



© Cover photo credits: European Space Agency (http://www.esa.int)

All maps and tables generated by EMSA based on CleanSeaNet data

NOTE REGARDING FIGURES CONTAINED IN THE CLEANSEANET 1ST GENERATION REPORT

All figures contained in the report were directly extracted from the CleanSeaNet data base. It can occasionally happen that these data appear inconsistent due to following issues:

- Images ordered by a coastal State often cover the alert area of another coastal State. Consequently, it may happen that spills are reported for a certain month for a neighbouring country while the list of acquisitions for the country does not show any acquisition for this month.
- Information regarding verification activities by the coastal States is extracted from feedback provided. Entering feedback in the system is the responsibility of each individual coastal State. It is important to highlight that missing feedback information can give a wrong impression of coastal State actions or of the service performance.

Spills detected by CleanSeaNet outside coastal States alert areas, were deliberately included in the "All Europe" figures. The only impact is that the total number of possible spills reported is bigger than the sum of the possible spills detected in each individual country. The overall rate of confirmation by Coastal States remains unchanged.

Information on verification rates was not provided because this rate can easily be misinterpreted. The rate of confirmation mentioned in the report, is the number of spills confirmed when detections are checked within less than 3 hours after satellite pass. This rate demonstrates the ability of CleanSeaNet to detect spills. A bar chart presenting this information is provided for each country.

• Please note that the total number of checked and of confirmed oil spills for each country are of course higher than the given numbers in the figure "Verification by aircraft less than 3 hours after detection".

Table of Contents

Introduction	4
The CleanSeaNet Service	4
Objectives	4
Operational results	5
Economic Benefits of Service Provision at European Level	5
CleanSeaNet from January 2011	5
All Europe	7
Country Profiles	11
Belgium	12
Bulgaria	14
Croatia	16
Cyprus	18
Denmark	20
Estonia	22
Finland	24
France	26
Germany	28
Greece	30
Ireland	32
Italy	34
Latvia	36
Lithuania	38
Malta	40
The Netherlands	42
Norway	44
Poland	46
Portugal	48
Romania	50
Slovenia	52
Spain	54
Sweden	56
United Kingdom	58

INTRODUCTION

This report presents an overview of the CleanSeaNet first generation service which was in operation from April 2007 to January 2011.

After a brief introduction presenting aggregated figures of the service at European level, results and activities are detailed for each of the coastal States using CleanSeaNet.

In December 2010 the second generation of the CleanSeaNet service was phased in, and it became fully operational in February 2011.

THE CLEANSEANET SERVICE

Directive 2005/35/EC, as later amended by Directive 2009/123/EC, on ship-source pollution and on the introduction of penalties, including criminal penalties, for pollution offences, tasked EMSA to "work with the Member States in developing technical solutions and providing technical assistance... in actions such as tracing discharges by satellite monitoring and surveillance." To fulfil this mandate, the Agency has set up and operates CleanSeaNet, the European satellite oil spill monitoring and vessel detection service.

The CleanSeaNet service is based on radar satellite images, covering all European sea areas, which are analysed in order to detect possible oil spills on the sea surface. When a possible oil spill is detected in national waters, an alert message is delivered to the relevant country. Analysed images are made available to national contact points within 30 minutes of the satellite passing overhead. The first generation of CleanSeaNet had access to three satellites via a network of 5 receiving ground stations throughout Europe, allowing wide areas to be monitored at regular time intervals.

The service entered into operation on 16 April 2007. CleanSeaNet supplements existing surveillance systems at national or regional level, strengthens Member States' response to illegal discharges and supports response operations in the case of accidental spills.

Since its launch in 2007, the service has been continually improved. Key developments have included the delivery of RADARSAT-2 images, the entry into service of the Azores ground station, and the integration of tools to support polluter identification such as the provision of vessel traffic information and oil drift model results.

OBJECTIVES

The two main objectives of the CleanSeaNet service are:

1. To support the European coastal States in responding to illegal discharges through routine monitoring of wide sea areas by:

- Identifying and tracing oil pollution on the sea surface;
- Contributing to the identification of polluters.
- 2. To support coastal State response operations during emergencies by monitoring accidental pollution.



