruses	0	0	0	?? [?? marine]	
unassigned	13791 list names	0	0	?? [?? marine]	



Natural Geography In Shore Areas (NaGISA)

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1. 2006 ACCOMPLISHMENTS & SCIENTIFIC HIGHLIGHTS

The September 2005- September 2006 period saw NaGISA continue its march towards establishing a global presence and strengthening the network of nearshore researchers that will keep NaGISA going over its planned 50-year lifespan. The compilation of the NaGISA protocol handbook, the establishment of the History of the Near Shore Project and the preparations for hosting of the first international symposium on biodiversity were steps that highlight the growing sense of community and structure within NaGISA.

Specific accomplishments during this time include:

- 1) Over 25 new sites being sampled with the standardized NaGISA protocols, many of them in countries with no previous NaGISA affiliation.
- 2) The founding of the joint HMAP and NaGISA project History of the Near Shore, which endeavors to integrate past and present nearshore research.
- 3) Two international taxonomic workshops: A Marine Decapoda and Stromatopoda workshop held in Lombok, Indonesia, and an Algal workshop held in Vancouver Canada.
- 4) Four regional protocol workshops: For the South America region held in Caracas, Venezuela; for the Caribbean region held in Discovery Bay, Jamaica; for the Indian Ocean region held in Mombassa, Kenya; and for the European region held in Pisa, Italy.
- 5) The creation of a unique taxonomic database based on photographs <http://mar-inv.interface-design.jp/> made possible through our collaboration with the NPO Marine Learning Center.
- 6) The production of an aquatic nematode digital library including original descriptions and distribution patterns, a result of collaboration between NaGISA and the Global Taxonomy Initiative (GTI) and made available on the Global Biodiversity Information Facility (GBIF) portal site (<http://www.gbif.net/>).
- 7) Six university classes in Venezuela, USA & Japan had NaGISA sampling efforts integrated in to their field course work.
- 8) Further integration with high schools was made in America, Europe and Japan.
- 9) Including the unique chance of having Italian high school seniors join researchers from the University of Pisa at NaGISA sites in southern Italy.
- 10) American and Japanese exchange students take part in field work in Shirahama, Japan; Florida, USA; and Massachusetts, USA along with NaGISA researchers from all over the world.
- 11) Kyoto University researchers take three Japanese high school groups along to sample rocky shores and seagrass beds in Kesen'numa, Japan.

NaGISA was able to broaden its base by networking with NGOs, community groups and scientists. This global growth will be on display at the NaGISA symposium in Kobe, Japan in October 2006, where participants from around the world will present work from all levels and areas of nearshore benthic research on themes including: Patterns in biodiversity; Nearshore taxonomy of macrofauna, macroflora and meiofauna; Community ecology in rocky shore and seagrass habitats; and Long-term monitoring programs and community integrated marine research, all of which will allow of the inspiring mixing of people and the propagation of ideas, which are certain to ensure the future success of NaGISA.

2. SOCIETAL BENEFITS, IMPACT & APPLICATIONS

It is NaGISA's goal that our standardized protocols and automated techniques (for recognizing microscopic taxa, currently in the proposal phase) will be used by national ocean observing programs, marine ecosystem-based resource management programs, national marine educational programs and researchers around the world. The NaGISA protocols were created with the intention of being integrated into long-term monitoring efforts; the open door policy that underpins our approach to partnerships was created specifically to attract institutions and members that might not otherwise foster relationships with marine science.

The baseline data provided by NaGISA, both on local or global scales, will be able to be used as a starting point for any marine ecosystem-based resource management program or ocean monitoring program that wishes to move its knowledge-base towards shore. Reciprocal benefits, however, will be possible when future managers work alongside NaGISA researchers or with the data provided by NaGISA through its online database. The use of NaGISA data to improve project sightlines, the integration of standardized protocols into program designs and the set up of data in information feedback loops will strengthen nearshore research over a much broader spectrum than possible by individual projects alone.

