



EMODnet Coastal Mapping Project

Tender no MARE/2014/10

Contract Number no
EASME/EMFF/2014/1.3.1.4/SI2.708188

Tri-monthly Report

Reporting Period: 26/02/2017 – 15/07/2017

Date: 20/07/2017

1. Highlights in this reporting period

Provide a summary of the key achievements and noteworthy progress within this reporting period.

Since the signature of the 2nd amendment of the service contract, the reporting period is modified from bi-monthly to quarterly periods. Accordingly and in order to be aligned with the other EMODnet projects, the next progress report was due by mid-April but, as the last one was produced in end-February, it was agreed with EASME to skip it and to wait the next term. So, this progress report covers the period from end-February to mid-July. The next one will cover the next three months.

This period was mainly devoted to the promotion of the project after the meetings held by the CPMR with its Regions and the European Parliament's "The Seas, Rivers, Islands and Coastal Areas" (SEARICA) Intergroup, in particular at the occasion of the MSP Conference "Addressing Land-Sea Interactions". Moreover, the final report and the executive summary were approved on 13 March. The project is now in the maintenance period.

SHOM was invited to present the project results at a two-day MSP Conference "Addressing Land-Sea Interactions" in St. Julian's, Malta on 15-16 June 2017 (<http://msp-platform.eu/events/photos-presentations-available-msp-conference-addressing-land-sea-interactions>). National experts and MSP practitioners exchanged experiences and knowledge during three interactive sessions focusing on key LSI issues in specific countries/contexts, strengths and weaknesses of sub-national approaches to LSI and the LSI issues faced by participants. A total of 15 presentations were given during the panel sessions "Introduction to LSI", "Sub-national approaches to LSI", "National and sea-basin approaches to LSI" and "Sectoral approaches to LSI and specific tools". The Coastal Mapping project results were presented during the last session "Coastal data for IMP (Integrated Maritime Policies)". This presentation was the occasion to recall the main results and recommendations of the project and to highlight the necessity for the maritime policies like Maritime Spatial Planning in the Land-Sea interface, to use accurate and validated data and to promote the proposition of EU strategy for acquisition of HR bathymetric data.

The coordinator received on 27 February comments and questions from EASME on the final report and on the executive summary submitted on 6 January 2017. He sent the answers and the updated final report and executive summary on 7 March. The final report and the executive summary were approved on 13 March and the interim payment was made to SHOM just after. This payment is currently distributed to all the partners.

2. Specific challenges or difficulties encountered during the reporting period

Please list specific problems you have encountered during this period, including related to technical and data provision issues

Nothing to report.

3. Meetings held since last report [if any]

List here the meetings held/participated since the last bi-monthly report, if relevant add short description

| Date | Location | Topic | Short Description |
|---------------|-------------------|----------------------------------|---------------------------|
| 15-16/06/2017 | St Julian's (MAL) | Addressing Land-Sea Interactions | [external] MSP Conference |
| | | | |
| | | | |

4. User Feedback [if any]

List any useful feedback you received on your activities and/or your portal or those of other EMODnet projects/activities. Also provide any suggestions you have received for EMODnet case studies and/or future products/activities/events.

| Date | Name | Organization | Type of user feedback | Response time to address user request |
|------------|----------------|---------------|----------------------------|---------------------------------------|
| 29/05/2017 | Sakari MARTIMO | MoD - Finland | Charting the Arctic seabed | One day |

This feedback is more detailed in annex 2.

5. Outreach and communication activities [if any]

Please list all the relevant communications activities or products you have developed/executed during this period (including presentations, lectures, trainings, demonstrations and development of communication materials such as brochures, videos, etc.). Relevant scientific and/or popular articles you know have been published using/referring to EMODnet should be reported under indicator 11 in Section 7.

| Date | Media | Title | Short description and/or link to the activity |
|------|-------|-------|---|
| | | | |
| | | | |
| | | | |

Nothing to report.

6. User statistics

Please provide as much information about the usage of your portal as possible once it is operational (page visits, downloads, etc.).

The only statistics refer to the users' visits of the website (see Annex 3).

6.1. Website global statistics

The statistics are more detailed in Annex 3.

| Period | Unique visitors | Number of visits | Pages |
|-------------------|-----------------|------------------|-------|
| 26/02/17-15/07/17 | 576 | 760 | 1229 |

| Country | Sessions | Pages/session |
|---------|----------|---------------|
| France | 239 | 1.78 |
| Italy | 107 | 1.56 |

| | | |
|----------------|----|------|
| United Kingdom | 56 | 1.59 |
| Netherlands | 43 | 1.60 |
| Belgium | 42 | 1.40 |
| Spain | 37 | 1.35 |
| United States | 36 | 1.03 |
| Germany | 20 | 2.35 |
| Ireland | 20 | 1.60 |
| Portugal | 17 | 2.41 |

| Service Provider | Sessions | Pages/session |
|--|----------|---------------|
| service hydrographique et oceanographique de la marine | 89 | 1.38 |
| worldline france hosting | 77 | 1.86 |
| (not set) | 24 | 1.25 |
| ovh hosting inc. | 17 | 1.00 |
| infrastructure for fastwebs main location | 14 | 1.14 |
| ministerie van verkeer en waterstaat/rijkswaterstaat | 14 | 1.29 |
| celeste sas | 11 | 1.09 |
| consiglio nazionale delle ricerche | 10 | 2.40 |
| vlaamse overheid | 10 | 1.20 |
| amazon technologies inc. | 9 | 1.00 |

Annex 1: Datasets available through the portal

These datasets are grouped in five categories: Coastline-Baseline, Topography&Bathymetry, Imagery, EMODnet and Additional Layers.

