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EU/CoE Joint Programme Emerald Network of Nature Protection Sites, Phase II (DCI-ENV/2012/289-173)

Quality check of the 2013 Emerald Sites database delivery by Georgia

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INTRODUCTION

The current report presents the result of the quality analysis/quality check of the Emerald database submitted by Georgia for 2013, through the EIONET Common Data Repository.

The analysis is the result of a detailed analysis performed by the three scientific and technical experts working on the project and is presented as follows: (1) analysis of the technical completeness of the database, (2) analysis of the completeness of the spatial data and (3) and an analysis of the overall scientific soundness of the database.

The information provided here should be thoroughly considered and every comment included by the experts should be carefully analysed and relevant action undertaken. In addition, it is suggested that the questions asked in Chapter 3 are used by the country for running a self-assessment/internal check of the Network proposed so far.

It should be noted that the analysis presented below is not a result of a complete feature by feature analysis, which will be the purpose of the biogeographical evaluation of the country site proposals, to be initiated in 2015.

The results of the qa/qc report will also be debated at the Emerald technical meeting organised in each of the project target countries and any eventual questions by the national Emerald team members will be clarified there.

1. DESCRIPTIVE DATA: TECHNICAL COMPLETENESS

1.1. Table BIOTOP:

Number of records:

A sites	B sites	C sites	Total
1	3	17	21

Field Name	Description	Comment
ТҮРЕ	Site type	OK
SITECODE	Site Code	OK
DATE	Compilation Date	OK
UPDATE	Update date	OK
DATE_PROP	Date site proposed as eligible as ASCI	OK
DATE_CON	Date confirmed as ASCI	N/A
RESPONDENT	Respondent	OK
MANAGER	Site Manager	OK
SITE_NAME	Site Name	OK
AREA	Area in ha	2 sites (17 and 19) are using the
		decimal "." Instead of decimal ","
		which is leading to problems during
		integration of data into the European
		data base: please change to decimal
		(()) 2

Field Name	Description	Comment
LENGTH	Site length in kilometres	ОК
LON_EW	Longitude East/West	OK
LAT_NS	Latitude North/South	ОК
LON_DEG	Longitude Degrees	ОК
LON_MIN	Longitude Minutes	ОК
LON_SEC	Longitude Seconds	ОК
LAT_DEG	Latitude Degrees	ОК
LAT_MIN	Latitude Minutes	ОК
LAT_SEC	Latitude Seconds	ОК
ALT_MEAN	Altitude Mean	ОК
ALT_MIN	Altitude Minimum	ОК
ALT_MAX	Altitude Maximum	ОК
ANATOL	Biogeographic region/Anatolian	ОК
ARCTIC	Biogeographic region/Arctic	N/A
ALPINE	Biogeographic region/Alpine	OK
ATLANTIC	Biogeographic region/Atlantic	N/A
CONTINENT	Biogeographic region/Continental	N/A
MACARONES	Biogeographic region/Macaronesian	N/A
MEDITERR	Biogeographic region/Mediterranean	N/A
BOREAL	Biogeographic region/Boreal	N/A
PANNONIC	Biogeographic region/Pannonian	N/A
PONTIC	Biogeographic region/Black Sea	N/A
STEPPIC	Biogeographic region/Steppic	N/A
QUALITY	Description Site Quality	What is the description behind the
		character codes indicated (A, B, C,
		D, E)?
VULNAR	Description Site Vulnerability	ОК
DESIGN	Description Site Designation	19 sites with no text given
OWNER	Description Site Ownership	OK
DOCUM	Description Site Documentation	21 sites with no reference to
		documentation
CHARACT	Description Site Character	20 sites with no description
MANAGPL	Description Site Management Plan	OK, but some more descriptive text
		on the management plan would be
		appreciated.
PHOTOS	Aerial photographs availability	ОК
MAPSINCL	Maps Included	ОК