Local scientific capacity building, a corner stone of the NaGISA approach, was originally included on the principle that it is of invaluable social benefit. Beyond that, it has become a source of vital human resources without which NaGISA could not survive. Working with the Global Taxonomic Initiative and the Japan Promotion of Science Multinational Research Project on Coastal Marine Science, NaGISA has made considerable headway in improving the taxonomic ability of Western Pacific countries through training workshops, graduate, postdoctoral and research programs. Individuals, institutes and disciplines have benefited through the publication of local guidebooks, scientific papers and information databases that have been the result of this effort. The NaGISA research approach: field protocols, the fundamentals of global research and concepts of biodiversity have been used in university level courses (South America, North America, Asia and Europe), included high school seminars (Asia, North America and Europe) and made public through open workshops (in all regions). The success in appealing to young minds has been astounding, not only have undergraduates responded by taking up graduate posts but also, with heavy community support high schools in both Japan and America have taken on the management of NaGISA sites. The youth oriented education program run by NaGISA is seen by the project as an essential part of ensuring the future of both the project and the state of nearshore marine science.

3. WORK PLANNED FOR 2007

Capacity Building & Education

- a) Taxonomic workshops scheduled:
 - Taxonomy and Ecology of Rhodolith beds, October 28-November 3rd Baja Mexico
 - Gastropoda and Polyplacophora, December 5-9th 2006 in Jakarta Indonesia
 - Scalidophora, February 13-18th 2007 in Shirahama Japan
- b) Expansion of our high school team group: specifically scheduled to join us and run their own mini sites are: 4 schools in Florida and South Carolina USA and two schools in Honshu Japan.
- c) Development and installation of an aquarium display at the Kyoto University Aquarium for school and public education

- d) Participation in the university summer school course 'integrated ecosystems from land to sea' offered by the National Universities of Japan.
- e) Increase in number the university classes using NaGISA monitoring efforts as part of their curriculum; Specifically in the USA and Canada through the work of EPAC and AO
- f) The creation and wide publication of scholarships and student exchanges offered in the field of benthic taxonomic: Specifically with in the Indian Ocean region (south Africa and India), the western Pacific Japan and South Asia and in the USA

Global Project Maintenance and Expansion

- a) The promotion and use of NaGISA protocols as viable long-term monitoring programs in Japan, USA and Europe using the Marine Laboratory Associations of each area. First proposal to be made to NAML in September 2006 in Hawaii
- b) Hosting of the Nearshore Biodiversity Symposium (NaGISA World Conference) October 15-18th 2006 in Kobe, Japan, corresponding publication of conference proceedings
- c) NaGISA SSG Meeting in Kobe, Japan October 19th 2006
- d) The identification (November 2006) and funding (January-June 2007) of at least one Nearshore History Project pre region – Funded out of NaGISA HQ and HMAP grants
- e) NaGISA Scalidophora, taxonomy workshop February 13-18th 2007 in Shirahama, Japan Supported by Nippon Foundation and Kyoto University
- f) Ensuring that HQ can participate in the activities laid out in this proposal: Creation of 2 (one research and one secretarial) positions at SMBL, Kyoto University for 4 years (April 1 2007 – March 31 2011)
- g) Organizing the Second NaGISA World Conference- funding to be requested from Nippon Foundation October 30 2007
- h) Open appeals to international programs to request integration with NaGISA:
 - Appeal to IOC-IOI Forum on Capacity Development in Ocean Sciences and Oceanography: A presentation will be made at the East Asian Seas Congress in Haikou, China on 12-16th December on the mutual interest in Asian Scientific capacity building, the engagement of local communities and the promotion of marine worker monitoring programs
 - Appeal to the Nature Conservancy: A proposal for NaGISA to become an international partner for their Conservation by Design program – June 2007
 - Global Seagrass Monitoring Network will be approached with a proposal for integration of datasets and promotional efforts, preliminary discussions in Kobe Japan in October
 - World Wildlife Fund's Global Marine Programme will be approached with a request to collaborate with their current effort to establish 'a network of effectively managed, ecologically representative Marine Protected Areas (MPAs) covering at least 10% of the world's seas' July 2007
 - Integration NaGISA and the White Sea diving program run by the Russian WWF - discussions scheduled for Kobe Japan in October 2006.

