CDDA version 14 (2016)

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Contents

1 Background & Introduction

The present document describes the activities and procedures for verification of the CDDA version 14 (2016).

1.1 CDDA

The Nationally designated areas inventory (CDDA) is an Eionet core data flow and holds information about protected areas and the national legislative instruments, which directly or indirectly create protected areas. The dataset contains data on individual nationally designated sites and designations in EEA member and collaborating countries.

1.2 Definition of terms

Before going into further detail on the QA/QC process of the CDDA database, please consider the following definitions of important terms and key activities of the process. These reflect the terminology used within the present report.

Table 1-1 Definition of terms

Validation / Quality control (QC)	Validation is the process by which the accuracy and consistency of products are evaluated and the associated uncertainties are quantified (Justice et al., 2000). Product *accuracy* is assessed by a comparison with independent data sources such as ground-based measurements, more detailed data or well-calibrated models. Inter-comparison with other equivalent products is also part of the validation process allowing building up a community reference product when no or not enough independent data are available. Quality control, or QC for short, is normally carried out after the end of the production and aims at providing the user with measurable / quantitative information how well the product meets the pre-defined specifications.
Verification / Quality assurance (QA)	The act of reviewing, inspecting, testing, checking, auditing, or otherwise establishing and documenting whether items, processes, services, or documents conform to specified requirements. Verification is a qualitative process in which intermediate or final results of the production process are commented and potential deviations from the specifications are highlighted. The verification will be

	performed during the course of production and is meant to increase data and production quality. Quality Assurance (QA) is a way of preventing mistakes or defects in products and avoiding problems when delivering solutions or services to customers. QA is applied to physical products in pre-production to verify what will be made meets specifications and requirements, and during manufacturing production by validating whether lot samples meet specified quality controls. QA is also applied to software to verify that features and functionality meet business objectives, and that code is relatively bug free prior to shipping or releasing new software products and versions.

The QA/QC process described in the current report is a verification process, as the output does not provide quantitative results about the database quality and is used an element of a process to correct and improve the latest integrated European database version.

2 Delivery of datasets

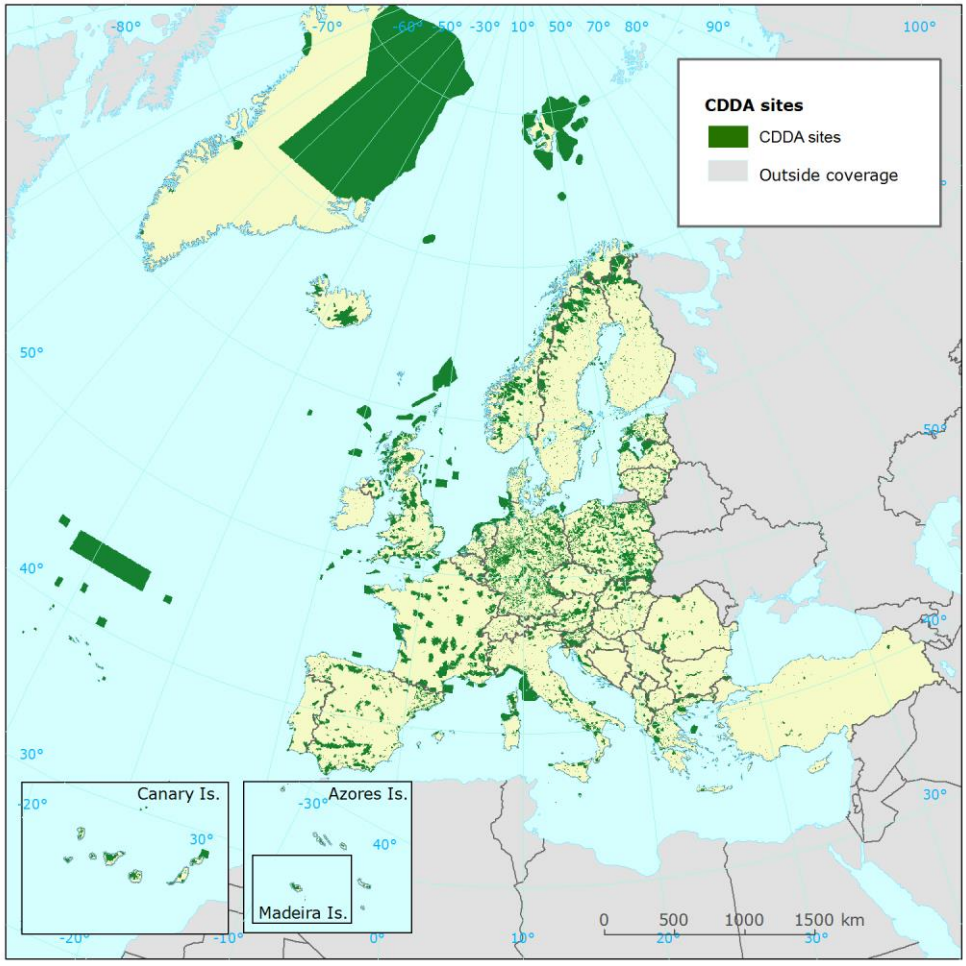
The following tabular and spatial European datasets have been uploaded to:
https://svn.eionet.europa.eu/repositories/Workdata/CDDA/cdda_ver14/

2.1 The CDDA v14 delivery

The latest version of the CDDA, version 14 from 2016, covers the entire geographical area of the 33 EEA member countries and its six cooperating countries. It includes the full geographical area under the responsibility of European countries as well as other States and Territories related to key initiatives in the European region.

The resulting data covers the 39 countries as well as Greenland (Denmark) and the French Overseas Departments and Territories and Overseas Collectives (Map 2-1, French DOMs not shown).

