

D4.1: Report on data availability and gap analyses for the Black Sea

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The largest organizations from the Former Soviet Union countries that perform or performed research on marine biology in the Black Sea and Eastern Mediterranean were identified (Annex I). Among the 23 organizations (14 – Ukraine, 5 – Russia, 4 – Georgia) there are 7 organizations that potentially can hold the most valuable marine biological historical datasets:

- The A.O. Kovalevsky Institute of Biology of the Southern Seas National Academy of Science of the Ukraine (Ukraine)
- Southern Scientific Research Institute of Marine Fishery and Oceanography (Ukraine)
- Karadag Nature Reserve of the National Academy of Sciences of Ukraine (Ukraine)
- P.P.Shirshov Institute of Oceanology Russian Academy of Sciences (Russia)
- Russian Federal Research Institute of Fisheries and Oceanography (Russia)
- Novorossiysk educational and research marine biological center of the Kuban State University (Russia)
- Scientific-research Institute of the Azov Sea Fishery (Russia)

18 individual scientists that potentially can have historical datasets (including 5 retired professional) were contacted. Only 3 persons agreed to participate in the data archeology and rescue.

Refusals to participate in the data archeology and rescue activities within EMODNET project were due to several reasons:

- Dataset has several originators and there is uncertainty that data holder has rights to distribute digitize dataset through EMODNET portal
- The activity is very time consuming and can interfere with main work tasks of data holder
- There is no interest in digitizing historical datasets (especially for retired professionals)
- There is interest in digitizing dataset but no interest in distributing datasets within scientific community

- Data policy of the organization doesn't allow distributing raw data (regardless time coverage)

Scientists from Russian institutions pointed out that for the last years the rules on distributing raw data materials became very strict and they are not allowed to distribute raw data materials.

The work in the archive of IBSS NASU revealed following problems that are common for all Former Soviet Countries:

- No database on archive materials exists – only lists of holding, in most cases only paper versions
- Description of items not always gives the clear understanding of contents (temporal, geographic, taxonomic coverage etc.). Additional analyzes of content required.
- For datasets of the period 1940 -1950 metadata not always available (dates, coordinates of sampling) due to the restricted use of this information.
- No standard format for biological sample processing recording. In some case the understanding of methodology and as a consequence the calculation of abundance/biomass is not possible

ИНСТИТУТ
Биологической науки РАН
НАУЧНЫЙ АРХИВ

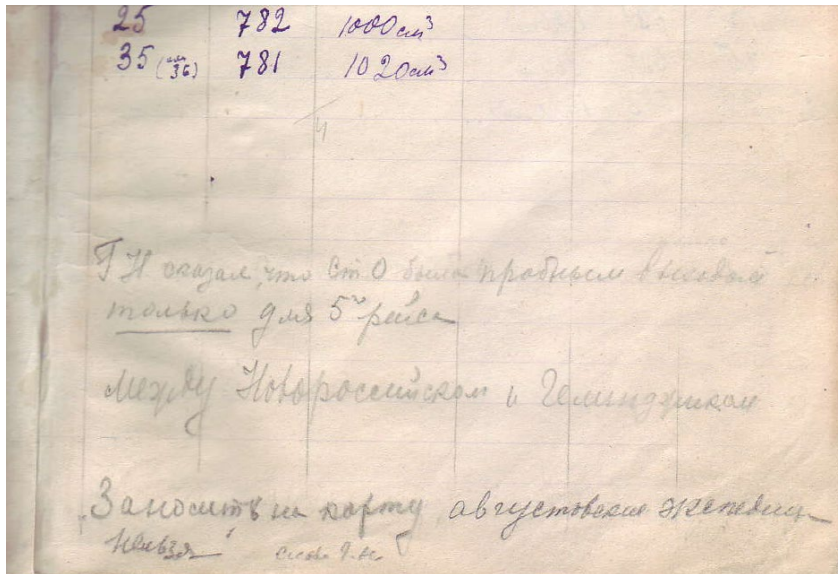
УТВЕРЖАЮ:
Директор ИБС РАН
Александр И.И. Артемьев
И.И. Артемьев
199 г.

Фонд ИБС РАН
Список № 2
научно-исследовательской
документации
за 1940-
1946 гг.
отчет планктона, фитопланктон.
Первичные научные материалы.
Лист 14-С.

№	Заглавие дела	Автор	Дата	Кол. листов
1	2	3	4	5
1.	Рейсовая книжка по сбору фитопланктона-морозовской группы бентоса, зоо- и фито-водичьяки др. (кювет с рис. и гербар.) с П.В. З. по ЗИ.		1934	20
2.	Экспедиционный дневник сбора фито-коллектив планктонных проб в Керченском заливе, Сутоцкие станции. (17.08-18.09.1936 год).	авторов	1936	30
3.	Черноморские виды фитопланктона.	" "	1936	34
4.	Экспедиционный журнал суточных станций по сбору фитопланктона. Разведка надпротив Алты. 18.07.-19.07.1936 г.	Морозов-Водичьяки П.В.	1936	10
5.	Некоторые данные о биомассе фитопланктона в Черном море (объем и авторское описание).	коллектив	1936-1939	28
6.	Глубоководная экспедиция СБС сов.-местно с Явля и СМД № 48 (справки материалы похода сбора фитопланктона). 07.-19.09.1940 г.	" "	1940	4
7.	Журнал результатов обработки материалов лова планктонной сетью экспедиции по Севастопольской бухте на Д-525 и карта экспедиционных работ за 1940 г. Разведка м.г. Ботуми.	" "	1940	100
8.	Материалы к определению (ключи определения видов <i>Thalassiosira</i> и др.), прилагаются по определению и др.).	" "	1940	48
9.	Журнал количественной обработки проб фитопланктона, полученных в Севастопольской бухте у Приморского бульвара. Таблицы, графики количественного соотношения биомассы и основных систематических групп фитопланктона на различных глубинах за 1940 год.	" "	1940	52

Исполнитель: Ровач Т.А.