COASTLINE – BASELINE (11 datasets):

| Name/Type of data | Area of interest | Provider |
|---|------------------|---------------------------|
| <i>EEA Coastline</i> | | |
| EEA Coastline | EU | EEA |
| <i>HIGHEST ASTRONOMICAL TIDE LEVEL</i> | | |
| France coastline | France | SHOM |
| <i>INTERTIDAL AREA</i> | | |
| Belgium Coastline | Belgium | MDK |
| Ireland Coastline | Ireland | GSI |
| Romania Coastline 1970 | Romania | DDNI |
| <i>LEGAL BASELINE</i> | | |
| Belgium Legal Baseline | Belgium | MDK |
| Greece Coastline | Greece | HNHS |
| Portugal Coastline | Portugal | IHPT |
| Romania Coastline | Romania | DDNI |
| <i>MEAN SEA LEVEL</i> | | |
| Coastline Crowdsourcing Results | Europe | Crowd |
| Sweden Coastline | Sweden | Lantmäteriet ¹ |

¹ : Swedish mapping, cadastral and land registration authority

TOPOGRAPHY & BATHYMETRY (30 datasets):

| Name/Type of data | Area of interest | Provider |
|--------------------------------------|------------------|----------|
| <i>EMODNET BATHYMETRY DTM</i> | | |
| Greece DTM | Greece | HNHS |
| <i>HIGH RESOLUTION DTM</i> | | |
| Belgium Single Beam | Belgium | MDK |
| France 10m DTM – Boulogne-sur-Mer | France | SHOM |
| France 20m DTM - Morbihan | France | SHOM |
| France 20m DTM – Pertuis Charentais | France | SHOM |
| Germany 1m DTM | Germany | BSH |

| | | |
|--|-----------------------|------|
| Greece DTM 90K | Greece | HNHS |
| Italy 1m DTM Ligurian Sea | Italy | IIM |
| Italy 1m DTM Sardinia | Italy | IIM |
| Netherlands 5m DTM LIDAR | Netherlands | RWS |
| Norway 10m DTM | Norway | NMA |
| Romania 5m DTM | Romania | DDNI |
| LAND-SEA SEAMLESS DTM | | |
| Belgium Lidar | Belgium | MDK |
| France Coastal DTM – Finistère 2014 | France | SHOM |
| France Coastal DTM – Languedoc-Roussillon 2009 | France | SHOM |
| France Coastal DTM – PACA 2015 | France | SHOM |
| Germany 50m DTM | Germany | BSH |
| Ireland 20m Shaded Relief Image | Ireland | GSI |
| Ireland 30m DTM | Ireland | GSI |
| Ireland 30m shaded Relief Image Donegal | Donegal (IRL) | GSI |
| Ireland 5m Coastal DTM Bantry & Dunmanus | Bantry/Dunmanus (IRL) | GSI |
| Ireland 8m Shaded Relief Image Bantry & Dunmanus | Bantry/Dunmanus (IRL) | GSI |
| Netherlands 20m DTM | Netherlands | RWS |
| Portugal DTM | Portugal | IHPT |
| Romania 500M DTM 1970 | Romania | DDNI |
| LOW RESOLUTION BATHYMETRY DTM | | |
| Baltic Sea 500m Shaded elevations | Baltic Sea | BSHC |
| Baltic Sea 500m Bathymetry watercolour | Baltic Sea | BSHC |
| MEDIUM RESOLUTION DTM | | |
| France 100m DTM – Atlantic coast | France | SHOM |
| France 100m DTM - Corse | France | SHOM |
| France 100m DTM – Lion Gulf / Côte d’Azur | France | SHOM |

EMODNET (2 datasets):

| Name/Type of data | Area of interest | Provider |
|---------------------------|------------------|----------|
| EMODNET BATHYMETRY | | |
| EMODnet Bathymetry | Europe | EMODnet |
| EMODNET HABITATS | | |
| EMODnet Seabed Habitats | Europe | EMODnet |

ADDITIONAL LAYERS (18 datasets):

| Name/Type of data | Area of interest | Provider |
|-------------------------------|-----------------------|----------|
| BACKSCATTERS | | |
| Ireland 10m Backscatter Image | Bantry/Dunmanus (IRL) | GSI |

| | | |
|---|-----------------------|--------------------------|
| BASEMAPS | | |
| EMODnet Bathymetry with GEBCO 2014 (merged) | Europe | EMODnet Bathymetry/GEBCO |
| Secchi Disk Depth statistics | Europe | COPERNICUS |
| DATA QUALITY AND SURVEY PLANS | | |
| Sweden surveys before 1940 | Sweden | SMA |
| Sweden surveys after 1940 | Sweden | SMA |
| OPPORTUNITIES FOR DATA FUNDING | | |
| EU Strategies | Europe | CPMR |
| Interreg VA | Europe | CPMR |
| Interreg VB | Europe | CPMR |
| HABITATS MAPPING | | |
| Italy Dune Cover 3m 2009 Sabaudia | Italy | ISPRA |
| SEABED COVER | | |
| Italy Bottom Type 3m 2009 Montalto | Italy | ISPRA |
| Italy Seabed Cover 3m 2009 Montalto | Italy | ISPRA |
| SEDIMENTS MAPPING | | |
| Ireland Bantry 10m Seabed Classification | Bantry/Dunmanus (IRL) | GSI |
| Ireland Samples | Ireland | GSI |
| Ireland Samples PSA | Ireland | GSI |
| Ireland Samples PSA Non INFOMAR | Ireland | GSI |
| SUITABILITY OF THE SURVEY TECHNOLOGIES | | |
| CMP.Geo – Airborn Hyperspectral | Europe | ISPRA |
| CMP.Geo - Lidar | Europe | ISPRA |
| CMP.Geo - Multibeam | Europe | ISPRA |