Map 2-1 Extent of the CDDA dataset (DOM/TOMs are not shown here)



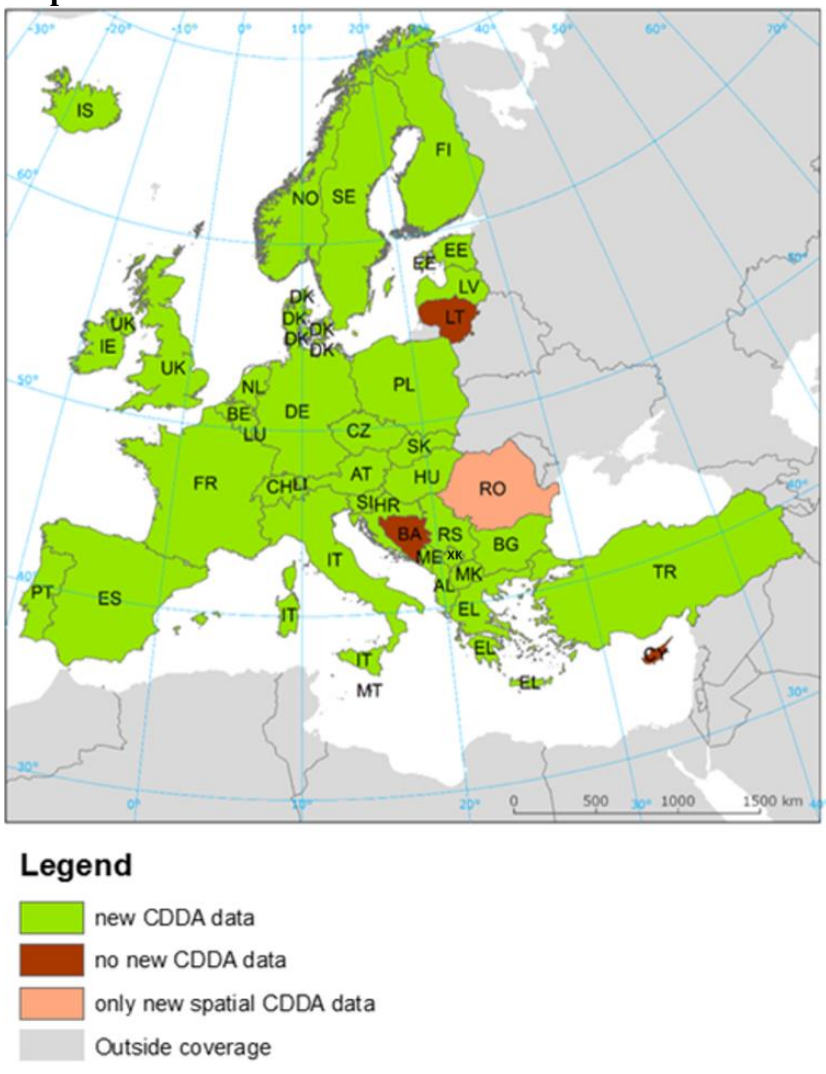
35 countries delivered new tabular and spatial data in 2016, which had to be included into version 14 of CDDA. The four countries BA, CY, LI and LT did not deliver any data.
All datasets were subjected to a series of quality assurance (QA) checks. Once the data passed these tests it was combined with data from those countries which did not submit data in 2016. For these particular countries data was extracted from the previous CDDA dataset, version 13.
The combined and integrated dataset (i.e. 2016 CDDA, version 14) covers 39 countries, and consists of a total of **101 736** records in the tabular database and **99 004** spatial records.

Table 2-2-1 Number of tabular and spatial records in the different CDDA versions

CDDA version	tabular	Spatial
Version 2016 v_14	101 736	99 004
Version 2015 v_13	100 181	97 752
Version 2014 v_12	98 367	95 109

The following map presents the countries, which provided data for the CDDA version 14.

Map 2-1 Countries that delivered data in 2016



A more detailed overview is given in the following table. The cells marked with yellow show countries which did not deliver data for various reasons (e.g. no new national CDDA). Cells coloured in light blue represent country deliveries which did not contain new data for the corresponding reporting. In these cases where no changes in the datasets where reported or proposed by the country the datasets from the previous reporting (all version 12, 2014) have been used.

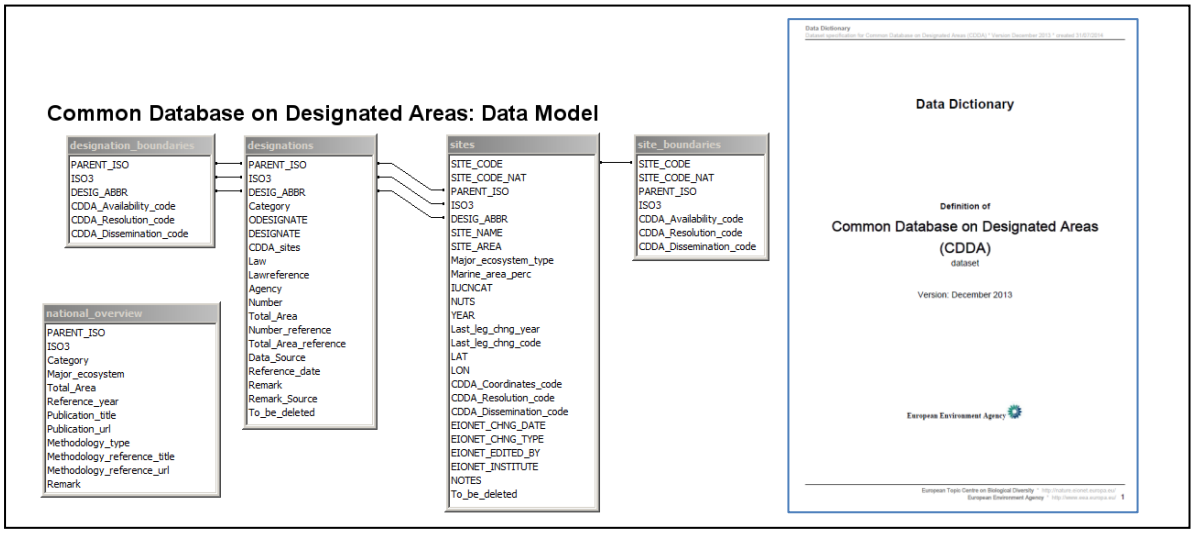
Table 2-2 Data deliveries and data updates for CDDA version 13 & 14, respectively (tabular & spatial)