Scientific Publications and Promotion

- a) Publication of first papers on global assessment of single organisms:
 - Global assessment of Macroalgae (Konar & Benedetti-Cecchi);
 - Global assessment of Seagrasses (Mukai);
 - Barnacle geographic distribution (Benny Chan);
 - Biodiversity trends in Alaska (Konar, Iken);
 - Biodiversity trends in AK Arctic (Iken, Konar)

For Peer reviewed Papers expected in 2008 – 2010 see milestones7.a NaGISA's Tangible Outputs

- b) Public access to the NaGISA database via a separate project run web portal by August 2007

- c) Updated data transfer connection to be made with OBIS by June 2007
- d) Publication of a special edition of the Journal of the Seto Marine Biological Laboratory of selected papers on nearshore biodiversity. January/February 2007.
- e) Circulation of the NaGISA handbook, scheduled for printing in January 2007
- f) The continuing input of data (as it forms) into OBIS and the NaGISA database
- g) The creation of a nearshore historical records database in collaboration with HMAP to be started in June 2007.
- h) Continued publication of the NaGISA newsletter and updates of the NaGISA website

Regional Initiatives

EPAC:

- Expand and support CA coverage by involving more researchers in the area
- Involvement of marine centers belonging to Western Association of Marine Laboratories (WAML): co-run protocol/organization workshop in Friday Harbor Lab and conduct sampling
- Expand seagrass site coverage in EPAC region
- Initiate contacts in Washington (WA) to engage researchers in NaGISA proposal writing and sampling
- Follow up with suggestions given by the USA NIRC to have them look over our proposal to integrate NaGISA with American monitoring efforts
- Taxonomy and Ecology of Rhodolith beds - workshop, October 28-November 3rd Baja Mexico
- Increase the number of university classes using NaGISA monitoring efforts as part of their curriculum; Specifically in the USA and Canada
- Confirmation of expansion through the Aleutian chain

WPAC:

- Gastropoda and Polyplacophora taxonomy workshop, December 5-9th 2006 in Jakarta, Indonesia
- Expansion of our high school team group: specifically two schools in Honshu Japan
- Development and installation of an aquarium display at the Kyoto University Aquarium for school age and general public education
- Participation in the university summer school course `integrated ecosystems from land to sea` offered by the National Universities of Japan.
- The creation and wide publication of student exchanges offered in the field of benthic taxonomic: Specifically between Japan and Southern Asia - funding to be requested from Nippon Foundation October 30 2007

ES:

- The promotion and use of NaGISA protocols as viable long-term monitoring programs throughout Europe using the Marine Laboratory Associations (MarBef, BIOMARE and MARS)
- Confirmation of the funding for the `Environmental Modulation of Biodiversity and Ecosystem Dynamics (EMBED)` proposal that was a result of the workshop in 2006.

CS:

- Integration of NaGISA CS sites with local universities and marine stations
- Extension of North West Florida high school group in to the Caribbean Seas via like collaborations with CS high schools.
- Presentation to the Association of Marine Laboratories of the Caribbean (annual meeting). This will be done with the intention of recruiting more sampling sites for the region.
- Meeting of the current participating members of NaGISA Caribbean (during the MLC annual meeting) to try and put together a proposal to get funding for the region

SAS:

- Integration of NaGISA SAS sites with local universities and marine stations
- Extension of North West Florida high school group in to the SAS regions via like collaborations with SAS high schools
- Reconnection to be made with researchers in Uruguay and follow up with researchers in Puerto Madryn and Ushuaia, Argentina
- Creation of a regional taxonomy caravan (identification of all echinoderms and macroflora)

IO:

- The creation and wide publication of scholarships and student exchanges offered in the field of benthic taxonomy, specifically with South Africa (Cape town University) and India (Marine Institute of Mumbai)
- Confirmation of sites in Tanzania, Egypt, Comoros, Mauritius, and Reunion

AO:

- Confirmation of sites and sampling assistance for sites along the Eastern North America seaboard
- Expansion of our high school team group: specifically 4 schools in Florida and South Carolina USA
- Engagement of researchers in Western Africa
- Increase the number of university classes using NaGISA monitoring efforts as part of their curriculum; Specifically in the USA and Canada – proposal to Dalhousie and other universities along the Eastern Seaboard with connections in West Africa (DAL has an exchange program with the Gambia)
- Involvement of marine centers belonging to National Association of Marine Laboratories (NAML): co-run protocol/organization workshop in Friday Harbor Lab and conduct sampling

PS:

- Confirmation of sites and funding in the Antarctic (proposals submitted to NSF, others will be submitted to the British Antarctic Survey and the Australian Antarctic Division)
- Confirmation of sites and funding in the Arctic (relations with programs involved in the Canadian Polar year).

4. EDUCATION & OUTREACH

Broad Spectrum/Open to the Public

- A photographic/taxonomic database <http://mar-inv.interface-design.jp/> Created by NaGISA and the Marine Learning Center as a tool for both researchers and the public to learn about taxonomy and to share resources that might otherwise not be accessible. The database went online this summer and is still fairly biased towards the Okinawa fauna. However, MLC now has the samples from NaGISA sampling throughout Japan, so the website will soon be much broader.
- An aquatic nematode digital library <http://www.gbif.net/> Created by collaboration between NaGISA and the Global Taxonomy Initiative (GTI), this library includes original descriptions and distribution patterns, and has been made available on the Global Biodiversity Information Facility (GBIF) portal site.
- An article appeared in the *Sudcaliforniano* Newspaper on 20/08/2006 titled *Un Nuevo descubrimiento en el Pacifico Noreste* on the discovery of 2 new Rhodolith species in the North East Pacific. This was followed with a scientific publication of the findings in the peer-reviewed scientific journal *Botanica Marina* 49: 355-359 (2006) entitled “Rhodolith bed: a newly discovered habitat in the North Pacific Ocean” by Brenda Konar, Rafael Riosmena-Rodriguez and Katrin Iken.

Postgraduate Level

Marine Decapoda and Stromatopoda taxonomy workshop - Lombok, Indonesia

The Marine Decapods and Stromatopods workshop was a success, held at Sheraton Senggigi in Lombok, Indonesia September 7-10, 2005. Over 20 participants from 5 countries (Indonesia, Thailand, Vietnam, Philippines, and Japan) learned how to collect, fix, identify, and take pictures of decapods and stomatopods under the supervision of Dr. Mohammad Kasim Moosa (LIPI, Indonesian Institute of Science). Full NaGISA field sampling was also done as part of the workshop at a new seagrass site in Kuta, Lombok.

Algal taxonomy workshop – Vancouver, Canada

Thirteen people attended from three different countries (Canada, US, Mexico) gathered at the University of British Columbia from May 27- 31, 2006. Pre-workshop sampling was conducted on Bath Island, which became the first NaGISA site in Canada. The voucher samples were deposited in *UBC* (University of British Columbia Herbarium) and *UAF Museum* (University of Alaska Fairbanks Museum). The workshop was organized and led by Dr. Sandra Lindstrom (UBC).

South American Protocol workshop- Caracas, Venezuela;

Organized by Universidad Simon Bolivar (Patricia Miloslavich and Elizabeth Huck) in January 16 -19, 2006 at Morrocoy National Park, Venezuela. Dr. Brenda Konar from the University of Fairbanks acted as instructor along with Dr. Patricia Miloslavich and Dr. Juan Cruz from Universidad Simon Bolivar. A total of 17 scientists from different institutions in Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Jamaica, Peru, Uruguay, and Venezuela participated. For the workshop, two new sites were selected at Morrocoy National Park, Falcon State. The first was a seagrass bed at Las Luisas Bay and the second is a coral reef (Cayo Sal).