CleanSeaNet satellite image of a possible oil discharge off the coast of Cyprus Satellite image © ESA (European Space Agency) / EMSA 2007

OPERATIONAL RESULTS

Prior to the launch of CleanSeaNet in 2007, the use of satellite images for pollution detection and identification of polluters was limited. Four years later, 72 authorised users in 24 coastal States¹ are using the service for pollution monitoring operations.

Key figures (16 April 2007 - 31 January 2011):

- Over 8,000 satellite images have been delivered, an average of over 2,000 images per year;
- The service was based on 3 polar orbiting SAR satellites: the European Space Agency's ENVISAT, and the Canadian Space Agency's RADARSAT-1 and RADARSAT-2;
- Image coverage density varies from 1-2 images per month in some areas to more than 20 images per month in others, based on coverage requirements defined by the coastal States;
- Over 1,000 million km² were monitored. To cover the same surface area with aerial surveillance would have required more than 50,000 flight hours;
- 8,866 possible spills were detected and reported by CleanSeaNet;
- On average, the trend is a global reduction in the number of possible spills detected in the images: from 1.38 possible spills identified per image in 2008 to 1.0 in 2009 and to 0.75 in 2010;

- 2,828 satellite detections were checked on site of which 745 were confirmed as mineral oil or other substance;
- 50% of spills checked by aircraft within 3 hours of satellite acquisition were confirmed²;
- Of the confirmed spills, 80% were mineral oil and 20% were other substances;
- CleanSeaNet provided emergency support for 10 accidental spills.

ECONOMIC BENEFITS OF SERVICE PROVISION AT EUROPEAN LEVEL

The CleanSeaNet service strengthens, in a cost-efficient way, the mechanisms set up in coastal States to address illegal discharges and to support coastal States' response to accidental pollution. The first generation of the service cost 2.7 million EUR per year, including development, implementation and maintenance of the service, satellite image licence prices, processing and analysis of the images, and the yearly fixed costs.

A collective system at European level gives advantages by optimising the use of resources and offering economies of scale as detailed below:

 Satellite monitoring to cover wide and/or remote areas is up to 10 times cheaper than aerial surveillance; The surface area covered by CleanSeaNet would have cost at least 30 million EUR to monitor by aircraft;

- By ordering a large number of images and data via centralised contracts³, a reduction of approximately 20% on the cost of image licences and of service provision was achieved;
- On average, one CleanSeaNet image covered the alerting area of 2.6 Member States. By ordering images centrally, it was therefore possible to significantly reduce the number of images needed to fulfil coastal States' national coverage requirements.

CLEANSEANET FROM JANUARY 2011

CleanSeaNet first generation contracts were due to expire at the beginning of 2011. To ensure the continuity of the service, EMSA put in place provisions for the second generation of CleanSeaNet.

The new service was designed taking into account the experience gained in previous years and recommendations from the users. The CleanSeaNet data centre, hosted and operated in-house by EMSA, has been fully operational since 1 February 2011. It offers a comprehensive and flexible system with a number of new features such as the implementation of nautical charts, a systematic vessel detection analysis, and the capacity to acquire longer satellite image segments.

¹ Belgium; Bulgaria; Croatia; Cyprus; Denmark; Estonia; Finland; France; Germany; Greece; Ireland; Italy; Latvia; Lithuania; Malta; the Netherlands; Norway; Poland; Portugal; Romania; Slovenia; Spain; Sweden; and the United Kingdom.

² Information on the time interval between satellite acquisition and on-site verification of possible spills is only available as of January 2009.

³ The first generation service was built upon two different types of contract: 1) for the acquisition of satellite image licences; and 2) for the provision of oil spill monitoring services.