Name	ISO - 2 digit	ISO - 3 digit	Version 13	Version 14
			2015	2016
Albania	AL	ALB	no new data	yes
Austria	AT	AUT	yes	yes
Bosnia - Herzegovina	BA	BIH	no	no
Belgium	BE	BEL	yes	yes
Bulgaria	BG	BGR	yes	yes
Switzerland	CH	CHE	yes	yes
Czech Republic	CZ	CZE	yes	yes
Cyprus	CY	CYP	no new data	no
Germany	DE	DEU	yes	yes
Denmark	DK	DNK	no	yes
Estonia	EE	EST	yes	yes
Spain	ES	ESP	yes	yes
Finland	FI	FIN	yes	yes
France	FR	FRA	yes	yes
Greece	GR	GRC	yes	yes
Croatia	HR	HRV	yes	yes
Hungary	HU	HUN	no new data	yes
Ireland	IE	IRL	yes	yes
Iceland	IS	ISL	yes	yes
Italy	IT	ITA	yes	yes
Liechtenstein	LI	LIE	no new data	no
Lithuania	LT	LTU	no	no
Luxembourg	LU	LUX	yes	yes
Latvia	LV	LVA	yes	yes
FYROM	MK	MKD	yes	yes
Malta	MT	MLT	yes	yes
Montenegro	ME	MNE	yes	yes
Netherlands	NL	NLD	yes	yes
Norway	NO	NOR	yes	yes
Poland	PL	POL	yes	yes
Portugal	PT	PRT	yes	yes
Romania	RO	ROU	yes	yes
Serbia	RS	SRB	yes	yes
Sweden	SE	SWE	yes	yes
Slovakia	SK	SVK	yes	yes
Slovenia	SI	SVN	yes	yes
Turkey	TR	TUR	yes	yes
United Kingdom	UK	GBR	yes	yes
Kosovo (UNSCR 1244/99)	XK	XKX	yes	yes

The national CDDA data was delivered as tabular and spatial dataset.

Tabular data:
EEA provides the different national institutes with an MS-Access CDDA template database and technical specifications via the Central data repository (CDR: http://cdr.eionet.europa.eu).

Figure 2-1 CDDA MS-Access data model & technical specification document



Using the template and the specification the countries update the table with the national CDDA information. After the national update, the database is uploaded again to the CDR.

Spatial boundary data:
Next to the tabular data the countries are asked to update their spatial CDDA data and to upload the data to the CDR.

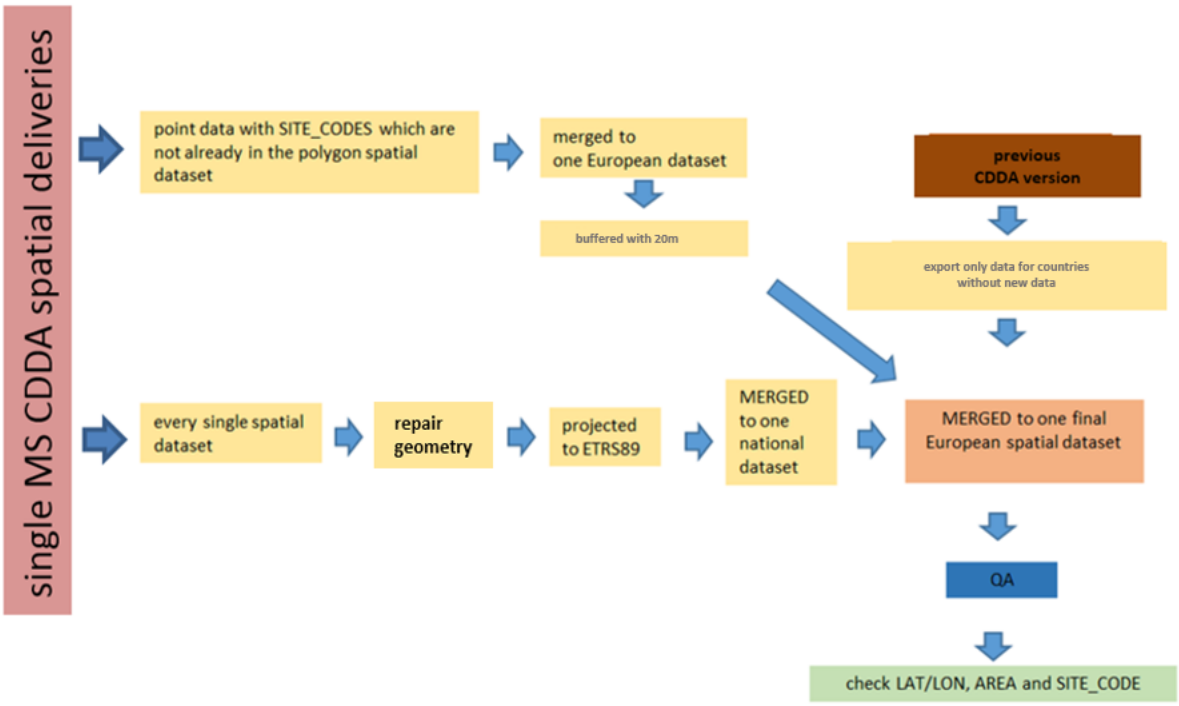
3 European CDDA dataset production

The final CDDA v14 dataset is the union of all single national tabular databases & spatial datasets.

TABULAR:
After passing quality checks without errors, the single country tables were imported to a new MS-Access database.

SPATIAL:
Once the data deliveries passed the quality check without errors, the individual national vector data files were merged to one national spatial dataset. In a next step, all merged spatial datasets were used for the construction of the final European CDDA dataset.