Caribbean Protocol workshop - Discovery Bay, Jamaica;

Organized by Universidad Simon Bolivar (Juan Cruz) and Discovery Bay Marine Laboratory (Norman Quinn) from June 3 -7, 2006 in Discovery Bay, Jamaica. A total of 6 scientists from different institutions in Jamaica, Curacao, Trinidad, San Andrea Island (Colombia), Venezuela and Chile participated in this workshop. The samples from the new site in Discovery Bay have been included into the NaGISA database by the Jamaican team.

Indian Ocean Protocol workshop – Mombassa, Kenya

Hosted by the Kenyan Marine and Fisheries Research Institute (KMFRI) from June 26-30, 2006, 25 scientists attended from universities, research intuitions and non-governmental organizations in South Africa, Mozambique, Tanzania, Keya, Egypt, Comoros, Seychelles, Mauritius, India, Reunion and Venezuela. The resulting meeting and protocol workshop succeeded not only in sampling 2 new sites but also establishing contact with 11 potential sites, which have agreed to look for local funding so as to move forward.

European Protocol workshop – Pisa, Italy

The workshop was generally considered to be very successful and good progress was made in developing an integrated group and research program. The workshop was well attended, with a total of 27 participants representing 13 institutions (contact details available on request). The two main goals of the workshop were clarification of general objectives and sampling protocol of NaGISA project in order to assure comparability of data from the next sampling activities, and the development of a research proposal on drivers of change in marine coastal biodiversity.

University Level

Integration of NaGISA concepts and fieldwork into university curriculums: Students at Simon Bolivar University in Venezuela took an active role in both rocky shore and seagrass bed sampling as part of their marine field course, thus increasing the number of universities that use NaGISA as a teaching tool to 6 (in 3 countries, Venezuela, USA & Japan). This approach continues to be a great success as it acts as both a training ground for field researchers and as a cheap skilled labour source for NaGISA sites.

High School

High schools in America:

American and Japanese exchange students took part in fieldwork in Shirahama Japan, Florida USA, and Massachusetts USA

Niceville High school (Niceville Florida USA) had two poster presentations accepted for the NaGISA World Congress

High schools in Europe: Italian high school seniors join researchers from the University of Pisa at NaGISA sites in southern Italy

High schools in Japan: American and Japanese exchange students took part in field work in Shirahama Japan, Florida USA, Massachusetts USA; three Japanese high schools groups joined Kyoto University researchers in sampling rocky shores and seagrass beds in Sendai, Japan.

Junior High School

Nearshore Art Competition: Opened to Junior High students in Hyogo Prefecture Japan in an attempt to get them to relate to nearshore marine animals (i.e. to see beyond whales and dolphins). The winners will be announced and prizes given out at the NaGISA World Conference Public Lecture on October 15th 2006.

5. GEOGRAPHIC EXPANSION

Twenty -five sites reported using NaGISA sampling for the first time in 2006 and 10 more are scheduled to start in 2007, bringing the number of total sites sampled to over 100 (see below for a list, PLEASE do not refer to the names of the site managers without permission of NaGISA HQ). The intention is to continue this trend and to work with the sites that have proposals pending (see `in prep` listed in the list below) and on the areas where we have not been successful so far: Australia, New Zealand, Western Africa, North Eastern and Central North-West America, before starting to `fill in` the gaps between the sites in the already sampled areas.