A possible spill detected by CleanSeaNet close to the Balearic Islands was confirmed by aircraft as mineral oil. Satellite image © ESA (European Space Agency) / EMSA 2008 - Photo © SASEMAR 2008

All Europe

CleanSeaNet First Generation

16 April 2007 - 31 January 2011





CleanSeaNet image acquisitions - Annual							
Satellite	2007	2008	2009	2010	2011	Total	
ENVISAT	739	1309	1238	1399	68	4753	
RADARSAT-1	568	958	476	242	22	2266	
RADARSAT-2	0	130	398	725	116	1369	
TOTAL 1307 2397 2112 2366 206 8388							

Satellite detections - Annual								
Satellite	2007	2008	2009	2010	2011	Total		
Number of detections	1590	3311	2106	1766	93	8866		
Average number per image	1.22	1.38	1.00	0.75	N/A	N/A		

<u>Note</u>: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.





Detections and verifications - Monthly



CleanSeaNet alerted the Irish authorities about this spill off the coast of Ireland caused by a refuelling at sea incident involving the Russian aircraft carrier Admiral Kuznetsov (visible on both images). Satellite image © ESA (European Space Agency) / EMSA 2009 - Photo © Irish Coast Guard - MCA

Country Profiles

BELGIUM



BELGIUM

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011





Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	47	67	53	64	1	232
RADARSAT-1	39	63	25	9	0	136
RADARSAT-2	0	6	27	34	5	72
TOTAL	86	136	105	107	6	440

<u>Note</u>: Images ordered by neighbouring countries may partially cover the Belgian area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Belgium.

Satellite detections - Annual								
Satellite	2007	2008	2009	2010	2011	Total		
Number of detections	5	12	5	6	0	28		
Average number per image	0.06	0.09	0.05	0.06	N/A	N/A		



BULGARIA



BULGARIA

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011



Detections and verifications - Monthly

CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	6	40	38	39	1	124
RADARSAT-1	5	18	9	3	0	35
RADARSAT-2	0	0	1	10	2	13
TOTAL	11	58	48	52	3	172

<u>Note</u>: Images ordered by neighbouring countries may partially cover the Bulgarian area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Bulgaria.

Satellite detections - Annual								
Satellite	2007	2008	2009	2010	2011	Total		
Number of detections	10	88	75	56	3	232		
Average number per image	1.11	1.52	1.56	1.08	N/A	N/A		





CROATIA



CROATIA

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011





Detections and verifications - Monthly

CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	2	45	26	50	0	123
RADARSAT-1	1	27	37	13	0	78
RADARSAT-2	0	7	27	39	8	81
TOTAL	3	79	90	102	8	282

<u>Note</u>: Images ordered by neighbouring countries may partially cover the Croatian area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Croatia.

Satellite detections - Annual								
Satellite	2007	2008	2009	2010	2011	Total		
Number of detections	0	42	36	44	1	123		
Average number per image	0.00	0.53	0.40	0.43	N/A	N/A		







CYPRUS



CYPRUS



CleanSeaNet First Generation: 16 April 2007 - 31 January 2011



CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	41	55	25	20	0	141
RADARSAT-1	38	42	7	0	0	87
RADARSAT-2	0	0	1	4	0	5
TOTAL	77	97	33	24	0	231

Note: Images ordered by neighbouring countries may partially cover the Cypriot area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Cyprus.

Satellite detections - Annual								
Satellite	2007	2008	2009	2010	2011	Total		
Number of detections	139	243	67	56	0	505		
Average number per image	1.81	2.51	2.03	2.33	N/A	N/A		





DENMARK



DENMARK

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011





CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	171	311	284	265	15	1046
RADARSAT-1	149	255	141	94	4	643
RADARSAT-2	0	55	156	235	46	492
TOTAL	320	621	581	594	65	2181

Note: Images ordered by neighbouring countries may partially cover the Danish area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Denmark.

Satellite detections - Annual									
Satellite	2007	2008	2009	2010	2011	Total			
Number of detections	62	131	92	86	1	372			
Average number per image	0.19	0.21	0.16	0.14	N/A	N/A			



ESTONIA



ESTONIA

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011



CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	94	142	142	185	4	567
RADARSAT-1	56	111	56	12	0	235
RADARSAT-2	0	31	70	89	5	195
TOTAL	150	284	268	286	9	997

<u>Note</u>: Images ordered by neighbouring countries may partially cover the Estonian area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Estonia.