Figure 3-1 Workflow spatial map production



4 Verification

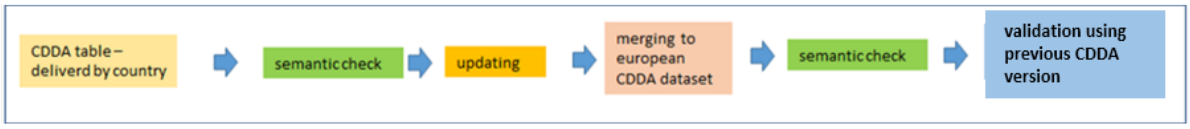
The spatial and tabular data were checked by ETC/BD at different points during the CDDA v14 production workflow. First, the single country deliveries were checked for completeness. Subsequently, different QA tests of the single deliveries were performed by EEA and ETC/BD. Once the spatial and tabular checks were complete the single datasets were merged to one European spatial and one tabular dataset. This final CDDA dataset was checked by EEA before publication.

4.1 Verification overview

Tabular and spatial data were checked using different QA methods:

Tabular:
The countries uploaded the national CDDA v14 MS-Access versions on the CDR. An automatic QA, which is integrated in the database, performed semantic checks of the different tables. Errors were analysed and corrected. If necessary, e.g. where information was missing, the countries were requested to update the data.
After a successful quality check of the deliveries, the single tables were imported to the CDDA-v14 database template (provided by the EEA). Afterwards final QA checks were conducted using the integrated QA tool.

Figure 4-1 Tabular data verification overview, version 13

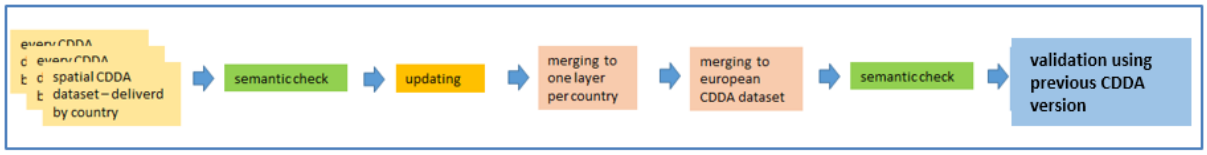


Spatial:
The countries delivered various kinds and quantities of spatial data. Some countries delivered one polygon vector file, others more than 2 different polygon and point vector files.

Figure 4-2 Example: spatial delivery by one country

Therefore the first step of the verification was to check each spatial dataset prior to merging to one national dataset.
After the data passed the semantic check (projection, format, …) without errors, all data was merged into one European CDDA dataset in a file-geodatabase. If a country did not deliver new data, the most recent data available to the EEA was imported.
If spatial data was delivered as point dataset the points were buffered using a 20m buffer and merged with the polygon layer. With this operation the final spatial dataset only consisted of polygon vector layers.

Figure 4-3 Spatial data verification overview for version 14



4.2 Verification steps tabular data

The verification of the tabular data was done following the specifications provided in the CDDA call (https://www.eionet.europa.eu/news/cdda2016).

The automatic QA checks following data quality indicators:

- check that all the relevant fields are filled out correctly (compare field type, name & content with the specifications)
- check for duplicates in SITE_CODE
- check that the dissemination codes in the 'sites' and 'site_boundaries' tables are the same
- if countries have officially asked for the calculation of coordinates this should be conducted by the ETC/BD.
- check that all coordinates are located in the country
- check coordinates of marine sites are located in marine regions
- check coordinates of terrestrial sites are located in terrestrial regions

Most of the checks listed above are executed by running an automatic FME (Feature Manipulation Engine – Software, using EEA common workspace) script on each of the separate national deliveries. The script loads the relevant database entries from the tabular database as well as the attributes and geometries from the spatial component to perform the checks. Within different sub-steps, information such as the number of sites, potential double-assigned site codes or the comparison between the number of tabular and spatial sites is derived and checked. The QA results for each separate country are recorded in a separate database, which contains information on all encountered inconsistencies identified during the checks.

4.3 Verification steps spatial data

In the following chapter the verification of the spatial data will be explained.
Most countries that submitted spatial data in the 2016 delivered shape files. Only a few exemptions used another form of delivery such as sqlite-databases or a WFS (which is so far not compliant with the CDDA specifications).
The spatial validation consisted of the following stages:

- Projection validation
- Geometry validation
    - Geometry must be valid - if not repair geometry.
    - Singlepart polygons with same SITE_CODE are not allowed – if this is the case: dissolve features by SITE_CODE
- Geographical and Attribute validation
    - Data must lie within the country extent (terrestrial + marine).

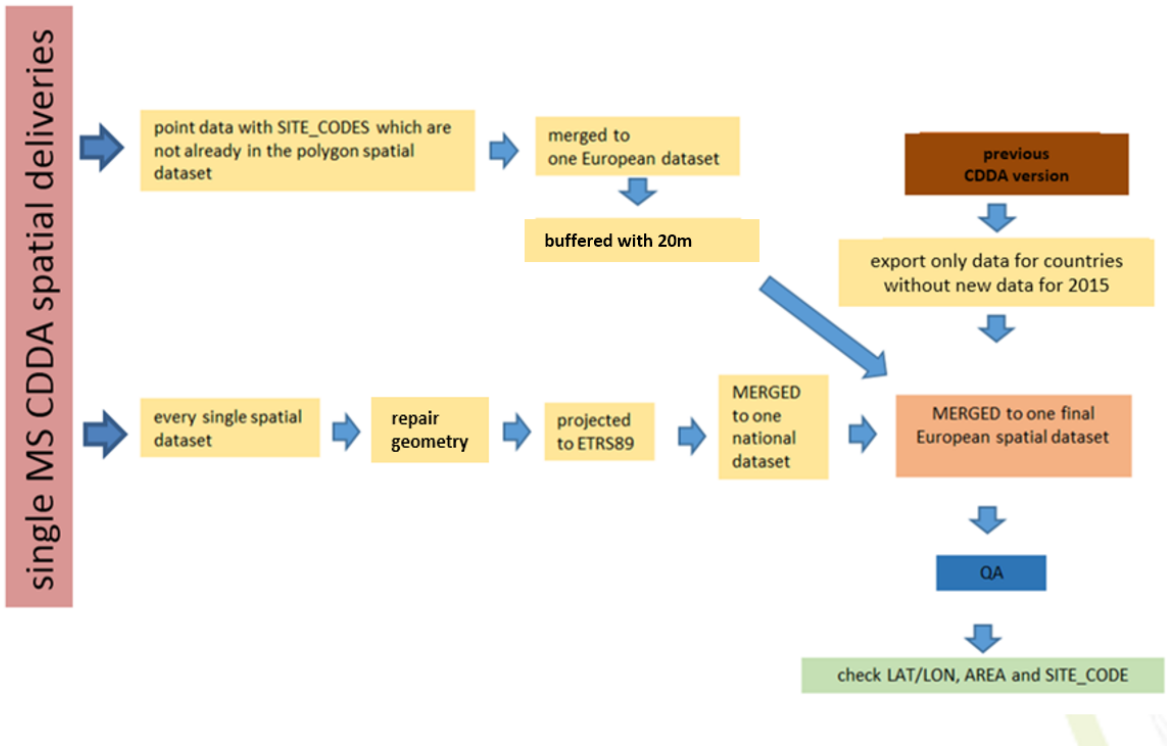
- Attribute validation, check that each feature has a SITE_CODE, if not link by another field, if not possible check site name and try to link using site name, grid coordinates, area
- Calculate coordinates for each polygon and compare them to the coordinates as supplied by country. (The coordinates of the centroid of each CDDA site in LAT/LON;WGS84)
- Comparison of the Area, area calculated using GIS and compared to that supplied by the Country.