Inventory of IBSS NASU archive materials exist only in paper form



Sample processing book (1951). The remark on the first page in Russian: to put coordinates of august expedition on map is forbidden

The preliminary list of identified datasets is given in Annex II

Annex I Largest marine biology research organizations of the Former Soviet Union countries (Georgia, Ukraine, and Russia)

Ukraine

	Organization	Abbreviation	Web-site	Research from (year)
1	The A.O. Kovalevsky Institute of Biology of the Southern Seas National Academy of Science of the Ukraine	IBSS NASU	http://ibss.nas.gov.ua	1871
2	Odessa branch of A.O. Kovalevsky Institute of Biology of the Southern Seas National Academy of Sciences of Ukraine	OB IBSS NASU	http://www.obibss.narod.ru	1953
3	Southern Scientific Research Institute of Marine Fishery and Oceanography	YugNIRO	http://yugniro.in.ua/	1922 1933-1988 AzCherNIRO
4	Ukrainian scientific center of Ecology of Sea	UkrSCES	http://www.sea.gov.ua/	1970 1970 - 1992 Odessa Branch State Oceanographic Institute
5	Odessa National I.I. Mechnikov University, Regional Centre for Integrated Environmental Monitoring and Ecological Studies	ONU		2003
6	Brema Laboratory	Brema	http://www.dolphin.com.ua/	-
7	Institute of Hydrobiology National Academy of Sciences of Ukraine	IGB NASU	http://hydrobio.kiev.ua/	1914
8	I.I. Schmalhausen Institute of Zoology National Academy of Sciences of Ukraine	-	http://www.izan.kiev.ua/	1919

9	M.G. Kholodny Institute of Botany National Academy of Sciences of Ukraine	-	http://www.botany.kiev.ua/	1921
10	Karadag Nature Reserve of the National Academy of Sciences of Ukraine	-	http://zapovednik-karadag.com/	1979 1914 – 1937 Karadag Biological Station 1937 – 1963 Karadag Biological Station National Academy of Sciences of Ukraine 1963 – 1997 IBSS NASU 1997 – status of legal entity is given to the Karadag Nature Reserve
11	Danube Biosphere Reserve National Academy of Sciences of Ukraine	DBR	http://dbr.org.ua/	1967
12	Kazantypskiy Nature Reserve	-		1998
13	Opuk nature reserve The Ministry of Ecology and Natural Resources of Ukraine	-	http://www.opuk.com.ua/	1998
14	Priazovskiy National Natural Park	-	http://www.pnpp.info	2010

Russia

	Organization	Abbreviation	Address, web-site	Research from (year)
1	P.P.Shirshov Institute of Oceanology Russian Academy of Sciences	IO RAS	http://www.ocean.ru/	1946
2	P.P.Shirshov Institute of Oceanology Russian Academy of Sciences, Southern branch	IO RAS	http://www.ocean.ru/	1949 1949 – 1967 Black Sea Scientific Research Station From 1967 branch of IO RAS
3	Russian Federal Research Institute of Fisheries and Oceanography	VNIRO	http://vniro.ru/	1931
4	Novorossiysk educational and research marine biological center of the Kuban State University		http://www.kubsu.ru/	1920 former Novorossiysk marine biological station
5	Scientific-research Institute of the Azov Sea Fishery	AzNIIRKH	http://www.azniirkh.ru	1928

Georgia

	Organization	Abbreviation	Address, web-site	Research from (year)
1	National Environmental Agency of the Ministry of Environmental Protection and Natural Resources of Georgia, Black Sea Monitoring Center-Batumi	NEA	http://www.nea.gov.ge	2008
2	Iv.Javakhishvili Tbilisi State University	TSU	http://www.tsu.edu.ge/	2005
3	Scientific fishery and biological station, Batumi	-	-	1930-1954 further part of AzCherNIRO
4	Water Ecology and Fisheries Research Institute	WEFRI	http://wefri.ge/	2006

Annex II The list of identified datasets to proposed for digitization.

1. Zoobentos data, collected by different IBSS NASU researches during 1957 – 1992. Datasets in paper format are stored in the archive of Benthos department of IBSS NASU.

##	Dataset title	Current format	Coverage		Size, records*
			temporal	geographic	
1	Zoobenthos surveys	paper	1958, 1960	Black Sea, Bosphorus region	~150
2	Zoobenthos surveys	paper	1957	Black Sea, near the southern coast of Crimea	~ 1300
3	Zoobenthos surveys	paper	1957	Black Sea, near the western coast of Crimea	~ 700
4	Zoobenthos surveys	paper	1957	Black Sea, near the southern coast of Crimea	~ 350
5	Zoobenthos surveys	paper	1958	Black Sea, near the Caucasian coast	~ 400
6	Zoobenthos surveys	paper	1962	Black Sea, near the Caucasian coast	~ 560
7	Zoobenthos surveys	paper	1969	Black Sea, near the Caucasian coast	~ 280
8	Zoobenthos surveys	paper	1968	Black Sea, near the Caucasian coast	~ 1000
9	Zoobenthos surveys	paper	1981	Black Sea, near the southern coast of Crimea	~ 270
10	Zoobenthos surveys	paper	1973	Black Sea, near the southern coast of Crimea	~ 600
11	Zoobenthos surveys	paper	1991, 1992	Black Sea, Crimean shelf	~ 350

Севастопольская биологическая станция АН СССР

Вас: 2хр + 11 = 76.5

Станция 326 (15 мн 46 мгр.)	Дата 9-VI-60	Координаты 41°21'8" N 29°05'2" E	Глубина 78 м
Грунт ил фанатовый, жидкий	Орудие лова Океан 0.25	Количество подъемов 1	

НАИМЕНОВАНИЕ ВИДОВ	Кол-во экз. в пробе	а		Вес в г.	Биомасса г/м ²	ПРИМЕЧАНИЯ
		Кол-во экз./м ²	г			
<i>Urosalpinx caudata</i>	1	4	2.700	10.800	23 мм	
<i>Cyclonassa brevis</i>	1	4	1.620	6.480	13 мм	
<i>Tritella communis</i> - мушкетер раковины (2 раковины <i>Watica</i>)					40 мм и 35 мм 2.	
<i>Strombiformis</i> sp. (?) - мушкетер раковина, 14 мм каравановидная, безликая						
<i>Sternaspis scutata</i>	167	668	3.882	15.528	(часть отгач в Москве) (без отгач 12-20 мм - отгач 10, отгач 5-5 мм)	
<i>Philine aperta</i> Lam. (?)	1	4	0.850	3.400	22 мм	
<i>Virgulana mirabilis</i>	3	12	0.930	3.720		
<i>Ampelisca diadema</i>	50	200	0.363	1.392		
<i>Ampipoda</i>	562	2248	0.289	1.156		
<i>Patisica marina</i>	5	20	0.034	0.136		
<i>Apseudes ostreorum</i>	127	508	0.335	1.340		
<i>Leptochelia mergellinae</i>	11	44	0.001	0.004		
<i>Edwardsia</i> sp.	1	4	0.383	1.332	50 мм	
<i>Nucula sulcata</i>	1	4	0.297	1.188	с глянцем, 10 мм	
<i>Urea alba</i>	4	16	0.075	0.300		
<i>Ampelisca stepanovi</i>	23	92	0.849	3.296		
<i>Philemedes interpuncta</i> (Wal.)	40	160	0.014	0.056	крупнейш. 1 мм.	
<i>Nephtys cirrosa</i>	10	40	1.352	5.404	♀ с личинками - от 40 мм, (отгач в Москве)	
<i>Nemertini</i>	4	16	0.142	0.568		
56.210						

Strombiformis sulcata (Donovan) 1044
Hataen tomatilis (L.)