Satellite detections - Annual									
Satellite	2007	2008	2009	2010	2011	Total			
Number of detections	45	44	20	19	0	128			
Average number per image	0.30	0.15	0.07	0.07	N/A	N/A			

<u>Note</u>: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.



Detections and verifications - Monthly



FINLAND



FINLAND

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011





CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	89	98	115	181	4	487
RADARSAT-1	55	82	37	11	0	185
RADARSAT-2	0	19	43	81	4	147
TOTAL	144	199	195	273	8	819

<u>Note</u>: Images ordered by neighbouring countries may partially cover the Finnish area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Finland.

Satellite detections - Annual									
Satellite	2007	2008	2009	2010	2011	Total			
Number of detections	21	23	7	13	0	64			
Average number per image	0.15	0.12	0.04	0.05	N/A	N/A			

<u>Note</u>: Images ordered by neighbouring countries may partially cover the French area of interest.



FRANCE



FRANCE

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011





CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	141	224	219	271	3	858
RADARSAT-1	104	192	83	32	1	412
RADARSAT-2	0	20	69	151	26	266
TOTAL	245	436	371	454	30	1536

<u>Note</u>: Images ordered by neighbouring countries may partially cover the French area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by France.

Satellite detections - Annual									
Satellite	2007	2008	2009	2010	2011	Total			
Number of detections	62	131	92	86	1	372			
Average number per image	0.25	0.30	0.25	0.19	N/A	N/A			



GERMANY



GERMANY

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011





CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	151	248	251	241	13	904
RADARSAT-1	122	206	117	91	4	540
RADARSAT-2	0	43	117	212	39	411
TOTAL	273	497	485	544	56	1855

<u>Note</u>: Images ordered by neighbouring countries may partially cover the German area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Germany.

Satellite detections - Annual									
Satellite	2007	2008	2009	2010	2011	Total			
Number of detections	59	117	61	50	2	289			
Average number per image	0.22	0.24	0.13	0.09	N/A	N/A			



GREECE



GREECE

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011



Detections and verifications - Monthly

CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	77	154	150	145	9	535
RADARSAT-1	59	117	37	8	0	221
RADARSAT-2	0	0	4	47	8	59
TOTAL	136	271	191	200	17	815

<u>Note</u>: Images ordered by neighbouring countries may partially cover the Greek area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Greece.

Satellite detections - Annual									
Satellite	2007	2008	2009	2010	2011	Total			
Number of detections	290	425	303	270	16	1304			
Average number per image	2.13	1.57	1.59	1.35	N/A	N/A			





IRELAND



IRELAND

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011





CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	32	60	64	92	0	248
RADARSAT-1	18	35	18	5	0	76
RADARSAT-2	0	0	17	29	10	56
TOTAL	50	95	99	126	10	380

Note: Images ordered by neighbouring countries may partially cover the Irish area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Ireland.

Satellite detections - Annual								
Satellite	2007	2008	2009	2010	2011	Total		
Number of detections	1	18	13	8	1	41		
Average number per image	0.02	0.19	0.13	0.06	N/A	N/A		



ITALY



ITALY

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011



Detections and verifications - Monthly

CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	23	152	76	116	1	368
RADARSAT-1	35	134	80	25	0	274
RADARSAT-2	0	12	44	108	21	185
TOTAL	58	298	200	249	22	827

<u>Note</u>: Images ordered by neighbouring countries may partially cover the Italian area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Italy.

Satellite detections - Annual								
Satellite	2007	2008	2009	2010	2011	Total		
Number of detections	25	374	180	218	16	813		
Average number per image	0.43	1.26	0.90	0.88	N/A	N/A		




LATVIA



LATVIA

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011



Detections and verifications - Monthly

CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	117	187	179	230	4	717
RADARSAT-1	77	134	61	10		282
RADARSAT-2		30	89	98	12	229
TOTAL	194	351	329	338	16	1228

Note: Images ordered by neighbouring countries may partially cover the Latvian area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Latvia.