Also for the QA of the spatial CDDA data FME scripts were used which were stored on the common workspace.

4.4 European CDDA layer production and verification

Once the spatial and tabular checks were complete, the single datasets were merged to one European spatial and one tabular dataset.
If sites are represented in form of a spatial point layer, the single points were buffered by 20m to form polygons and added to the polygon data sets. Subsequently, all single files were merged to one spatial CDDA dataset in File-Geodatabase format by ETC/BD and uploaded to the EEA SVN server. Finally, the uploaded CDDA dataset was checked by EEA before publication.

Figure 4-4 Workflow: merging single spatial datasets (point & polygons)



5 QA

In this chapter a selection of information and results about the new CDDA dataset will be presented.

5.1 Semantic check

In the following table a selection of comments on the single CDDA deliveries are presented.

Table 5-1 *Selection* of semantic check results and information

Country	**ISO3**	**Comment**
Albania	ALB	• no national site codes defined • for some marine-terrestrial sites the marine percentage is missing
Austria	AUT	• double use of a site code
Bosnia - Herzegovina	BIH	• no data was uploaded
Belgium	BEL	• no comments
Bulgaria	BGR	• no comments
Switzerland	CHE	• national site codes used instead of European site code • reintroduction of site already deleted before
Cyprus	CYP	• no data was uploaded
Czech Republic	CZE	• no comments
Germany	DEU	• 933 sites shows a site area differing for more than 1ha from the previous CDDA version
Denmark	DNK	• spatial site without corresponding tabular information • table is not named correctly • missing SITE_CODE_NAT • some double SITE CODES found • Marine area percentage not filled for marine-terrestrial sites
Estonia	EST	• 2 shapefiles were merged with buffered point layer
Spain	ESP	• no comments
Finland	FIN	• no comments
France	FRA	• the designation categories “B” and “C” are not included in the “national overview table”
Greece	GRC	• the marine percentage values are not correct → some values are larger 100%
Croatia	HRV	• no comments
Hungary	HUN	• small geometric shift between the spatial datasets CDDA_v14 and CDDA_v13
Ireland	IRL	• no comments
Iceland	ISL	• no comments
Italy	ITA	• designation boundaries are delivered in EPSG-projection 4258 • site area defined as 0 although spatial boundaries have been reported stating an area >0 ha
Liechtenstein	LIE	• no data was uploaded
Lithuania	LTU	• no data was uploaded
Luxembourg	LUX	• no comments
Latvia	LVA	• no comments
FYROM	MKD	• some LAT/LON values are missing
Malta	MLT	• in the “site boundary –table “ for one site the boundary information is missing
Montenegro	MNE	• one site was delivered only spatially – no corresponding tabular information found
Netherlands	NLD	• more than on spatial dataset was delivered for the protected sites • wrong projection
Norway	NOR	• Multipart polygons representing same site have been reported separately → multiple use of same site code
Poland	POL	• no comments

Country	**ISO3**	**Comment**
Portugal	PRT	• no comments
Romania	ROU	• spatial data was downloaded from Romania map service (WFS) as GML file • the spatial dataset do not correspond to the CDDA specifications • no tabular data was uploaded to CDR → no automatic quality assurance checks have been performed on the envelope • as no new tabular data has been uploaded inconsistencies identified in previous version still persist
Serbia	SRB	• one site was only delivered spatially – no corresponding tabular information found • some shifts between previous and current spatial version identified
Sweden	SWE	• no comments
Slovakia	SVK	• in the “designations table the designation ”SK13” marked “no CDDA sites” but used for one site
Slovenia	SVN	• no comments
Turkey	TUR	• spatial data has been delivered in four separate datasets • site code information are missing for multiple sites • major ecosystem information are missing for all sites • double use of site code
United Kingdom	GBR	• some shifts between previous and current spatial version identified • major ecosystem information for some sites are missing • relevant information in the “national overview table” are missing • coordinates for multiple sites missing
Kosovo (UNSCR 1244/99)	XKK	• wrong xml file format were uploaded to CDR • in the “designations table the designation ”XK07” marked “no CDDA sites” but used for one site • multiple use of single site code

5.2 Comparison of the new CDDA with the previous version

Another output of the semantic checks is the comparison of the site count as well as the site area between the new spatial CDDA version and the previous version 13 from 2015.