IMAGERY (3 datasets):

| Name/Type of data | Area of interest | Provider |
|---|-----------------------|----------|
| AERIAL PHOTOGRAPHY | | |
| France Coastal Imagery | France | SHOM |
| Ireland Coastal Imagery 2006 Bantry & Dunmanus (merged) | Bantry/Dunmanus (IRL) | GSI |
| Romania 1m Orthophotos | Romania | DDNI |

Annex 2: User feedback

Le 29/05/2017 10:31, Sakari MARTIMO a écrit :

Hello, I work in the MoD, Finland and because of our Arctic related project I'm interested in to learn more about EMODnet's project related to charting the Arctic sea bed. The "tasker" (to provide multi-resolution map of the entire seabed). derives from the EU's Joint Arctic Communication 2016. So, could you kindly guide me to the source papers or persons. As it happens, I'll travel to Brussels next week Wed 5 Jun and could meet your people if possible or relevant (if you are located in Brussels?).

B.R. Sakari

Le 30/05/2017 10:40, Gaël Morvan a écrit :

Dear Sakari,

the EMODnet initiative takes into account several purposes which are describe there :

<http://emodnet.eu/>

In particular, several projects deal with specific thematic : bathymetry, physics, chemistry, human activities,.... The Coastal Mapping project (which I'm in charge of) is more dedicated to survey technics and ways to fund them.

Maybe I'm wrong, but I guess you could be interested in bathymetry datasets. I invite you to have a look at the EMODnet bathymetry website (<http://www.emodnet-bathymetry.eu/>) and eventually to contact the project team (<http://www.emodnet-bathymetry.eu/contact>).

Best regards,

Gaël

Le 30/05/2017 14:29, Sakari.Martimo@defmin.fi a écrit :

Dear Gael,

Thank you very much for your quick reply and information. And yes, the bathymetry is perhaps the most interesting area for me at the moment.

Anyway, what would be really interesting for my project is to know what is the status of the mapping project mentioned in the EU's Joint Arctic Communication 2016. I have copied part of the Communication text below.

"...the European Commission has set out a target to develop a multi-resolution map of the entire seabed and overlying water column by 2020. This project will include the Barents Sea from 2018. Over 100 organisations, including from Iceland, Norway and Russia, are working together under the European Marine Observation and Data Network (EMODnet) to make their marine data more accessible, interoperable and useful to end-users. Data will be available through a single web portal. ..."



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So, is the project succeeding to gain the goal also up North? Who would be the end users of the EMODnet (bathymetry) products? Are there plans to map Arctic Sea beyond the Barents Sea as stated in the text? Is the data received only from those 100 plus organisations or does the EMOD net plan to have her own mapping operations or for example coordinate mapping in areas which are poorly mapped?

Sorry for this burst of questions. If you think that It's better to discuss about these with the project team, please advise.

Best regards

Sakari

Le 30/05/2017 15:08, Gaël Morvan a écrit :

Dear Sakari,

I definitely forward this e-mail to Thierry Schmitt who is the EMODnet Bathymetry project coordinator and who will be, I think, the right person to adress your request.

Best regards,

Gaël

Annex 3: Global website statistics

| Period | Users | Sessions | Pageviews | Pages/session | Avg session duration |
|-------------------|-------|----------|-----------|---------------|----------------------|
| 26/02/17-15/07/17 | 576 | 760 | 1229 | 1.62 | 00:01:31 |

| Country | Sessions | Pageviews | Pages/session | Avg session duration |
|----------------|----------|-----------|---------------|----------------------|
| France | 239 | 425 | 1.78 | 0:01:56 |
| Italy | 107 | 167 | 1.56 | 0:01:24 |
| United Kingdom | 56 | 89 | 1.59 | 0:01:14 |
| Netherlands | 43 | 69 | 1.60 | 0:00:56 |
| Belgium | 42 | 59 | 1.40 | 0:01:04 |
| Spain | 37 | 50 | 1.35 | 0:00:45 |
| United States | 36 | 37 | 1.03 | 0:00:22 |
| Germany | 20 | 47 | 2.35 | 0:03:27 |
| Ireland | 20 | 32 | 1.60 | 0:00:36 |
| Portugal | 17 | 41 | 2.41 | 0:06:47 |
| Greece | 14 | 16 | 1.14 | 0:01:10 |
| Brazil | 13 | 14 | 1.08 | 0:00:26 |
| Norway | 11 | 13 | 1.18 | 0:00:11 |
| Slovenia | 10 | 14 | 1.40 | 0:00:43 |
| Malta | 9 | 17 | 1.89 | 0:02:14 |
| Denmark | 8 | 15 | 1.88 | 0:02:44 |
| Finland | 8 | 15 | 1.88 | 0:03:03 |
| Canada | 5 | 6 | 1.20 | 0:00:59 |
| Israel | 5 | 7 | 1.40 | 0:00:05 |
| Morocco | 5 | 6 | 1.20 | 0:01:10 |