масса *Sternaspis* наивысшая

Zoobenthos data processing sheet (IBSS NASU Benthos department)

2. Zooplankton (mezo – macro) data collected during cruises of YugNIRO 1965 – 1995 on board of different research vessels that covers (according to preliminary estimates, as no digitized coordinates available) the major part of the Black Sea. The datasets are stored in the format of txt files (Lexicon¹) on personal computer. All fields including taxon names, stages, sex, r/vs, region of investigations are coded. This is a unique dataset that is of the extreme interest of the Black Sea basin research community.

##	R/V	Call sign (RUS)	Cruise number	Year	Period of research	Number of samples ²
1	Gonets	ГОНЕ	5	1965	13/05/65- 23/05/65	47
2	Gonets	ГОНЕ	6	1965	17/06/65- 28/06/65	35
3	Gonets	ГОНЕ	7	1965	16/07/65- 22/07/65	59
4	Gonets	ГОНЕ	8	1965	15/08/65- 27/08/65	99
5	K. Bolryrev	УХРМ	5	1965	11/05/65- 23/05/65	106
6	K. Bolryrev	УХРМ	7	1965	14/07/65- 29/07/65	58
7	Gonets	ГОНЕ	5	1967	21/05/67- 26/05/67	46
8	K. Bolryrev	УХРМ	8	1967	14/08/67- 22/08/67	65
9	Kontakt	УЖСП	2	1967	23/02/67- 04/03/67	68
10	Kontakt	УЖСП	6	1967	13/06/67- 22/06/67	74
11	Kontakt	УЖСП	7	1967	12/07/67- 23/07/67	76
12	V.Vorob'ev	ВОРО	5	1968	15/05/68- 22/05/68	46
13	V.Vorob'ev	ВОРО	7	1968	07/07/68- 07/07/68	12
14	Gonets	ГОНЕ	8	1968	12/08/68- 21/08/68	46
15	Grot	УНГФ	3	1968	06/03/68- 13/03/68	57
16	Grot	УНГФ	6	1968	28/06/68- 30/06/68	15
17	Grot	УНГФ	7	1968	01/07/68- 06/07/68	41
18	Gonets	ГОНЕ	2	1969	02/02/69- 26/02/69	35
19	Gonets	ГОНЕ	3	1969	02/03/69- 07/03/69	29
20	Gonets	ГОНЕ	7	1969	10/07/69- 17/07/69	48
21	Grot	УНГФ	5	1969	19/05/69- 30/05/69	60

¹ Lexicon (program) - Lexicon was a text editor / word processor MS-DOS program that was extremely popular in the Soviet Union and Russia at the end of 1980s and in 1990s. Some estimate that Lexicon was illegally installed on 95% of all Russian PCs. The last version for MS-DOS was 3.0.

² The numbers of samples were estimated according the number of txt files in cruise data folders.

##	R/V	Call sign (RUS)	Cruise number	Year	Period of research	Number of samples²
22	Grot	УНГФ	6	1969	16/06/69- 21/06/69	54
23	Grot	УНГФ	8	1969	17/08/69- 24/08/69	57
24	V.Vorob'ev	БОРО	7	1970	12/07/70- 24/07/70	86
25	Grot	УНГФ	6	1970	11/06/70- 16/06/70	86
26	Grot	УНГФ	5	1971	14/05/71- 23/05/71	66
27	K. Bolryrev	УХРМ	5	1971	12/05/71- 24/05/71	97
28	K. Bolryrev	УХРМ	7	1971	16/07/71- 27/07/71	59
29	K. Bolryrev	УХРМ	8	1971	14/08/71- 29/08/71	59
30	Kristall	УЖСР	3	1971	13/03/71- 29/03/71	37
31	Kontakt	УЖСП	2	1971	26/02/71- 02/03/71	12
32	K. Bolryrev	УХРМ	2	1972	03/01/72- 03/03/72	131
33	K. Bolryrev	УХРМ	5	1972	12/05/72- 25/05/72	90
34	K. Bolryrev	УХРМ	7	1972	11/06/72- 17/07/72	71
35	K. Bolryrev	УХРМ	8	1972	12/08/72- 31/08/72	88
36	Kontur	УЖСМ	6	1972	13/06/72- 23/06/72	80
37	Kontur	УЖСМ	7	1972	12/07/72- 22/07/72	80
38	Kontakt	УЖСП	8	1972	09/08/72- 20/08/72	50
39	Grot	УНГФ	5	1973	14/05/73- 27/05/73	102
40	K. Bolryrev	УХРМ	7	1973	15/07/73- 28/07/73	84
41	Kristall	УЖСР	6	1973	13/06/73- 20/06/73	34
42	K. Bolryrev	УХРМ	2	1974	13/02/74- 07/03/74	157
43	K. Bolryrev	УХРМ	5	1974	13/05/74- 26/05/74	101
44	K. Bolryrev	УХРМ	6	1974	11/06/74- 02/07/74	168
45	K. Bolryrev	УХРМ	7	1974	11/07/74- 20/07/74	81
46	K. Bolryrev	УХРМ	8	1974	11/08/74- 24/08/74	83
47	Kristall	УЖСР	7	1974	11/07/74- 22/07/74	88
48	Kristall	УЖСР	8	1974	10/08/74- 23/08/74	84
49	Kontakt	УЖСП	5	1974	15/05/74- 26/05/74	57
50	Grot	УНГФ	2	1975	14/02/75- 01/03/75	72
51	Grot	УНГФ	3	1975	05/03/75- 09/03/75	43
52	Grot	УНГФ	7	1975	20/07/75- 29/07/75	71