List of Active NaGISA Sites presented according to Region

NaGISA Western Pacific Region	
Russia, Vostok	Adrianov, Andrey
Japan, Hokkaido, Akkeshi	Mukai, Hiroshi
Japan, Hokkaido, Usujiri	Rigby, Robin
Japan, Honshu, Takeno	Kawai, Hiroshi / Shirayama, Yoshihisa
Japan, Honshu, Shirahama (Akihama)	Shirayama, Yoshihisa / Kato, Tetsuya
Japan, Honshu, Shirahama (Minamihama)	Kato, Tetsuya
Japan, Honshu, Shirahama (Uchinoura)	Kato, Tetsuya
Japan, Shikoku, Kochi Usa	Shimode, Shinji
Japan, Okinawa, Akijima (1-2)	Omori, Makoto / Iseto, Tohru
Philippine, Mindoro, Puerto Galera Bay	del Norte-Campos, Annabelle
Philippine, Palawan, Puerto Princesa Bay	del Norte-Campos, Annabelle

Indonesia, Lombok, Kuta	Susetiono
Indonesia, Lombok, Mataram (1-2)	Susetiono
Indonesia, East Kalimantan	Susetiono
Indonesia, Bitung (1-2)	Susetiono
Vietnam, Halong Bay (1-2)	Trong, Pham Dinh
Vietnam, Tam Lagoon (1-2)	Trong, Pham Dinh
Vietnam, Na Trang (1-2)	Trong, Pham Dinh
Thailand, Phuket Banken (1-2)	Somchai, Bussarawit
Thailand, Libong Island	Somchai, Bussarawit
Malaysia, Sg Pulau (1-2)	Zulfigar, Yasin
NaGISA Eastern Pacific Region	
USA, Kachemak Bay site (1~4)	Konar, Brenda
USA, Kodiak Island site (1~4)	Konar, Brenda
USA, Prince William Sound site (1~4)	Iken, Katrin
USA, Aleutian (in prep)	Konar, Brenda
Mexico North Central Baja Peninsula (1~6)	Edwards, Matt
Mexico Southern Baja Peninsula (1~4)	Riosmena, Rafael
Mexico Gulf of California (in prep)	Riosmena, Rafael
Canada, Vancouver BC (1~2)	Chenelot, Heloise
NaGISA European Seas	
Italy, Mediterranean Tuscany Archipelago	Benedetti-Cecchi, Lisandro
Italy, Mediterranean Adriatic Sea	Benedetti-Cecchi, Lisandro
Italy, Mediterranean Eastern Mediterranean (1-2)	Jaume, D
Portugal (1-2)	Sousa Pinto, I
North Sea (1-2)	Buchholz, F.
Baltic Sea (1-2)	Weslawsky, J.M.
UK Plymouth (1-2)	Hawkins, S.
Crete (1-2)	Avanitidis, C & A. Eleftheriou
NaGISA Polar Seas	
Antarctica, Palmer Station (in prep)	Iken, Katrin
Antarctica, McMurdo Station (in prep)	
USA, Beaufort Sea- Boulder Patch (1~7)	Iken, Katrin
Norway, Arctic site (1~3)	Weslawsky, J.M.
NaGISA Indian Ocean	
India, Goa Southern site (1~3)	Thiruchitrambalam, Ganesh
India (1-2)	Wafer, Mohideen