Table 5-2 CDDA site count comparison: CDDA_v13 vs CDDA_v14 (spatial datasets)

Country	count 2015	count 2016	Difference 2016-2015	Difference 2016-2015 [%points]	INFO
Albania	54	54	0	0,0	no changes
Austria	1199	1199	0	0,0	no changes
Bosnia - Herzegovina	33	33	0	0,0	no new data
Belgium	1396	1421	25	1,8	increase
Bulgaria	1015	1014	-1	-0,1	decrease
Switzerland	5884	5890	6	0,1	increase
Czech Republic	2552	2594	42	1,6	increase
Cyprus	16	16	0	0,0	no new data
Germany	17289	17423	134	0,8	increase
Denmark	1923	1929	6	0,3	increase
Estonia	11618	11693	75	0,6	increase
Spain	1580	1783	203	12,8	increase
Finland	11719	12102	383	3,3	increase
France	2973	2994	21	0,7	increase
Greece	799	803	4	0,5	increase
Croatia	416	408	-8	-1,9	decrease
Hungary	218	307	89	40,8	increase
Ireland	309	309	0	0,0	no changes
Iceland	114	114	0	0,0	no changes
Italy	871	871	0	0,0	no changes
Liechtenstein	41	41	0	0,0	no new data
Lithuania	360	360	0	0,0	no new data
Luxembourg	104	113	9	8,7	increase
Latvia	707	707	0	0,0	no changes
Macedonia, Replublic of	75	75	0	0,0	no changes
Malta	203	204	1	0,5	increase
Montenegro	4	4	0	0,0	no changes
Netherlands	250	251	1	0,4	increase
Norway	2896	2941	45	1,6	increase
Poland	2017	2027	10	0,5	increase
Portugal	220	221	1	0,5	increase
Romania	866	943	77	8,9	increase
Serbia	185	312	127	68,6	increase
Sweden	14111	14456	345	2,4	increase
Slovakia	1172	1174	2	0,2	increase
Slovenia	2046	2046	0	0,0	no changes
Turkey	1225	839	-386	-31,5	decrease
United Kingdom	9274	9298	24	0,3	increase
Kosovo (UNSCR 1244/99)	29	35	6	20,7	increase

The tabular database contains more CDDA sites than the spatial dataset. Therefore the area statistic based on the tabular dataset varies from the area statistic based on the spatial data (not shown):

Table 5-3 CDDA area comparison: CDDA_v13 vs CDDA_v14 (tabular datasets)

Country	PARENT_ISO	AREA [km²] 2015	AREA [km²] 2016	Difference 2016-2015	Difference 2016-2015 [%pts]	INFO
Albania	ALB	4648	4648	0	0,00	no changes
Austria	AUT	26312	26312	0	0,00	no changes
Belgium	BEL	8340	8394	54	0,65	increase
BosniaHerzegovina	BIH	391	391	0	0,00	no new data
Bulgaria	BGR	15158	15169	11	0,07	increase
Croatia	HRV	8078	8064	-13	-0,17	decrease
Cyprus	CYP	3789	3789	0	0,00	no changes
Czech Republic	CZE	13178	13690	512	3,88	increase
Denmark	DNK	995884	996448	564	0,06	increase
Estonia	EST	23716	23811	95	0,40	increase
Finland	FIN	35322	35529	207	0,59	increase
France	FRA	299801	304694	4893	1,63	increase
Germany	DEU	133801	144209			
Greece	GRC	38130	38103	-28	-0,07	decrease
Hungary	HUN	11319	14194	2875	25,40	increase
Iceland	ISL	20089	20089	0	0,00	no changes
Ireland	IRL	2006	2006	0	0,00	no changes
Italy	ITA	60227	60227	0	0,00	no changes
Kosovo	XKX	1241	1300	59	4,78	increase
Latvia	LVA	16856	16851	-5	-0,03	decrease
Liechtenstein	LIE	82	82	0	0,00	no new data
Lithuania	LTU	10933	10933	0	0,00	no new data
Luxembourg	LUX	1279	1520	241	18,87	increase
Macedonia,	MKD	2297	2297	0	0,00	no changes
Malta	MLT	340	343	2	0,73	increase
Montenegro	MNE	1314	1314	0	0,03	increase
Netherlands	NLD	12800	12862	62	0,49	increase
Norway	NOR	182332	182582	250	0,14	increase
Poland	POL	103886	103837	-49	-0,05	decrease
Portugal	PRT	121884	121990	106	0,09	increase
Romania	ROU	20354	20328	-26	-0,13	decrease
Serbia	SRB	5727	5520	-208	-3,62	decrease
Slovakia	SVK	12224	12225	1	0,01	increase
Slovenia	SVN	28109	28104	-6	-0,02	decrease
Spain	ESP	79682	102179	22497	28,23	increase
Sweden	SWE	57964	58271	308	0,53	increase
Switzerland	CHE	3479	3485	6	0,17	increase
Turkey	TUR	111538	111546	8	0,01	increase
United Kingdom	GBR	162741	173640	10900	6,70	increase

The total tabular CDDA area increased from 2 637 251 km² to 2 824 777 km² between versions 13 and 14. **That´s an increase of 187 526 km²**.

5.3 Major ecosystem information

One important CDDA information is the "Major ecosystem type" - http://dd.eionet.europa.eu/dataelements/69878. For every CDDA site the major ecosystem type: marine, marine-terrestrial or terrestrial should be specified.

The following table shows the overview of delivered major ecosystem type information by country.