##	R/V	Call sign (RUS)	Cruise number	Year	Period of research	Number of samples²
53	Grot	УНГФ	8	1975	15/08/75- 22/08/75	53
54	K. Bolryrev	УХРМ	7	1975	25/07/75- 01/08/75	76
55	K. Bolryrev	УХРМ	8	1975	13/08/75- 20/08/75	48
56	K. Bolryrev	УХРМ	11	1975	20/11/75- 14/12/75	26
57	Kristall	УЖСР	5	1975	14/05/75- 26/05/75	102
58	Grot	УНГФ	5	1976	14/05/76- 19/05/76	47
59	Grot	УНГФ	7	1976	10/07/76- 26/07/76	58
60	Grot	УНГФ	8	1976	14/08/76- 21/08/76	48
61	K. Bolryrev	УХРМ	2	1976	12/02/76- 07/03/76	60
62	K. Bolryrev	УХРМ	5	1976	14/05/76- 24/05/76	62
63	K. Bolryrev	УХРМ	11	1976	12/11/76- 29/11/76	58
64	Kontur	УЖСМ	8	1976	15/08/76- 26/08/76	64
65	Kristall	УЖСР	7	1976	07/07/76- 23/07/76	64
66	Grot	УНГФ	5	1977	20/05/77- 27/05/77	47
67	Grot	УНГФ	7	1977	15/07/77- 24/07/77	45
68	K. Bolryrev	УХРМ	2	1977	11/02/77- 02/03/77	91
69	K. Bolryrev	УХРМ	11	1977	19/11/77- 10/12/77	85
70	Kontur	УЖСМ	5	1977	13/05/77- 27/05/77	65
71	Kontur	УЖСМ	8	1977	12/08/77- 27/08/77	66
72	Kristall	УЖСР	8	1977	18/08/77- 25/08/77	48
73	Kontakt	УЖСП	7	1977	15/07/77- 28/07/77	66
74	Grot	УНГФ	5	1978	14/05/78- 21/05/78	47
75	Grot	УНГФ	7	1978	10/07/78- 27/07/78	94
76	Grot	УНГФ	11	1978	17/11/78- 03/12/78	66
77	K. Bolryrev	УХРМ	2	1978	11/02/78- 01/03/78	89
78	K. Bolryrev	УХРМ	5	1978	13/05/78- 28/05/78	68
79	K. Bolryrev	УХРМ	8	1978	14/08/78- 24/08/78	62
80	Kristall	УЖСР	7	1978	15/07/78- 30/07/78	64
81	Kristall	УЖСР	8	1978	14/08/78- 22/08/78	48
82	Grot	УНГФ	5	1979	14/05/79- 22/05/79	16
83	Grot	УНГФ	7	1979	13/07/79- 17/07/79	35

##	R/V	Call sign (RUS)	Cruise number	Year	Period of research	Number of samples²
84	Grot	УНГФ	11	1979	16/11/79- 23/12/79	35
85	K. Bolryrev	УХРМ	2	1979	13/02/79- 03/03/79	62
86	K. Bolryrev	УХРМ	5	1979	13/05/79- 25/05/79	41
87	K. Bolryrev	УХРМ	7	1979	14/07/79- 27/07/79	46
88	Kristall	УЖСР	7	1979	18/07/79- 18/07/79	3
89	Grot	УНГФ	2	1980	22/02/80- 14/03/80	38
90	K. Bolryrev	УХРМ	5	1980	18/05/80- 31/05/80	26
91	K. Bolryrev	УХРМ	11	1980	21/11/80- 19/12/80	36
92	Fiolent	УЖЙЬ	8	1980	17/08/80- 21/08/80	30
93	Poshival'nikov	УЙЬЕ	8	1980	16/08/80- 24/08/80	22
94	Kerchenskiy Rabochiy	УПМА	5	1980	23/05/80- 31/05/80	16
95	K. Bolryrev	УХРМ	2	1981	13/02/81- 10/03/81	47
96	K. Bolryrev	УХРМ	4	1981	15/04/81- 22/04/81	38
97	-	МРСЧ	6	1983	16/04/83- 30/06/83	28
98	-	МРСЧ	8	1983	02/08/83- 04/08/83	42
99	-	МРСЧ	9	1983	02/09/83- 06/09/83	17
100	-	МРСЧ	10	1983	13/10/83- 27/10/83	22
101	-	МРСЧ	11	1983	09/11/83- 10/11/83	5
102	-	МРСЧ	12	1983	19/12/83- 20/12/83	15
103	Poiskovik	УЫНЦ	4	1983	06/04/83- 14/04/83	77
104	K. Bolryrev	УХРМ	11	1985	25/11/85- 12/12/85	41
105	Moksha	УБРУ	7	1985	28/07/85- 16/08/85	15
106	Geleznyakov	УДУГ	8	1985	30/08/85- 03/09/85	21
107	Kerchenskiy Komsomolets	УЛГБ	7	1986	25/07/86- 18/08/86	54
108	Kerchenskiy Komsomolets	УЛГБ	11	1986	16/11/86- 21/11/86	21
109	Gelezniy Potok	ЕРУУ	5	1987	21/05/87- 12/06/87	34
110	Gelezniy Potok	ЕРУУ	7	1987	31/07/87- 27/08/87	68
111	G.Arschintsev	УНЦТ	6	1987	26/06/87- 15/07/87	12
112	G.Arschintsev	УНЦТ	7	1987	24/07/87- 14/08/87	21