| | | | | |
|-------------|---|----|------|---------|
| Sweden | 5 | 6 | 1.20 | 0:00:52 |
| Croatia | 4 | 6 | 1.50 | 0:00:43 |
| Romania | 4 | 6 | 1.50 | 0:00:13 |
| (not set) | 4 | 4 | 1.00 | 0:00:00 |
| Egypt | 3 | 4 | 1.33 | 0:01:25 |
| South Korea | 3 | 5 | 1.67 | 0:00:13 |
| Argentina | 2 | 2 | 1.00 | 0:00:00 |
| Bulgaria | 2 | 3 | 1.50 | 0:00:02 |
| Georgia | 2 | 3 | 1.50 | 0:01:26 |
| Latvia | 2 | 10 | 5.00 | 0:03:29 |
| Monaco | 2 | 2 | 1.00 | 0:00:00 |
| Malaysia | 2 | 3 | 1.50 | 0:00:10 |
| Peru | 2 | 2 | 1.00 | 0:00:00 |
| Russia | 2 | 10 | 5.00 | 0:02:31 |
| Turkey | 2 | 6 | 3.00 | 0:02:08 |
| Austria | 1 | 1 | 1.00 | 0:00:00 |
| Australia | 1 | 1 | 1.00 | 0:00:00 |
| Cyprus | 1 | 1 | 1.00 | 0:00:00 |
| Algeria | 1 | 1 | 1.00 | 0:00:00 |
| India | 1 | 1 | 1.00 | 0:00:00 |
| Iceland | 1 | 3 | 3.00 | 0:02:14 |
| Jamaica | 1 | 1 | 1.00 | 0:00:00 |
| Libya | 1 | 1 | 1.00 | 0:00:00 |
| Montenegro | 1 | 1 | 1.00 | 0:00:00 |
| Mexico | 1 | 1 | 1.00 | 0:00:00 |
| Poland | 1 | 3 | 3.00 | 0:00:36 |
| Réunion | 1 | 1 | 1.00 | 0:00:00 |
| Thailand | 1 | 1 | 1.00 | 0:00:00 |
| Taiwan | 1 | 1 | 1.00 | 0:00:00 |

| Service Provider | Sessions | Pageviews | Pages/session | Avg session duration |
|--|----------|-----------|---------------|----------------------|
| service hydrographique et oceanographique de la marine | 89 | 123 | 1.38 | 0:00:42 |
| worldline france hosting | 77 | 143 | 1.86 | 0:03:49 |
| (not set) | 24 | 30 | 1.25 | 0:00:34 |
| ovh hosting inc. | 17 | 17 | 1.00 | 0:00:00 |
| infrastructure for fastwebs main location | 14 | 16 | 1.14 | 0:00:02 |
| ministerie van verkeer en waterstaat/rijkswaterstaat | 14 | 18 | 1.29 | 0:00:55 |
| celeste sas | 11 | 12 | 1.09 | 0:00:15 |
| consiglio nazionale delle ricerche | 10 | 24 | 2.40 | 0:01:58 |
| vlaamse overheid | 10 | 12 | 1.20 | 0:00:08 |
| amazon technologies inc. | 9 | 9 | 1.00 | 0:00:00 |
| istituto superiore per la protezione e la ricerca ambientale | 9 | 12 | 1.33 | 0:03:15 |
| universita degli studi di trieste | 8 | 9 | 1.13 | 0:00:11 |
| geodetski institut slovenije | 7 | 10 | 1.43 | 0:00:21 |
| innotec-001 public subnet | 7 | 8 | 1.14 | 0:00:09 |
| the university of plymouth | 7 | 7 | 1.00 | 0:00:00 |
| universita degli studi di napoli federico ii | 7 | 10 | 1.43 | 0:04:40 |
| bundesamt fuer seeschiffahrt und hydrographie | 6 | 27 | 4.50 | 0:06:20 |
| wind telecomunicazioni s.p.a | 6 | 11 | 1.83 | 0:01:15 |
| direction interministerielle des systemes d information et de co | 5 | 12 | 2.40 | 0:00:33 |
| messagelabs limited | 5 | 15 | 3.00 | 0:02:57 |
| proxad / free sas | 5 | 20 | 4.00 | 0:04:51 |
| 1&1 versatel deutschland gmbh | 4 | 8 | 2.00 | 0:06:20 |

| | | | | |
|---|---|----|------|---------|
| alma mater studiorum universita di bologna | 4 | 5 | 1.25 | 0:00:06 |
| bundesverwaltung fuer verkehr- bau und wohnungswesen | 4 | 4 | 1.00 | 0:00:00 |
| cableuropa - ono | 4 | 4 | 1.00 | 0:00:00 |
| commission europeenne | 4 | 8 | 2.00 | 0:00:41 |
| conseil regional de haute normandie | 4 | 13 | 3.25 | 0:01:32 |
| destiny n.v | 4 | 4 | 1.00 | 0:00:00 |
| dynamic pools | 4 | 12 | 3.00 | 0:05:38 |
| flanders marine institute | 4 | 6 | 1.50 | 0:02:33 |
| internet service provider | 4 | 6 | 1.50 | 0:00:11 |
| red de servicios ip | 4 | 7 | 1.75 | 0:00:34 |
| scansafe services llc | 4 | 4 | 1.00 | 0:00:00 |
| telefonica de espana sau | 4 | 4 | 1.00 | 0:00:00 |
| timico limited | 4 | 4 | 1.00 | 0:00:00 |
| university college galway | 4 | 11 | 2.75 | 0:01:20 |
| valtiokonttori/vip | 4 | 9 | 2.25 | 0:02:40 |
| vodafone portugal - comunicacoes pessoais s.a. | 4 | 12 | 3.00 | 0:14:42 |
| customer nets | 3 | 4 | 1.33 | 0:00:03 |
| haifa university | 3 | 5 | 1.67 | 0:00:09 |
| Inaub656 aubervilliers bloc 1 | 3 | 8 | 2.67 | 0:01:05 |
| Innly656 neuilly bloc 2 | 3 | 11 | 3.67 | 0:02:16 |
| metronet telekomunikacije d.d. | 3 | 4 | 1.33 | 0:00:19 |
| national maritime administration | 3 | 3 | 1.00 | 0:00:00 |
| natural environment research council (nerc) | 3 | 3 | 1.00 | 0:00:00 |
| nos comunicacoes s.a. | 3 | 7 | 2.33 | 0:03:44 |
| nos madeira comunicacoes s.a | 3 | 4 | 1.33 | 0:02:07 |
| orange spain network | 3 | 4 | 1.33 | 0:00:28 |