Table 5-1 Major ecosystem type information by country [count of sites]

Country	PARENT_ISO	no type info	Marine	Marine/terrestrial	Terrestrial
Albania	ALB	798	0	0	0
Austria	AUT	0	0	0	1217
Belgium	BEL	0	2	15	1665
Bulgaria	BGR	0	1	3	1039
Bosnia -Herzegovina	BIH	156	0	0	0
Switzerland	CHE	0	0	0	5891
Cyprus	CYP	45	0	0	0
Czech Republic	CZE	0	0	0	2552
Germany	DEU	206	4	4	17083
Denmark	DNK	0	0	5	2268
Spain	ESP	0	24	86	1470
Estonia	EST	0	23	324	11345
Finland	FIN	0	21	914	10784
France	FRA	0	29	32	2917
United Kingdom	GBR	5569	77	48	3580
Greece	GRC	0	3	40	799
Croatia	HRV	0	2	20	395
Hungary	HUN	0	0	0	279
Ireland	IRL	0	2	49	258
Iceland	ISL	115	0	0	0
Italy	ITA	0	33	5	833
Liechtenstein	LIE	41	0	0	0
Lithuania	LTU	0	2	2	356
Luxembourg	LUX	0	0	0	108
Latvia	LVA	0	7	0	700
Macedonia	MKD	0	0	0	86
Malta	MLT	0	5	0	198
Montenegro	MNE	0	0	0	72
Netherlands	NLD	0	4	3	244
Norway	NOR	0	3	950	1944
Poland	POL	0	0	15	2002
Portugal	PRT	0	43	15	162
Romania	ROU	0	1	1	949
Serbia	SRB	0	0	0	260
Slovakia	SVK	0	0	0	1214
Slovenia	SVN	0	6	15	2025
Sweden	SWE	0	1	791	13498
Turkey	TUR	1313	0	0	0
Kosovo	XKX	0	0	0	115

In the current CDDA version there are still 8 countries which did not deliver information on the major ecosystem type for any reported sites.

5.4 IUCN management category information

Another important CDDA information is the IUCN management category of the site, http://dd.eionet.europa.eu/dataelements/74678.
The following table shows the count of sites classified by their IUCN category.

Table 5-2 IUCN management categories by country [count of sites]

Country	Ia	Ib	II	III	IV	V	VI	NA	UA	NULL
Albania	2		15	749	23	5	4			
Austria	3	4	9	212	641	344	3		*1*	
Belgium			10		988		278	*406*		
Bulgaria	55		3	349	35	11	562	*28*		
Bosnia - Herzegovina				2		1				153
Switzerland	546				5345					
Cyprus	1	1	14	6	17	3	3			
Czech Republic	2	7	3	618	1885	37				
Germany			16		8150	8505				626
Denmark	6	14	10	23	307	1616		*297*		
Spain	10	61	97	259	176	311	43	*623*		
Estonia	29	1221		1231	908	856	808	*6639*		
Finland	20	123	38	2	394	3	15	*11124*		
France	55	1	7	13	2832	68			*2*	
United Kingdom			18	343	8549	107		*198*	*59*	
Greece	10		25	71	622	4	73	*37*		
Croatia		2	8	85	77	97		*148*		
Hungary			5		156	57		*61*		
Ireland	73		6		230					
Iceland	2	2	5	46	19	28	13			
Italy	116		24	55	491	185				
Liechtenstein		9			31	1				
Lithuania	6		5		287	32	30			
Luxembourg		44	2		62					
Latvia		4	45	355	293	10				
Macedonia	2		3	67	12	1	1			
Malta	9	75	7	53	19	1	1	*38*		
Montenegro	7		5	54		5			*1*	
Netherlands			20		231					
Norway	2126	1	44	96	229	138			*263*	
Poland			16		1435	121			*445*	
Portugal	13	25	1	21	66	45	49			
Romania	45		13	206	671	16				
Serbia	3	1	2	80	29	26	2	*117*		
Slovakia	350	23	8	326	406	15		*86*		
Slovenia	6	50	1	1164		44		*781*		
Sweden	2760	157	23	315	1245	302		*9488*		
Turkey									*1313*	
Kosovo	8	2	2	99		4				

The tables shows that for the most sites IUCN category information is available. Only two countries delivered sites without any IUCN information (NULL).

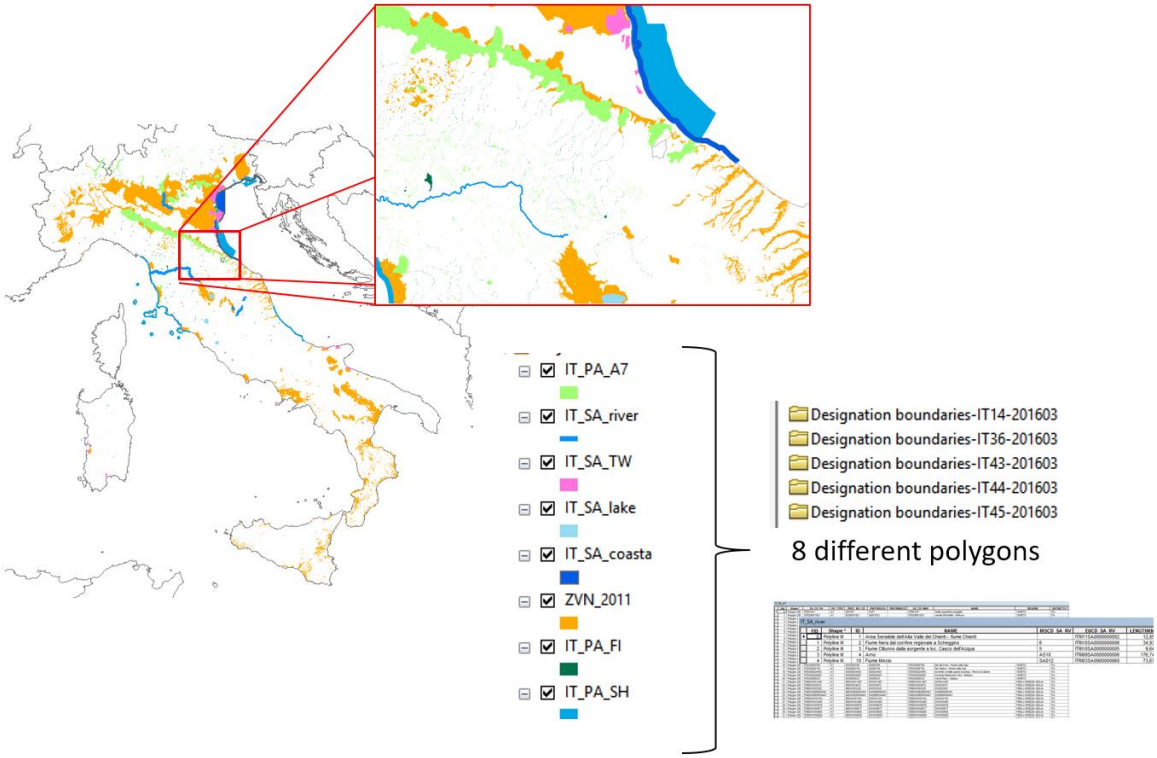
5.5 Designation boundaries

The designation boundaries concept is used for the reporting of areas protected by a designation type which does not create individual sites that can be identified by a SITE_CODE. Designation boundaries are always reported as a spatial dataset http://dd.eionet.europa.eu/tables/9117

Only Italy and Netherlands delivered designation boundaries.