##	R/V	Call sign (RUS)	Cruise number	Year	Period of research	Number of samples²
113	Srednyaya Kosa	УБКБ	4	1987	14/04/87- 04/05/87	74
114	Srednyaya Kosa	УБКБ	5	1987	20/05/87- 09/06/87	60
115	Estafeta Oktyabrya	УДУМ	8	1987	06/08/87- 24/08/87	21
116	Geleznyakov	УДУГ	1	1987	13/01/87- 31/01/87	76
117	Kerchenskiy Komsomolets	УЛГБ	1	1987	24/01/87- 10/02/87	31
118	Kerchenskiy Komsomolets	УЛГБ	4	1987	07/04/87- 17/04/87	113
119	I. Pavlyuchenkov	УЫВФ	9	1987	06/09/87- 20/10/87	107
120	I. Pavlyuchenkov	УЫВФ	11	1987	16/11/87- 04/12/87	38
121	Poiskovik	УЫНЩ	8	1987	04/08/87- 11/08/87	13
122	Poiskovik	УЫНЩ	9	1987	03/09/87- 28/09/87	24
123	Semen Volkov	ЕСЛИ	2	1988	18/02/88- 19/03/88	43
124	Gelezniy Potok	ЕРУУ	1	1988	07/01/88- 07/02/88	81
125	Gelezniy Potok	ЕРУУ	5	1988	15/05/88- 06/06/88	46
126	Gelezniy Potok	ЕРУУ	7	1988	23/07/88- 18/08/88	43
127	Gelezniy Potok	ЕРУУ	11	1988	17/11/88- 11/12/88	43
128	Patriot	ЕРУЫ	6	1988	23/06/88- 09/07/88	19
129	Patriot	ЕРУЫ	8	1988	02/08/88- 16/08/88	29
130	Patriot	ЕРУЫ	9	1988	11/09/88- 08/10/88	117
131	D.Stefanov	УТТЬ	4	1988	02/04/88- 26/04/88	43
132	D.Stefanov	УТТЬ	5	1988	08/05/88- 20/05/88	39
133	D.Stefanov	УТТЬ	10	1988	08/10/88- 10/10/88	22
134	Moksha	УБРУ	7	1988	23/07/88- 14/08/88	21
135	Moksha	УБРУ	10	1988	07/10/88- 11/10/88	25
136	Poiskovik	УЫНЩ	4	1988	08/04/88- 03/05/88	86
137	Poiskovik	УЫНЩ	5	1988	25/05/88- 30/05/88	16
138	Poiskovik	УЫНЩ	6	1988	17/06/88- 21/06/88	18
139	Patriot	ЕРУЫ	1	1989	07/01/89- 08/02/89	33
140	Patriot	ЕРУЫ	7	1989	03/07/89- 17/09/89	49
141	Osipenko	ОСИП	8	1989	07/08/89- 15/08/89	17

##	R/V	Call sign (RUS)	Cruise number	Year	Period of research	Number of samples²
142	Kerchenskiy Komsomolets	УЛГБ	2	1989	11/02/89- 05/03/89	53
143	Kerchenskiy Komsomolets	УЛГБ	3	1989	16/03/89- 17/03/89	7
144	Kerchenskiy Komsomolets	УЛГБ	5	1989	11/05/89- 05/06/89	27
145	Kerchenskiy Komsomolets	УЛГБ	11	1989	13/11/89- 04/12/89	44
146	I. Pavlyuchenkov	УЫВФ	5	1989	21/05/89- 07/06/89	47
147	I. Pavlyuchenkov	УЫВФ	6	1989	08/06/89- 07/07/89	28
148	I. Pavlyuchenkov	УЫВФ	7	1989	29/07/89- 14/08/89	39
149	Poiskovik	УЫНЩ	4	1989	06/04/89- 06/05/89	75
150	Poiskovik	УЫНЩ	5	1989	19/05/89- 20/05/89	7
151	Poiskovik	УЫНЩ	6	1989	10/06/89- 23/06/89	28
152	MRTK	МРТК	4	1990	18/04/90- 19/04/90	15
153	Tyrkan PTS	ТЮРК	6	1990	25/06/90- 26/06/90	24
154	G.Arschintsev	УНЩТ	3	1990	24/03/90- 28/03/90	8
155	Yunaya smena	УКСЦ	5	1990	17/05/90- 04/06/90	28
156	Yunaya smena	УКСЦ	6	1990	18/06/90- 10/07/90	48
157	Moksha	УБРУ	5	1990	27/05/90- 07/06/90	18
158	Kometa Galyeya	УЗЗЕ	7	1990	25/07/90- 14/08/90	51
159	Merak	УЙМД	1	1990	07/01/90- 04/02/90	52
160	Merak	УЙМД	2	1990	15/02/90- 08/03/90	39
161	Kerchenskiy Komsomolets	УЛГБ	6	1990	18/06/90- 14/07/90	46
162	Kerchenskiy Komsomolets	УЛГБ	7	1990	24/07/90- 31/07/90	32
163	Kerchenskiy Komsomolets	УЛГБ	8	1990	17/08/90- 20/08/90	7
164	I. Pavlyuchenkov	УЫВФ	9	1990	11/01/90- 06/03/90	52
165	Poiskovik	УЫНЩ	4	1990	05/04/90- 01/05/90	34

##	R/V	Call sign (RUS)	Cruise number	Year	Period of research	Number of samples²
166	Poiskovik	УЫНЩ	6	1990	09/06/90- 15/06/90	24
167	RKT	ЭРКТ	5	1990	31/05/90- 31/05/90	14
168	ARGONAVT	АРГО	7	1991	09/07/91- 20/07/91	48
169	Osipenko	ОСИП	6	1991	16/06/91- 09/07/91	65
170	Osipenko	ОСИП	7	1991	26/07/91- 11/08/91	35
171	Kumachevo	УРТА	6	1991	29/06/91- 15/07/91	36
172	Kerchenskiy Komsomolets	УЛГБ	8	1991	10/08/91- 27/08/91	48
173	Poiskovik	УЫНЩ	2	1991	15/02/91- 09/03/91	43
174	Poiskovik	УЫНЩ	4	1991	06/04/91- 30/04/91	58
175	Poiskovik	УЫНЩ	5	1991	24/05/91- 23/06/91	61
176	Osipenko	ОСИП	6	1992	21/06/92- 04/07/92	20
177	D.Stefanov	УТТЬ	7	1992	23/07/92- 24/08/92	101
178	I. Pavlyuchenkov	УЫВФ	9	1992	13/09/92- 06/10/92	53
179	Poiskovik	УЫНЩ	1	1992	11/01/92- 15/01/92	21
180	Poiskovik	УЫНЩ	4	1992	19/04/92- 07/05/92	49
181	Poiskovik	УЫНЩ	5	1992	16/05/92- 08/06/92	39
182	Osipenko	ОСИП	5	1993	13/05/93- 02/06/93	17
183	Poiskovik	УЫНЩ	9	1993	06/09/93- 27/09/93	52
184	Arschintsevo	АРШН	5	1994	26/05/94- 04/06/94	30
185	Poiskovik	УЫНЩ	9	1994	22/09/94- 07/10/94	25
186	Poiskovik	УЫНЩ	11	1994	11/11/94- 12/11/94	8
187	Poiskovik	УЫНЩ	6	1995	13/06/95- 04/07/95	59
Total samples:						9413

3. Database was developed in Paradox³ and filled within NATO TU Black Sea project. It was used to accumulate data on phytoplankton and further summarized parameters like total phytoplankton abundance/biomass etc. were included to the multidisciplinary Black Sea database that was disseminated on the CD-ROM and then were made available online through IMS METU server. Data on the species level were not in the scope of the project and database is still kept on personal PC's in one of the departments of the IBSS. It is possible that not all samples from paper sample processing books were digitized so the procedure of comparing database records with available source books is required along with data transformation and quality check. Taxon scientific names were coded in accordance with the scheme developed by ... The coding scheme had been changed for several times during the period of its use. The work on exact match taxon names to codes should be undertaken.