Kenya, Gazi Bay	Kimani, Edward
Kenya, Shimoni	Kimani, Edward
South Africa, Langebaan Oostervaal (1-2)	Griffiths, Charles & Vanessa Marie Anastassiou
Seychelles (1-2) (in prep)	Shah, Nirmal Jivan & Jennifer Davis
Mozambique (1-2) (in prep)	Bandeira, Salomao
Reunion (in prep)	Bigot, Lionel & Nicole Gravier Bonnet
Mauritius (in prep)	Mussai, Prakash
Comoros (in prep)	Ibrahim, Yahaya
Egypt (in prep)	el Hag, Mohamed
Tanzania (in prep)	Kywalyanga, Margareth & Rose Sallema
Western Australia (in prep)	
NaGISA North Atlantic	
USA, Massachusetts Wallis Sands Site (in prep)	Olezko-Szuts, Susan
USA, Florida Destin's East Pass (1 - 2) *(Not SG or MA)	Hernandez, Richard
NaGISA Caribbean Sea Region	
Cuba, La Habana (1- 2)	Ortiz, Manuel
Jamaica, Discovery Bay (1- 2)	Quinn, Norman
Colombia, San Andres Isla (1-2)	Abril, Alfredo
Curacao, Netherlands Antilles (1-2)	Piontek, Steve
Trinidad (1-2)	Gobin, Judith
Tobago (1-2)	Gobin, Judith
NaGISA South American Region	
Peru, Pisco (1-2)	Quiñe, Marina
Ecuador, Puntilla Santa Elena (1-2)	Cruz, Manuel
Colombia, Baha Chengue (Parque Tayrona)	Santodomingo, Nadia
Colombia, Islas del Rosario	Santodomingo, Nadia
Venezuela, Araya Peninsula, Lagunda de Bocaripo	Miloslavich, Patricia
Venezuela, Araya Peninsula, Isla Caribe (Chacopata)	Miloslavich, Patricia
Venezuela, Morrocoy	Cruz, Manuel
Venezuela, La Guaira	Cruz, Manuel
Brazil, Bahia	Couto, Erminda C. G.
Brazil, Parana (1 - 2)	da Cunha Lana, Paulo
Uruguay, Isla Lobos (1-2) (in prep)	Defeo, Omar
Argentina, Mar del Plata (1~3)	Penchaszapeh, Pablo
Argentina, Pto. Madryn (1-2) (in prep)	Van der Molen, Silvina
Argentina, Ushuaia (1-2) (in prep)	Tapella, Federico
Chile, Pinta Arenas (1-2)	Mutschke, Erika
Chile, Comao Fjord (1-2)	Forsterra, Gunter

(In prep implies that they are not in the water as of writing but have proposals pending)

6. PARTNERSHIPS & COLLABORATION

a. Partnerships

Organization Name	Point-of-Contact	Nature of Relationship
Global Taxonomic Initiative	Yoshihisa Shirayama Junko Shimura	Co-coordination of databases and scientific capacity building in Southern Asia
JSPS multinational program, “coastal oceanography”	Yoshihisa Shirayama	Joint organization of taxonomic and educational workshops in the western Pacific region
US Minerals Management Service	Katrin Iken	NaGISA protocols are being adopted for monitoring MMS sites in the Beaufort Sea
GEM monitoring	Brenda Konar	NaGISA is currently identified as a player in the Alaskan Gulf Monitoring Program
Fulbright Memorial Fund	Kioko Jones (Fulbright) Yoshihisa Shirayama (NaGISA)	High School exchange program organized between Japan and the US has for 3 years annually had a NaGISA component.
Nippon Foundation	Yoshihisa Shirayama	Collaboration for improved scientific capacity in Southern Asia
WIOMSA (Western Indian Ocean Marine Science Association)	Kimani Edward, Robin Rigby	Collaboration for the promotion of coastal science in the Western Indian Ocean region.
Mexican Science Foundation (CONACYT) & SEMARNAT-CONACYT:	Rafael Riosmena	Collaboration in the Gulf of Mexico: concerning environmental changes in the area and its long-term implications
CONABIO (Mexican agency for Biodiversity)	Rafael Riosmena	The Gulf of California databases are linked to NaGISA. CONABIO and OBIS
MarBef	L. Benedetti-Cecchi	Use of the MarBef network to reach nearshore researchers through out Europe
DIVERSITAS Western Pacific and Asia (DIWPA)	Yoshihisa Shirayama	DIWPA first published the NaGISA manifesto and continues long arm support
Techno Ocean	Yoshihisa Shirayama	Assessment of new technologies that may be viable for nearshore monitoring
National Geographic	Matt Edwards	Support for sampling in California and Baja
MARS	L. Benedetti-Cecchi	Crossing networks to better reach nearshore researchers in Europe
BIOMARE	L. Benedetti-Cecchi	Collaborative sampling with BIOMARE researchers through out Europe
Marine Learning Center	Tohru Iseto	Co-creation of a taxonomic/photographic database
NAML (WAML)	Robin Rigby (Brenda Konar)	Identified spokes persons and organizers of joint efforts