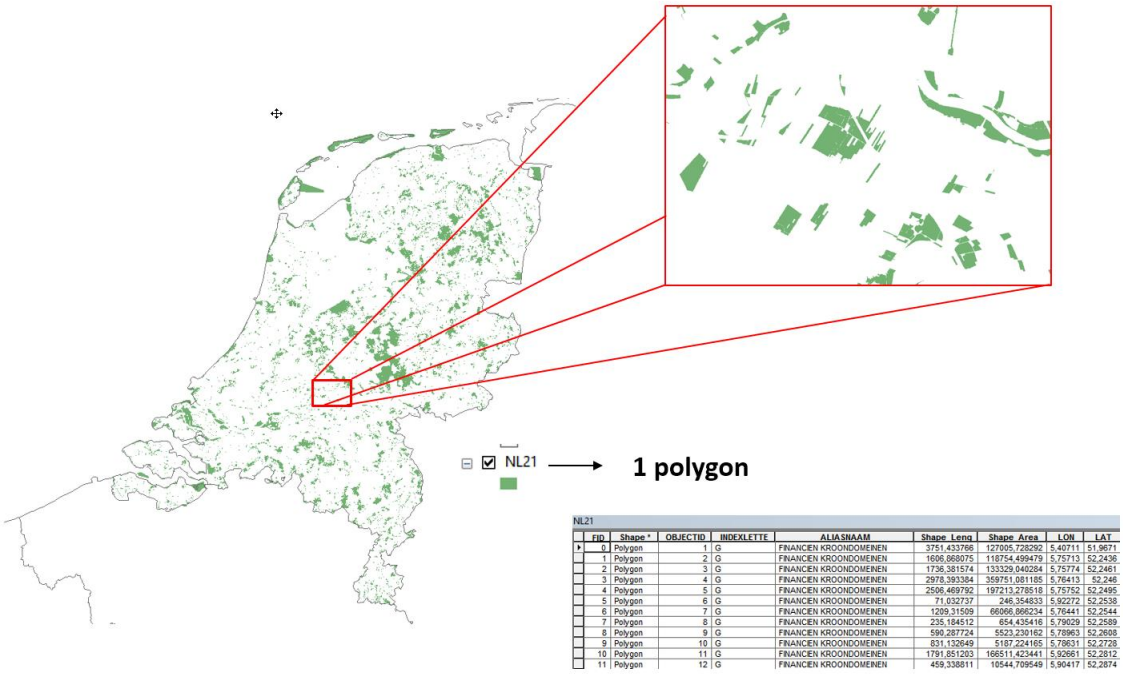
Italy delivered eight separate spatial datasets instead of one dataset combining all designation boundaries:

Figure 5-1 Spatial designation boundary delivery from Italy



The Netherlands delivered one designation boundary dataset covering the designation type NL21.

Figure 5-2 Designation boundary delivery from the Netherlands



NL21

FID	Shape *	OBJECTID	INDEXLETTE	ALIASNAAM	Shape_Leng	Shape_Area	LON	LAT
0	Polygon	1	G	FINANCIEN KROONDOMEINEN	3751,433786	127095,726292	5,40711	51,9671
1	Polygon	2	G	FINANCIEN KROONDOMEINEN	1606,868075	118754,499479	5,75713	52,2436
2	Polygon	3	G	FINANCIEN KROONDOMEINEN	1736,381574	133329,040284	5,75774	52,2461
3	Polygon	4	G	FINANCIEN KROONDOMEINEN	2978,393384	359751,081185	5,76413	52,246
4	Polygon	5	G	FINANCIEN KROONDOMEINEN	2596,469792	197213,278518	5,75752	52,2495
5	Polygon	6	G	FINANCIEN KROONDOMEINEN	71,032737	246,354833	5,92272	52,2538
6	Polygon	7	G	FINANCIEN KROONDOMEINEN	1209,31509	66066,866234	5,76441	52,2544
7	Polygon	8	G	FINANCIEN KROONDOMEINEN	235,184512	654,435416	5,79029	52,2589
8	Polygon	9	G	FINANCIEN KROONDOMEINEN	590,287724	5523,230182	5,78963	52,2608
9	Polygon	10	G	FINANCIEN KROONDOMEINEN	831,132649	5187,224165	5,78631	52,2728
10	Polygon	11	G	FINANCIEN KROONDOMEINEN	1791,851203	166511,423441	5,92661	52,2812
11	Polygon	12	G	FINANCIEN KROONDOMEINEN	459,338811	10544,709549	5,90417	52,2874

6 Concluding remarks

While the majority of the data delivered under the CDDA reporting cycle is of a high quality, there are still some problematic issues for data processing:

- wrong xml-file format or no xml-file uploaded to EIONET –> *no automatic QA possible*
- LAT/LON coordinates outside the country
- Unnecessary fields added to tabular/spatial dataset and/or different spelling of field names
- Many countries have delivered only tabular information to indicate the presence of designation boundaries, but where such a delivery is not accompanied by a spatial file the areas cannot be included under the designation boundaries concept. An improved description of the designation boundaries concept will be provided before the next CDDA reporting.
- Marine area percentages in some cases are not correct
- Spatial datasets reported in the wrong projection