##	Cruise code	Dataset name	Year	Period	Number of samples
1	yaldec68	Yalta, December 1968	1968	27.12.1968-27.12.1968	6
2	yalnov68	Yalta, November 1968	1968	01.11.1968-03.11.1968	8
3	yaloct68	Yalta, October 1968	1968	28.10.1968-31.10.1968	8
4	yalaug69	Yalta, August 1969	1969	23.08.1969-26.08.1969	12
5	yaljun69	Yalta, June 1969	1969	19.06.1969-25.06.1969	11
6	yalapr70	Yalta, April 1970	1970	03.04.1970-06.04.1970	12
7	yaljun70	Yalta, June 1970	1970	17.06.1970-22.06.1970	9
8	yaljun71	Yalta, 1971	1971	22.06.1971-23.06.1971	20
9	AK88	Ak. Kovalevskiy, cruise 88	1979	01.12.1979-08.12.1979	13
10	yaldec79	Yalta, December 1979	1979	14.12.1979-21.12.1979	9
11	yalmay79	Yalta, May 1979	1979	11.05.1979-19.05.1979	4
12	yaljuj80	Yalta, June-July 1980	1980	21.06.1980-03.07.1980	11
13	yaljua82	Yalta, July-August 1982	1982	27.07.1982-02.08.1982	5
14	yalocn82	Yalta, October-November 1982	1982	29.10.1982-02.11.1982	7
15	SIM-1183	Simferopol, November 1983	1983	13.11.1983-13.11.1983	1
16	yalmay83	Yalta, May 1983	1983	13.05.1983-20.05.1983	10
17	yalnov83	Yalta, November 1983	1983	13.11.1983-17.11.1983	1
18	ML44	Mikhail Lomonosov, cruise 44	1985	11.06.1985-30.06.1985	27
19	yalmar86	Yalta, March 1986	1986	05.03.1986-07.03.1986	10

³ Paradox is a relational database management system currently published by Corel Corporation. It was originally released for DOS by Ansa Software, and then by Borland after it bought the company. A Windows version was released by Borland in 1992.

##	Cruise code	Dataset name	Year	Period	Number of samples
20	AK106	Ak. Kovalevskiy, cruise 106	1987	08.08.1987-18.08.1987	8
21	PV23a	Professor Vodyanitskiy, cruise 23a	1987	27.05.1987-16.06.1987	17
22	DM44	Dmitriy Mendeleev, cruise 44	1989	25.07.1989-09.09.1989	34
23	Vityaz21	Vityaz, cruise 21	1991	11.02.1991-02.04.1991	31
24	Vityaz23	Vityaz, cruise 23	1991	18.08.1991-11.11.1991	19
25	Vityaz26	Vityaz, cruise 26	1992	28.09.1992-14.10.1992	20
26	PV41	Professor Vodyanitskiy, cruise 41	1993	04.04.1993-13.04.1993	16
27	PV43	Professor Vodyanitskiy, cruise 43	1993	01.09.1993-04.09.1993	14
28	Rift19	Rift, cruise 19	1993	11.03.1993-20.03.1993	10
29	Akvan395	Akvanavt, March 1995	1995	19.03.1995-31.03.1995	15
30	Kiev495	Kiev, April 1995	1995	04.04.1995-08.04.1995	8
31	MAAP95	coastal stations, March-April 1995	1995	18.03.1995-25.04.1995	10
32	OCT95	coastal stations, September-October 1995	1995	28.09.1995-10.10.1995	10
33	PK33	Professor Kolesnikov, cruise 33	1995	18.03.1995-03.04.1995	8
34	Yantar95	Yantar, 1995 year	1995	27.08.1995-05.09.1995	12

4. Datasets from IBSS NASU archive (phytoplankton). Datasets covers the second part of XX century. Datasets are the result of phytoplankton investigations in Black Sea, Sea of Azov, Mediterranean Sea.

##	Dataset name	Year(s)	Region ⁴	Samples ⁵
1	expedition journal (incl. sample harvesting with nets, bathometer, on 24h stations)	1960, 1961, 1963	Bosphorus	36
2	primary samples processing	1960, 1962, 1963	Bosphorus	99
3	expedition journal (incl. sample harvesting with	1961-1962	Bosphorus, Black sea and sea of Azov (Mediterranean Sea?)	101

⁴ Based on the name of the processing book (journal)

⁵ The approximate number of samples based on paper processing books detailed analysis

##	Dataset name	Year(s)	Region ⁴	Samples ⁵
	nets, bathometer, on 24h stations)			
4	primary samples processing	1964	Sevastopol bay	87
5	primary samples processing	1964-1965	Mediterranean Sea	89
6	summary quantity tables	1964-1965	Sevastopol bay, Black sea	94
7	primary samples processing	1964-1971	eastern part of the Black sea, Batumi - Sukhumi	155
8	primary samples processing	1965	Mediterranean Sea	32
9	expedition journal (incl. sample harvesting with nets, bathometer, on 24h stations)	1968-1969	Kamyshovaya bay, section: cape Hersonissos - Bosphorus	30
10	expedition journal (incl. sample harvesting with nets, bathometer, on 24h stations)	1968-1970	Bosphorus, Mediterranean Sea(?)	23
11	primary samples processing	1968-1969	section: cape Hersonissos - Bosphorus	93
12	primary samples processing	1969-1970	Bosphorus	132
13	primary samples processing	1970	Bosphorus	97
14	expedition journal (incl. sample harvesting with nets, bathometer, on 24h stations)	1972-1975	Black sea	23
15	primary samples processing	1976	Mediterranean Sea	47
16	phytoplankton structure	1976	Sochi	86
17	expedition journal (incl.	1977	Black sea, Mediterranean Sea	12

##	Dataset name	Year(s)	Region⁴	Samples⁵
	sample harvesting with nets, bathometer, on 24h stations)			
18	primary samples processing	1981	western part of the Black sea	66
19	expedition journal (incl. sample harvesting with nets, bathometer, on 24h stations)	1981	western part of the Black sea	25
20	primary samples processing	1989	Mediterranean Sea	42
21	primary samples processing	1990	north-western part of the Black sea	100