| | | | | |
|---|---|----|------|---------|
| rabat_3g_maroctelecom | 3 | 4 | 1.33 | 0:01:57 |
| scottish common services agency | 3 | 3 | 1.00 | 0:00:00 |
| skov og naturstyrelsen | 3 | 7 | 2.33 | 0:05:06 |
| te data | 3 | 4 | 1.33 | 0:01:25 |
| telecom italia s.p.a. tin easy lite | 3 | 3 | 1.00 | 0:00:00 |
| universita iuav di venezia | 3 | 3 | 1.00 | 0:00:00 |
| xarxa informatica de la | 3 | 3 | 1.00 | 0:00:00 |
| xs4all internet bv | 3 | 10 | 3.33 | 0:00:29 |
| a3137-00004-001 | 2 | 4 | 2.00 | 0:01:10 |
| adsl llu pools | 2 | 2 | 1.00 | 0:00:00 |
| adsl_maroc_telecom | 2 | 2 | 1.00 | 0:00:00 |
| adsl-pro | 2 | 4 | 2.00 | 0:12:07 |
| belnet | 2 | 3 | 1.50 | 0:00:05 |
| bsren655 rennes bloc 2 | 2 | 3 | 1.50 | 0:00:05 |
| cbizz b.v. | 2 | 3 | 1.50 | 0:00:10 |
| celcom internet service provider | 2 | 3 | 1.50 | 0:00:10 |
| commission of the european communities | 2 | 2 | 1.00 | 0:00:00 |
| cox communications inc. | 2 | 2 | 1.00 | 0:00:00 |
| customer allocation - internet service | 2 | 3 | 1.50 | 0:00:30 |
| customers asker | 2 | 2 | 1.00 | 0:00:00 |
| customers ie | 2 | 2 | 1.00 | 0:00:00 |
| delta-net infrastructure network | 2 | 3 | 1.50 | 0:01:26 |
| edinburgh university local area network | 2 | 2 | 1.00 | 0:00:00 |
| edp - energias de portugal s.a. | 2 | 5 | 2.50 | 0:10:23 |
| eircom | 2 | 2 | 1.00 | 0:00:00 |
| end-user interco | 2 | 2 | 1.00 | 0:00:00 |
| fastwb staff public subnet | 2 | 4 | 2.00 | 0:00:08 |
| free sas | 2 | 2 | 1.00 | 0:00:00 |

| | | | | |
|--|---|----|------|---------|
| ftip003194010 hydrographics department | 2 | 9 | 4.50 | 0:06:43 |
| fundacion oceana s.l. | 2 | 2 | 1.00 | 0:00:00 |
| global hosting | 2 | 3 | 1.50 | 0:00:36 |
| hellas on line s.a. | 2 | 3 | 1.50 | 0:00:08 |
| iminds vzw | 2 | 2 | 1.00 | 0:00:00 |
| institut francais de recherche pour l exploitation de la mer - i | 2 | 14 | 7.00 | 0:06:08 |
| instituto tecnologico geominero de espan~a | 2 | 2 | 1.00 | 0:00:00 |
| kongsberg maritime as | 2 | 2 | 1.00 | 0:00:00 |
| lait public subnet | 2 | 9 | 4.50 | 0:00:37 |
| latvian environment geology and meteorology agency | 2 | 10 | 5.00 | 0:03:29 |
| london customer ag service 10 | 2 | 3 | 1.50 | 0:00:07 |
| monaco-telecom | 2 | 2 | 1.00 | 0:00:00 |
| nexg | 2 | 3 | 1.50 | 0:00:11 |
| provider | 2 | 2 | 1.00 | 0:00:00 |
| red de supercomputacion de galicia | 2 | 2 | 1.00 | 0:00:00 |
| roompot recreatie beheer | 2 | 3 | 1.50 | 0:00:21 |
| shaw communications inc. | 2 | 2 | 1.00 | 0:00:00 |
| signalhorn ag | 2 | 2 | 1.00 | 0:00:00 |
| sky uk limited | 2 | 3 | 1.50 | 0:02:13 |
| stella-telecom - static pool - dial-up | 2 | 3 | 1.50 | 0:07:21 |
| stichting deltares | 2 | 2 | 1.00 | 0:00:00 |
| technische universiteit delft | 2 | 3 | 1.50 | 0:00:08 |
| tele2 consumer is one of the largest isp\ s in the netherlands | 2 | 2 | 1.00 | 0:00:00 |
| universidade de aveiro | 2 | 5 | 2.50 | 0:07:58 |
| universita ca foscari - venezia | 2 | 2 | 1.00 | 0:00:00 |
| university of malta | 2 | 6 | 3.00 | 0:08:52 |