b. Links to Other CoML Ocean Realm Projects

Project Name	Cross-Over Person(s)	Nature of Relationship
ArcOD	Katrin Iken (NaGISA) Bodil Bluhm (Arctic)	NaGISA helped set up the initial Arctic Ocean Diversity workshop and publish the proceedings. Continued ties including the use of NaGISA protocols as ArcOD protocol & Joint taxonomic initiatives
CeDeMAR		Both projects emphasis benthic taxonomy, and capacity building. However, we have not finalized how we can collaborate on this beyond student exchanges.
Zooplankton		Ideally we will be able to hand over the coastal zooplankton that we collect to Zoo Plankton, thus enlarging their sphere of collection.
Gulf of Maine	Lewis Incze, Evan Richert, Gerhard Phole	It is hoped that the Gulf of Maine nearshore component will be able to use NaGISA protocols
CAML	Victoria Wadley, Katrin Iken	The promotion of NaGISA protocols in the Antarctic and the Southern Ocean region
Microbes	Linda Amaral Zettler	NaGISA sites will be used to collect microbes; however, we are still working on the practicalities of this and have not yet set start date
Coral Reefs	Hiroshi Fukami (Coral)	Both focused on coastal zones it has been suggested that we share the same database and try to promote each other's protocols.
Bar Code of Life	Yoshihisa Shirayama, Katrin Iken	Jointly benefit from a method of automated recognition of nearshore taxa (image analyzers). We attended their first meeting June 2006
HMAP	Robin Rigby (NaGISA) Ann Marboe (HMAP)	The History of the Nearshore project is our first joined initiative and it is our mutual hope to that it will result in the creation of a nearshore historical records database
FMAP	Ram Myers (FMAP)	Various collaborative projects will happen between FMAP and NaGISA researchers on an individual scale but FMAP will have a hand in helping to design better analyzing tools for the NaGISA database.

c. Links to CoML National and Regional Implementation Committees (NRICs)

NRIC	Liaison or personnel	Nature of Relationship
Australia		
Canada		
Caribbean	Patricia Miloslavich & Jaun Jose Cruz	Run the NaGISA South American and Caribbean Regional Groups (respectively) and are vital in our connections and activities in the area
China		
Europe	Carlo Heip & Bhavani Narayanaswamy	Carlo has been fundamental in getting NaGISA going in Europe and connections between the NRIC and NaGISA are maintained by Bhavani
Indian Ocean	Mohideen Wafer	Manages the NaGISA sites on the Indian sub content and is vital to our securing funding in the area

Japan	Yoshihisa Shirayama & Robin Rigby	NaGISA PI and Coordinator (respectively)
South America	Patricia Miloslavich	Run the NaGISA South American Regional Group
Sub-Saharan Africa	Charles Griffith	Manages the NaGISA sites in South Africa and has played /will play a large role in getting NaGISA off the ground in the region
USA	Daphne Fautin & Jo-Ann Leong	Has extended an invitation to help with improving our approach to the American scientific funding agencies (which we have not taken up yet) and to assist with our attempt to attract marine centers (respectively)

d. Liaisons to CoML Cross-Cutting Groups

Project Name	Liaison Name & Institution	Nature of the Relationship
OBIS	Robin Rigby (SMBL) & Brenda Konar (UAF)	Currently the data submission points
HMAP	Robin Rigby (SMBL) Anne Marboe (UofR)	Co-leader of the History of the Nearshore
FMAP	Yoshihisa Shirayama (SMBL)	Liaison
SCOR Tech Panel	Yoshihisa Shirayama (SMBL)	Liaison
E&O	Robin Rigby (Kyoto University)	Liaison
Barcoding	Yoshihisa Shirayama (SMBL), Katrin Iken (UAF)	Liaison, collaborators

e. Effectiveness of the Partnerships and collaborations

We have yet to tap into the perceived strength of the cross cutting groups as we have yet to secure an understanding of what each does. This will improve as soon as the specific assistance that is to be provided by each can be identified and related to our members.