Location / Station	Volume (L)	Count	Notes
Станция 115			Коллекция взята в ночь 18.02.1950
Восток судна 19-20 апр. в 5 час 14 м.		30	
Запад судна " " " " " " " "		31	
Средняя ст. (по разрезу Северн-Вост. и ст. 8)			
50 миль от Мурманск в 103			серия 1 13.55.1950
- Кан 6 л.	414		Кусури - 7,5 см. Восток
Онд 20 см	828		Онд 5 см 11.29
2 м. 2, III, IIII = 8.	3314		все сум 30
Средняя станция (по разрезу дати-Северн)	415		29
50 миль от Мурманск в 103	415		30
19-20 апреля 1950 года	11.183		29
8 серия	415		30
Глубина воды: 1900 м			11.183
судно: Империал			30
Взато 70 проб			415
	414		11.111-6
	2899		178
	1243		414
	414		2899
новомая			1243
III = 7	2899		414
			15
Станция 1	414		2899
60 л.	29.852		414
	24.852		636 +
			21952 =
			22574.

Processing sheet (phytoplankton) from IBSS NASU archive

Appendix 1: Black Sea datasets currently available through EMODnet Biology/EurOBIS (14/08/2014)

N r	displayname	metadata	added_date	recordcount exportfile
1	Fishbase Version 2000	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=42	2004-08-21 22:34:48.000	220
2	NeMys	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=66	2004-08-24 11:45:36.000	267
3	Taxonomic Information System for the Belgian coastal area	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=82	2004-08-10 10:05:02.000	28
4	MedOBIS	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=481	2004-12-17 13:02:51.000	1613
5	MarBEF Publication Series data	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=674	2006-01-10 12:02:02.733	8
6	AlgaeBase	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2	2006-06-20 12:38:45.570	2239
7	SeSaM	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=961	2006-10-27 11:19:10.410	2
8	IBSS historical data from different cruises	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=1675	2008-09-08 12:44:44.050	2546
9	CeDAMar database for benthic biological sampling on the abyssal plains: European data	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=1940	2009-04-07 18:02:26.243	1
10	A Biotic Database of Indo-Pacific Marine Mollusks	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=987	2009-05-29 11:58:48.640	1
11	Hexacorallians of the world	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=43	2009-05-29 12:11:29.413	2
12	National Museum of Natural History Invertebrate Zoology Collections	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=1866	2009-05-29 12:11:29.413	7
13	National Museum of Natural History Vertebrate Zoology Fishes Collections	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=1984	2009-05-29 12:11:29.413	11
14	Historical zooplankton records from the Black Sea	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2171	2009-11-12 14:08:28.187	65418

15	PANGAEA - data from Archive of Ocean Data (ArcOD)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2724	2011-01-05 16:44:31.357	25
16	PANGAEA - Data from Hotspot ecosystem research on the margins of European seas (HERMES)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2721	2011-01-05 16:44:31.357	13
17	PANGAEA - Data from various sources	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2722	2011-01-05 16:44:31.357	29
18	PANGAEA - Data from the Deeps Sea Drilling Project (DSDP)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2755	2011-01-05 16:44:31.357	180
19	Cetacean sightings in the Black Sea, Sea of Azov and Kerch Strait	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2706	2011-04-26 14:35:15.247	879
20	Zooplankton in the Ukraine Black Sea shelf (1989-2005)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2695	2011-06-16 13:04:57.693	26357
21	Phytoplankton data collected in the Black Sea during 107 cruise of the R/V "Kovalevskiy"	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2699	2011-06-16 13:38:25.907	2483
22	Phytoplankton data collected in the Black Sea during the 5th cruise of the R/V "Kiev"	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2698	2011-07-15 14:36:34.663	1527
23	Phytoplankton of the northern part of the Black Sea 1992-1993	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2708	2011-07-15 14:55:50.470	14036
24	Phytoplankton of the Ukrainian Black Sea shelf (1985-2005)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2694	2011-07-15 15:16:42.740	38983
25	Phytoplankton data collected in the Black Sea during a cruise of the R/V "Experiment"	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2696	2011-08-04 13:56:20.760	737
26	Phytoplankton data collected in the Black Sea during 37 cruise of the R/V "Professor Vodyanitskiy"	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2704	2011-08-04 14:06:27.877	2670
27	Phytoplankton data collected in the Black Sea during 33 cruise of the R/V "Professor Vodyanitskiy"	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2703	2011-08-04 14:23:19.297	2742
28	Cetacean strandings in the northern Black Sea and the Sea of Azov	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2165	2011-08-19 13:01:32.803	1247

29	Cetacean bycatches in the northern Black Sea	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2705	2011-12-02 18:03:24.900	648
30	Macroalgae of the Crimean coastal zone (Black Sea, 1967-2007)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2690	2011-12-02 18:11:09.160	7153
31	Seagrasses of the Crimean coastal zone (Black Sea, 1960-2009)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2693	2011-12-23 14:59:55.470	1092
32	YugNIRO-1 - Macrozoobenthos data and accompanied environmental data from the Black Sea	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2770	2012-02-01 11:24:08.663	8692
33	Collection Porifera SMF	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2861	2012-02-13 16:31:59.493	1
34	Benthic data from Sevastopol (Black Sea)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2886	2012-02-22 10:46:07.193	214
35	Zooplankton from the north-eastern Black Sea	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2778	2012-02-23 16:09:42.660	9630
36	Benthos from Karkinitzky Gulf (Black Sea)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2885	2012-05-04 10:47:34.047	607
37	Diatoms of Laspi Bay (Black Sea)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2882	2012-05-04 11:16:53.347	1280
38	SNU-FF Macrobenthos (1999)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=3086	2012-08-10 16:01:51.893	672
39	SNU-FF Meiobenthos (2009-2010)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=3093	2012-08-10 16:02:49.593	1056
40	SNU-FF Crustacea (2004-2005)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=3085	2012-08-10 16:03:41.087	350
41	SNU-FF Mollusca (2001-2002)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=3129	2012-08-10 16:04:19.817	239
42	SNU-FF Phytoplankton and zooplankton (1999-2010)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=291	2012-08-10 16:06:38.337	1307
43	Gelatinous macrozooplankton abundance and biomass in Sevastopol Bay and inshore waters off the Crimean Coasts of the Black Sea	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2968	2012-12-14 11:08:59.330	2500