| | | | | |
|---|---|---|------|---------|
| university of piraeus | 2 | 3 | 1.50 | 0:08:02 |
| university of turku | 2 | 4 | 2.00 | 0:06:51 |
| university of ulster | 2 | 2 | 1.00 | 0:00:00 |
| ventelo dhcp oslo | 2 | 3 | 1.50 | 0:00:56 |
| 2 rue francois verny | 1 | 1 | 1.00 | 0:00:00 |
| adsl users internet crna gora | 1 | 1 | 1.00 | 0:00:00 |
| adsl-go-plus | 1 | 1 | 1.00 | 0:00:00 |
| advania hf. | 1 | 3 | 3.00 | 0:02:14 |
| aecom limited | 1 | 1 | 1.00 | 0:00:00 |
| alessio & longhi ltda | 1 | 1 | 1.00 | 0:00:00 |
| aljeel aljadeed for technology | 1 | 1 | 1.00 | 0:00:00 |
| alligence | 1 | 1 | 1.00 | 0:00:00 |
| amazon.com inc. | 1 | 1 | 1.00 | 0:00:00 |
| america movil peru s.a.c. | 1 | 1 | 1.00 | 0:00:00 |
| apolo -gold-telecom-per | 1 | 1 | 1.00 | 0:00:00 |
| asignacion de /22 para el gobierno del principado de asturias | 1 | 1 | 1.00 | 0:00:00 |
| assigned to vodafonemalta | 1 | 1 | 1.00 | 0:00:00 |
| athens | 1 | 1 | 1.00 | 0:00:00 |
| atkins limited | 1 | 1 | 1.00 | 0:00:00 |
| atos it solutions and services gmbh | 1 | 1 | 1.00 | 0:00:00 |
| b2b customers ie | 1 | 5 | 5.00 | 0:03:45 |
| bluet di robotti diego public subnet | 1 | 2 | 2.00 | 0:01:00 |
| boix_tecnic | 1 | 1 | 1.00 | 0:00:00 |
| bouygues telecom division mobile | 1 | 1 | 1.00 | 0:00:00 |
| bras pools - banjara hills | 1 | 1 | 1.00 | 0:00:00 |
| brasil telecom s/a - filial distrito federal | 1 | 1 | 1.00 | 0:00:00 |
| bsmar657 marseille bloc 1 | 1 | 1 | 1.00 | 0:00:00 |
| bsrou651 rouen bloc 2 | 1 | 3 | 3.00 | 0:02:33 |

| | | | | |
|---|---|---|------|---------|
| bulgarian telecommunications company plc | 1 | 1 | 1.00 | 0:00:00 |
| c.n.r.s siege | 1 | 1 | 1.00 | 0:00:00 |
| cellular subscribers for ggsn yv | 1 | 1 | 1.00 | 0:00:00 |
| central + migration to 21cn | 1 | 1 | 1.00 | 0:00:00 |
| centrum voor landbouwkundig onderzoek | 1 | 1 | 1.00 | 0:00:00 |
| charter communications | 1 | 1 | 1.00 | 0:00:00 |
| claro s.a. | 1 | 1 | 1.00 | 0:00:00 |
| cmagu01-mc1-cpe-stb | 1 | 1 | 1.00 | 0:00:00 |
| colocrossing | 1 | 1 | 1.00 | 0:00:00 |
| colruyt group services nv | 1 | 1 | 1.00 | 0:00:00 |
| comcast business communications llc | 1 | 1 | 1.00 | 0:00:00 |
| communication et developpement | 1 | 1 | 1.00 | 0:00:00 |
| companhia itabirana telecomunicacoes ltda | 1 | 1 | 1.00 | 0:00:00 |
| compelsove (hamilton rentals) | 1 | 1 | 1.00 | 0:00:00 |
| computer devision | 1 | 1 | 1.00 | 0:00:00 |
| consulting in double realtime | 1 | 1 | 1.00 | 0:00:00 |
| cowi a/s | 1 | 2 | 2.00 | 0:05:47 |
| cpe customers nl | 1 | 1 | 1.00 | 0:00:00 |
| crawley | 1 | 2 | 2.00 | 0:00:29 |
| customer static address space | 1 | 1 | 1.00 | 0:00:00 |
| delft university of technology network | 1 | 1 | 1.00 | 0:00:00 |
| dod network information center | 1 | 1 | 1.00 | 0:00:00 |
| dsme | 1 | 2 | 2.00 | 0:00:17 |
| early registrations surfnet bv | 1 | 1 | 1.00 | 0:00:00 |
| ecole navale | 1 | 1 | 1.00 | 0:00:00 |
| edpnet_adsl_fixed | 1 | 4 | 4.00 | 0:02:37 |

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|---|---|---|------|---------|
| eircom limited | 1 | 1 | 1.00 | 0:00:00 |
| erm italia srl | 1 | 1 | 1.00 | 0:00:00 |
| europaischen organisation fuer die nutzung meteorologischen sate | 1 | 1 | 1.00 | 0:00:00 |
| european space agency (esa) | 1 | 9 | 9.00 | 0:05:09 |
| fairfield university | 1 | 1 | 1.00 | 0:00:00 |
| fixed-ip | 1 | 1 | 1.00 | 0:00:00 |
| fonden videnparken a/s | 1 | 1 | 1.00 | 0:00:00 |
| food and agriculture organization of the united nations | 1 | 1 | 1.00 | 0:00:00 |
| forcepoint cloud netherlands | 1 | 1 | 1.00 | 0:00:00 |
| frontier communications of america inc. | 1 | 1 | 1.00 | 0:00:00 |
| ftip003263938 atlas elektronik uk ltd | 1 | 1 | 1.00 | 0:00:00 |
| fundacion tecnalía | 1 | 4 | 4.00 | 0:00:46 |
| gazi universitesi | 1 | 1 | 1.00 | 0:00:00 |
| gesti n de direccionamiento uninet | 1 | 1 | 1.00 | 0:00:00 |
| glaxosmithkline | 1 | 1 | 1.00 | 0:00:00 |
| go p.l.c. | 1 | 3 | 3.00 | 0:01:36 |
| griffin internet leased line range | 1 | 2 | 2.00 | 0:00:40 |
| h tel de r gion des pays de la loire | 1 | 2 | 2.00 | 0:00:16 |
| hartley anderson limited | 1 | 1 | 1.00 | 0:00:00 |
| hellenic centre for marine research - athens | 1 | 1 | 1.00 | 0:00:00 |
| hol static dialup | 1 | 1 | 1.00 | 0:00:00 |
| hotspots gmbh | 1 | 3 | 3.00 | 0:05:45 |
| hrvatski telekom d.d. | 1 | 2 | 2.00 | 0:01:56 |
| hutchison 3g ireland | 1 | 2 | 2.00 | 0:02:49 |
| hydra communications ltd | 1 | 1 | 1.00 | 0:00:00 |
| ihe delft | 1 | 1 | 1.00 | 0:00:00 |