Satellite detections - Annual									
Satellite	2007	2008	2009	2010	2011	Total			
Number of detections	16	21	19	3	0	59			
Average number per image	0.08	0.06	0.06	0.01	N/A	N/A			

Note: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.





2011

LITHUANIA



LITHUANIA

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011





Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	59	110	96	106	1	372
RADARSAT-1	47	88	42	4	0	181
RADARSAT-2	0	18	62	50	8	138
TOTAL	106	216	200	160	9	691

Note: Images ordered by neighbouring countries may partially cover the Lithuanian area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Lithuania.

Satellite detections - Annual									
Satellite	2007	2008	2009	2010	2011	Total			
Number of detections	0	5	1	1	0	7			
Average number per image	0.00	0.02	0.01	0.01	N/A	N/A			

Note: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.



MALTA



MALTA

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011



CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	3	48	33	38	2	124
RADARSAT-1	10	23	28	5	0	66
RADARSAT-2	0	2	14	20	2	38
TOTAL	13	73	75	63	4	228

<u>Note</u>: Images ordered by neighbouring countries may partially cover the Maltese area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Malta.

Satellite detections - Annual									
Satellite	2007	2008	2009	2010	2011	Total			
Number of detections	0	33	30	23	1	87			
Average number per image	0.00	0.45	0.40	0.37	N/A	N/A			

<u>Note</u>: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.



Detections and verifications - Monthly



THE NETHERLANDS



THE NETHERLANDS

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011





CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	97	139	124	121	12	493
RADARSAT-1	100	172	66	42	0	380
RADARSAT-2	0	23	74	118	23	238
TOTAL	197	334	264	281	35	1111

<u>Note</u>: Images ordered by neighbouring countries may partially cover the Dutch area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by The Netherlands.

Satellite detections - Annual									
Satellite	2007	2008	2009	2010	2011	Total			
Number of detections	80	189	121	109	2	501			
Average number per image	0.41	0.57	0.46	0.39	N/A	N/A			

<u>Note</u>: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.



NORWAY



NORWAY

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011





Detections and verifications - Monthly

CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	68	297	276	228	31	900
RADARSAT-1	17	69	47	17		150
RADARSAT-2		17	50	88	13	168
TOTAL	85	383	373	333	44	1218

Note: Images ordered by neighbouring countries may partially cover the Norwegian area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Norway.

Satellite detections - Annual									
Satellite	2007	2008	2009	2010	2011	Total			
Number of detections	13	82	39	23	1	158			
Average number per image	0.15	0.21	0.10	0.07	N/A	N/A			

Note: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.



2011

POLAND



POLAND

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011



CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	97	177	175	171	2	622
RADARSAT-1	74	157	92	38	2	363
RADARSAT-2		34	93	124	17	268
TOTAL	171	368	360	333	21	1253

<u>Note</u>: Images ordered by neighbouring countries may partially cover the Polish area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Poland.

Satellite detections - Annual									
Satellite	2007	2008	2009	2010	2011	Total			
Number of detections	14	44	31	48	1	138			
Average number per image	0.08	0.12	0.09	0.14	N/A	N/A			

<u>Note</u>: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.



Detections and verifications - Monthly 18 16 Number of possible spills 14 12 10 6 2 0 + 04 05 06 07 08 09 10 11 12 01 02 03 04 05 06 07 08 09 10 11 12 01 02 03 04 05 06 07 08 09 10 11 12 01 02 03 04 05 06 07 08 09 10 11 12 01 2007 2008 2009 2010 2011 Satellite detection Detection checked Detection confirmed

PORTUGAL



PORTUGAL

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011





Detections and verifications - Monthly

CleanSeaNet image acquisitions - Annual

e . III.	0007			0040	0044	1
Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	15	84	131	189	8	427
RADARSAT-1	26	84	28	55	14	207
RADARSAT-2	0	12	25	9	0	46
TOTAL	41	180	184	253	22	680

Note: Images ordered by neighbouring countries may partially cover the Portuguese area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Portugal.