44	Mesozooplankton abundance and biomass in Sevastopol Bay and inshore waters off the Crimean Coasts of the Black Sea	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2969	2012-12-14 11:25:02.070	15224
45	Gelatinous macrozooplankton abundance and biomass in inshore and deep waters of the Northwestern Black Sea	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2967	2012-12-14 11:41:34.537	331
46	Phytoplankton data collected in the Black Sea, Bosphorus area, Marmara Sea, Aegean Sea, Ionian Sea, Tunisian Strait, and Mediterranean Sea during the 65th cruise of the R/V "Kovalevskiy" in 1969-1970	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2979	2012-12-14 12:03:26.880	1398
47	Phytoplankton data collected in the Black Sea during the 117th cruise of the R/V "Kovalevskiy" in 1990	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2980	2012-12-14 12:04:19.877	2837
48	Phytoplankton data collected in the Black Sea in 1958	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2976	2012-12-14 12:05:02.817	176
49	Phytoplankton data collected in the Black Sea during the 4th cruise of the R/V "Kiev" in 1995	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2977	2012-12-14 12:05:47.060	421
50	Phytoplankton data collected in the Black Sea and Bosphorus area during a cruise of the R/V "Mgla", year 1969	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2982	2012-12-14 12:06:31.760	146
51	Phytoplankton data collected in the Black Sea and Bosphorus area during a cruise of the R/V "Mgla", year 1968	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2981	2012-12-14 12:09:28.320	263
52	Phytoplankton data collected in the Black Sea during the 33rd cruise of the R/V "Professor Kolesnikov" in	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=2978	2012-12-14 12:12:50.133	2831

	1995			
53	Phytoplankton data collected from the Black Sea during April 1952 (Cruise 3)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4036	2013-02-13 16:32:12.713	1210
54	Phytoplankton data collected from the North-Western part of the Black Sea during August 1957 (Cruise 1)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4038	2013-02-13 16:33:37.083	1197
55	Phytoplankton data collected from the North-Western part of the Black Sea during August 1957 (Cruise 2)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4039	2013-02-13 16:34:20.650	1702
56	Phytoplankton monitoring data from a polygon near Belbek River (Black Sea) from 1987 to 1990	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4040	2013-02-13 16:35:24.930	4758
57	Phytoplankton data collected from diurnal stations in the halistatic region of the Black Sea during April and July 1957	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4041	2013-02-13 16:37:28.193	2436
58	Phytoplankton data collected from the Black Sea during November 1957 (Cruise 2)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4042	2013-02-13 16:38:45.660	1721
59	Phytoplankton monitoring data from Sevastopol Bay (Black Sea) from 1952 to 1963	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4044	2013-02-13 16:39:54.940	2063
60	Phytoplankton data collected from a diurnal station in Sevastopol Bay (Black Sea) during 1952	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4046	2013-02-13 16:40:39.263	471
61	Cetaceans along Romanian Black Sea Coast by boat 2010-2011	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=3130	2013-02-14 11:02:47.310	14
62	Cetaceans along Romanian Black Sea Coast from shore 2010-2011	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=3132	2013-02-14 11:18:50.497	11
63	Cetacean sightings off Turkey 2006-2011	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=3134	2013-02-14 11:21:21.797	8
64	Green Balkans cetacean strandings on the Bulgarian Black Sea coast	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=3136	2013-02-14 11:24:46.273	4

65	Strandings along Romanian Black Sea coasts 2012-2012	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=4147	2013-07-08 11:20:50.443	259
66	Bycatch along Romanian Black Sea coasts 2010-2011	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=4148	2013-07-08 11:22:00.163	12
67	Phytoplankton data from the Black Sea collected on R/V Professor Vodyanitskij in November 1991 (pv35)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=4387	2013-12-09 16:37:37.737	2298
68	Phytoplankton samples collected near Sochi, Black Sea, in 1974-1975 (sochi_1974-1975)	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=4390	2013-12-09 16:37:37.773	2034
69	Phytoplankton data of Sevastopol Bay of the Black Sea during 1972	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=4389	2013-12-09 16:37:37.810	3906
70	Phytoplankton data collected in the Black Sea along the Tuapse transect in August 1951	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=4381	2013-12-09 16:37:37.850	771
71	Phytoplankton data collected in the Black Sea in February 1957	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=4382	2013-12-09 16:37:37.900	550
72	Phytoplankton data collected during R/V Issledovatel cruise in September 1948	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=4383	2013-12-09 16:37:37.937	630
73	Phytoplankton data collected during a cruise in the Black Sea in May 1957	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=4386	2013-12-09 16:37:37.973	677
74	Zooplankton data collected during cruises on the R/V Knipovich in April 1950	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=4393	2013-12-10 11:02:51.967	774
75	Phytoplankton data collected near Yalta, Black Sea, in June 1950	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=4392	2013-12-10 11:02:52.003	989
76	Phytoplankton data collected during cruises on the R/V Knipovich in 1948 and 1950	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=4385	2013-12-10 11:02:52.040	1132
77	Phytoplankton data collected in deep waters of the halistatic region	http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=4388	2013-12-10 11:02:52.077	808

	of the Black Sea in September 1948			
78	Phytoplankton data from the Sukhumi region, Black Sea, collected in November 1948	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4391	2013-12-10 11:02:52.113	418
79	Phytoplankton data collected during R/V Issledovatel cruise in October 1948	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4384	2013-12-10 11:02:52.150	716
80	Zooplankton collected in the Black Sea during Cruise 5 in February 1957	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4378	2013-12-10 11:02:52.197	957
81	Zooplankton collected in the Black Sea along the Yalta-Batumi transect in February 1951	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4380	2013-12-10 11:02:52.243	1230
82	Zooplankton collected in the Northwestern Black Sea in 1952	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4377	2013-12-10 11:02:52.300	2846
83	Spatial distribution in sediment characteristics and benthic activity on the northwestern Black Sea shelf: macrobenthos	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=1204	2014-01-17 14:53:01.550	1036
84	Benthos collected in the Azov Sea during several expeditions in 1934-1935	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4379	2014-03-04 16:19:21.520	1258
85	Benthos collected in the Azov Sea in 1935 on board the R/V N. Danilevskiy	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4376	2014-03-04 16:26:14.337	1829
86	Phytoplankton data collected in the NW Black Sea along the Tarkhankut transect in April 1952	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4516	2014-03-04 16:28:33.350	658
87	Colección de referencia de otolitos, Instituto de Ciencias del Mar-CSIC	http://www.emodnet-biology.eu/data-catalog?module=dataset&dased=4015		1
	Total number of records			264723