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|--|---|---|------|---------|
| imported inetnum object for bureau | 1 | 1 | 1.00 | 0:00:00 |
| infra | 1 | 1 | 1.00 | 0:00:00 |
| institut za vode republike slovenije | 1 | 2 | 2.00 | 0:04:40 |
| institute for hygiene and epidemiology | 1 | 2 | 2.00 | 0:00:11 |
| instituto espanol de oceanografia | 1 | 3 | 3.00 | 0:00:28 |
| international seabed authority | 1 | 1 | 1.00 | 0:00:00 |
| ip addresses assigned for dsl customers | 1 | 2 | 2.00 | 0:00:58 |
| ip pools | 1 | 1 | 1.00 | 0:00:00 |
| istituto nazionale di geofisica e vulcanolog public subnet | 1 | 1 | 1.00 | 0:00:00 |
| ivent ministry of defence | 1 | 1 | 1.00 | 0:00:00 |
| jeremy benn associates | 1 | 1 | 1.00 | 0:00:00 |
| katholieke universiteit leuven | 1 | 1 | 1.00 | 0:00:00 |
| kcom group plc | 1 | 1 | 1.00 | 0:00:00 |
| koebenhavns kommune leverancecenter it infrastruktur | 1 | 3 | 3.00 | 0:00:45 |
| koninklijk belgisch instituut voor natuurwetenschappen | 1 | 2 | 2.00 | 0:00:21 |
| kpn zm on2013 | 1 | 1 | 1.00 | 0:00:00 |
| lanestel sarl | 1 | 1 | 1.00 | 0:00:00 |
| lirex net | 1 | 2 | 2.00 | 0:00:03 |
| Inmso656 montsouris bloc 1 | 1 | 1 | 1.00 | 0:00:00 |
| Input657 puteaux bloc 1 | 1 | 5 | 5.00 | 0:00:50 |
| magnet networks limited | 1 | 1 | 1.00 | 0:00:00 |
| malta information technology agency (mita) | 1 | 1 | 1.00 | 0:00:00 |
| man005-II001 | 1 | 1 | 1.00 | 0:00:00 |
| managed.com | 1 | 1 | 1.00 | 0:00:00 |
| meo mobile customers nat | 1 | 1 | 1.00 | 0:00:00 |

| | | | | |
|---|---|---|------|---------|
| ministerio de defensa | 1 | 1 | 1.00 | 0:00:00 |
| ministry of interior | 1 | 1 | 1.00 | 0:00:00 |
| mobifon s.a. | 1 | 1 | 1.00 | 0:00:00 |
| multiprotocol service provider to other isp s and end users | 1 | 1 | 1.00 | 0:00:00 |
| nacionalni institut za biologijo | 1 | 1 | 1.00 | 0:00:00 |
| nas dhcp pool como | 1 | 1 | 1.00 | 0:00:00 |
| nas dhcp pool modena | 1 | 4 | 4.00 | 0:02:29 |
| nas dhcp pool pescara | 1 | 1 | 1.00 | 0:00:00 |
| nas dhcp pool pisa | 1 | 5 | 5.00 | 0:01:29 |
| nas dhcp pool verona | 1 | 1 | 1.00 | 0:00:00 |
| national research university higher school of economics | 1 | 1 | 1.00 | 0:00:00 |
| nato sto-cmre | 1 | 1 | 1.00 | 0:00:00 |
| nederlandse spoorwegen pi block | 1 | 1 | 1.00 | 0:00:00 |
| nerc computer services | 1 | 1 | 1.00 | 0:00:00 |
| nice | 1 | 3 | 3.00 | 0:01:11 |
| noaa-boulder | 1 | 1 | 1.00 | 0:00:00 |
| norsk institutt for vannforskning | 1 | 1 | 1.00 | 0:00:00 |
| numeria srl | 1 | 1 | 1.00 | 0:00:00 |
| o t tecnologia em inform tica ltda | 1 | 1 | 1.00 | 0:00:00 |
| obs customer | 1 | 1 | 1.00 | 0:00:00 |
| ojsc rostelecom macroregional branch north-west | 1 | 9 | 9.00 | 0:05:02 |
| open business systems | 1 | 1 | 1.00 | 0:00:00 |
| orange | 1 | 1 | 1.00 | 0:00:00 |
| orange mobile | 1 | 1 | 1.00 | 0:00:00 |
| palo alto networks techops | 1 | 1 | 1.00 | 0:00:00 |
| panservice | 1 | 3 | 3.00 | 0:02:30 |
| parco regionale dei castelli romani | 1 | 1 | 1.00 | 0:00:00 |
| pat/nat ip addresses pop 3901 for | 1 | 2 | 2.00 | 0:00:54 |