Satellite detections - Annual								
Satellite	2007	2008	2009	2010	2011	Total		
Number of detections	30	97	81	57	6	271		
Average number per image	0.73	0.54	0.44	0.23	N/A	N/A		

Note: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.





ROMANIA



ROMANIA

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011



CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	8	40	38	39	1	126
RADARSAT-1	7	18	9	3	0	37
RADARSAT-2	0	0	1	10	2	13
TOTAL	15	58	48	52	3	176

<u>Note</u>: Images ordered by neighbouring countries may partially cover the Romanian area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Romania.

Satellite detections - Annual								
Satellite	2007	2008	2009	2010	2011	Total		
Number of detections	8	69	49	37	0	163		
Average number per image	0.53	1.19	1.02	0.71	N/A	N/A		

<u>Note</u>: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.



Detections and verifications - Monthly



SLOVENIA



SLOVENIA

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011



CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	4	39	1	20	0	64
RADARSAT-1	7	25	27	13	0	72
RADARSAT-2	0	7	20	33	7	67
TOTAL	11	71	48	66	7	203

Note: Images ordered by neighbouring countries may partially cover the Slovenian area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Slovenia.

Satellite detections - Annual								
Satellite	2007	2008	2009	2010	2011	Total		
Number of detections	0	0	0	0	0	0		
Average number per image	0.00	0.00	0.00	0.00	N/A	N/A		

Note: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.



SPAIN



SPAIN

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011





CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	80	159	238	286	6	769
RADARSAT-1	71	127	55	49	12	314
RADARSAT-2	0	18	39	43	7	107
TOTAL	151	304	332	378	25	1190

Note: Images ordered by neighbouring countries may partially cover the Spanish area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Spain.

Satellite detections - Annual								
Satellite	2007	2008	2009	2010	2011	Total		
Number of detections	135	204	184	130	6	659		
Average number per image	0.89	0.67	0.55	0.34	N/A	N/A		

<u>Note</u>: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.



SWEDEN



SWEDEN

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011





Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	192	299	303	330	7	1131
RADARSAT-1	173	265	153	55	4	650
RADARSAT-2	0	64	175	206	31	476
TOTAL	365	628	631	591	42	2257

<u>Note</u>: Images ordered by neighbouring countries may partially cover the Swedish area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by Sweden.

Satellite detections - Annual								
Satellite	2007	2008	2009	2010	2011	Total		
Number of detections	99	178	121	48	9	455		
Average number per image	0.27	0.28	0.19	0.08	N/A	N/A		

<u>Note</u>: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.



5





UNITED KINGDOM

CleanSeaNet First Generation: 16 April 2007 - 31 January 2011







CleanSeaNet image acquisitions - Annual

Satellite	2007	2008	2009	2010	2011	Total
ENVISAT	227	346	327	368	20	1288
RADARSAT-1	116	225	97	35	0	473
RADARSAT-2	0	19	84	179	35	317
TOTAL	343	590	508	582	55	2078

<u>Note</u>: Images ordered by neighbouring countries may partially cover the British area of interest. They are nevertheless counted towards the total even if their acquisition was not requested by United Kingdom.

Satellite detections - Annual						
Satellite	2007	2008	2009	2010	2011	Total
Number of detections	142	241	185	136	14	718
Average number per image	0.41	0.41	0.36	0.23	N/A	N/A

<u>Note</u>: As figures for 2011 refer only to January, the average number of possible spills detected per image would not be representative and is therefore not calculated.





About EMSA

The European Maritime Safety Agency is one of the European Union's decentralised agencies. Based in Lisbon, the Agency provides technical assistance and support to the European Commission and Member States in the development and implementation of EU legislation on maritime safety, pollution by ships and maritime security. It has also been given operational tasks in the field of oil pollution response, vessel monitoring and long-range identification and tracking of vessels.

www.emsa.europa.eu



EUROPEAN MARITIME SAFETY AGENCY