| | | | | |
|---|---|---|------|---------|
| pat/nat ip addresses pop 3904 for | 1 | 2 | 2.00 | 0:14:30 |
| pe-tdp-grs | 1 | 1 | 1.00 | 0:00:00 |
| pioneer broadband | 1 | 1 | 1.00 | 0:00:00 |
| pop lyon | 1 | 1 | 1.00 | 0:00:00 |
| port utilities | 1 | 1 | 1.00 | 0:00:00 |
| post office broadband | 1 | 1 | 1.00 | 0:00:00 |
| provider local registry | 1 | 1 | 1.00 | 0:00:00 |
| psi line srl | 1 | 1 | 1.00 | 0:00:00 |
| pt comunicacoes s.a. | 1 | 4 | 4.00 | 0:01:27 |
| pure pages inc. | 1 | 1 | 1.00 | 0:00:00 |
| r sidentiel | 1 | 1 | 1.00 | 0:00:00 |
| range assigned to comune di follonica end-user | 1 | 2 | 2.00 | 0:01:22 |
| rcs & rds business | 1 | 3 | 3.00 | 0:00:53 |
| reassign to animated storyboards(thailand) co. ltd.) | 1 | 1 | 1.00 | 0:00:00 |
| residential customers | 1 | 1 | 1.00 | 0:00:00 |
| salem information services ltd | 1 | 1 | 1.00 | 0:00:00 |
| santiago de compostela | 1 | 1 | 1.00 | 0:00:00 |
| sc media sat srl | 1 | 1 | 1.00 | 0:00:00 |
| schuberg philis b.v. | 1 | 1 | 1.00 | 0:00:00 |
| sida group | 1 | 4 | 4.00 | 0:02:27 |
| societe francaise du radiotelephone s.a. | 1 | 1 | 1.00 | 0:00:00 |
| statically ip addresses assigned to vf dsl customers | 1 | 2 | 2.00 | 0:19:45 |
| stetnet informatica ltda. | 1 | 1 | 1.00 | 0:00:00 |
| strato ag | 1 | 1 | 1.00 | 0:00:00 |
| supermedia sp. z o.o. | 1 | 3 | 3.00 | 0:00:36 |
| swedish meteorological and hydrological institute | 1 | 2 | 2.00 | 0:04:21 |

| | | | | |
|--|---|----|-------|---------|
| taipei taiwan | 1 | 1 | 1.00 | 0:00:00 |
| tdc bb-adsl users | 1 | 1 | 1.00 | 0:00:00 |
| tecteo | 1 | 1 | 1.00 | 0:00:00 |
| teledyne brown engineering | 1 | 1 | 1.00 | 0:00:00 |
| telef nica brasil s.a | 1 | 1 | 1.00 | 0:00:00 |
| telefonica de espana sau red de servicios ip spain nat | 1 | 1 | 1.00 | 0:00:00 |
| telemar norte leste s.a. | 1 | 1 | 1.00 | 0:00:00 |
| telenor norge customers link net | 1 | 1 | 1.00 | 0:00:00 |
| telgo telecomunica es goi s ltda. | 1 | 1 | 1.00 | 0:00:00 |
| texas a&m university at galveston | 1 | 2 | 2.00 | 0:13:19 |
| the cloud networks germany gmbh | 1 | 1 | 1.00 | 0:00:00 |
| the empire district electric company | 1 | 1 | 1.00 | 0:00:00 |
| this network is used for customer allocation. | 1 | 11 | 11.00 | 0:34:13 |
| tiscali italia spa | 1 | 1 | 1.00 | 0:00:00 |
| tt adsl-static_gay | 1 | 5 | 5.00 | 0:04:16 |
| ubo - universite de brest | 1 | 8 | 8.00 | 0:01:47 |
| universidad de m laga | 1 | 1 | 1.00 | 0:00:00 |
| universidad del pais vasco - euskal herriko unibertsitatea | 1 | 4 | 4.00 | 0:19:56 |
| universita degli studi di bari | 1 | 4 | 4.00 | 0:07:59 |
| universita degli studi di firenze | 1 | 1 | 1.00 | 0:00:00 |
| universita degli studi di roma la sapienza | 1 | 1 | 1.00 | 0:00:00 |
| universita degli studi di roma tor vergata | 1 | 1 | 1.00 | 0:00:00 |
| universite de brest | 1 | 1 | 1.00 | 0:00:00 |
| universite pierre et marie curie | 1 | 1 | 1.00 | 0:00:00 |
| university of bath | 1 | 1 | 1.00 | 0:00:00 |
| university of helsinki | 1 | 1 | 1.00 | 0:00:00 |

| | | | | |
|--|---|---|------|---------|
| university of houston | 1 | 1 | 1.00 | 0:00:00 |
| university of las palmas de gran canaria | 1 | 2 | 2.00 | 0:02:40 |
| university of southampton | 1 | 1 | 1.00 | 0:00:00 |
| van den herik | 1 | 2 | 2.00 | 0:14:34 |
| vianet | 1 | 2 | 2.00 | 0:04:57 |
| welcome italia s.p.a | 1 | 1 | 1.00 | 0:00:00 |
| wereld natuur fonds | 1 | 1 | 1.00 | 0:00:00 |
| xtra telecom s.a. | 1 | 1 | 1.00 | 0:00:00 |
| ziggo consumers | 1 | 2 | 2.00 | 0:00:21 |
| zscaler inc. | 1 | 2 | 2.00 | 0:00:11 |