1.2. Table AMPREP: Amphibian and reptiles

Number of records: 28

Number of species: 6

Field Name	Description	Comment
SITECODE	Site Code	ОК
ANNEX_II	Resolution 6 species Y/N	N/A
SPECNUM	Species Number	ОК
SPECNAME	Species Name	ОК
RESIDENT	Resident population	OK, but only qualitative data
BREEDING	Breeding population	ОК
WINTER	Wintering population	ОК
STAGING	Staging population	ОК
POPULATION	Site Assessment: Population	ОК
CONSERVE	Site Assessment: Conservation	ОК
ISOLATION	Site Assessment: Isolation	ОК
GLOBAL	Site Assessment: Global	ОК

1.3. Table BIRD: Birds

Number of records: 541

Number of species: 137

Field Name	Description	Comment
SITECODE	Site Code	ОК
ANNEX_II	Resolution 6 species Y/N	N/A
SPECNUM	Species Number	OK
SPECNAME	Species Name	OK
RESIDENT	Resident population	Only qualitative data; for birds, it should be
BREEDING	Breeding population	7 possible to indicate quantitative information
WINTER	Wintering population	and 13
STAGING	Staging population	
POPULATION	Site Assessment: Population	OK
CONSERVE	Site Assessment: Conservation	OK
ISOLATION	Site Assessment: Isolation	OK
GLOBAL	Site Assessment: Global	ОК

1.4. Table FISHES: Fishes

Number of records: 11

Number of species: 3

Field Name	Description	Comments
SITECODE	Site Code	ОК
ANNEX_II	Resolution 6 species Y/N	N/A
SPECNUM	Species Number	ОК
SPECNAME	Species Name	ОК
RESIDENT	Resident population	OK, but only "P" is very weak for phase II
BREEDING	Breeding population	
WINTER	Wintering population	
STAGING	Staging population	
POPULATION	Site Assessment: Population	ОК
CONSERVE	Site Assessment: Conservation	ОК
ISOLATION	Site Assessment: Isolation	ОК
GLOBAL	Site Assessment: Global	OK

1.5. Table INVERT: Invertebrates

Number of records: 107

Number of species: 11

Field Name	Description	Comment
SITECODE	Site Code	ОК
ANNEX_II	Resolution 6 species Y/N	N/A
SPECNUM	Species Number	ОК
SPECNAME	Species Name	ОК
RESIDENT	Resident population	• 3 records with no population: sites nr. 3,
BREEDING	Breeding population	12 and 18
WINTER	Wintering population	• only "P" is very weak for phase II
STAGING	Staging population	
POPULATION	Site Assessment: Population	ОК
CONSERVE	Site Assessment: Conservation	OK
ISOLATION	Site Assessment: Isolation	OK
GLOBAL	Site Assessment: Global	OK

1.6. Table MAMMAL: Mammals

Number of records: 162

Number of species: 18

Field Name	Description	Comment
SITECODE	Site Code	ОК
ANNEX_II	Resolution 6 species Y/N	N/A

SPECNUM	Species Number	ОК
SPECNAME	Species Name	ОК
RESIDENT	Resident population	• Only qualitative data; for mammals it
BREEDING	Breeding population	should be possible to indicate at least
WINTER	Wintering population	some quantitative information
STAGING	Staging population	• 7 records with no population: sites nr. 5,
		8, 18 and 20
POPULATION	Site Assessment: Population	ОК
CONSERVE	Site Assessment: Conservation	
ISOLATION	Site Assessment: Isolation	
GLOBAL	Site Assessment: Global	

1.7. Table PLANT: Plants

Number of records: 29 (all from resolution 6 species)

Number of species: 10

Number of species in country reference database: 12 (but comments are given in the Georgian Reference Database, to explain the difference, no sites for "*Aldrovanda vesiculosa*" and "*Dracocephalum austriacum*")

Field Name	Description	Comments
SITECODE	Site Code	ОК
ANNEX_II	Resolution 6 species Y/N	N/A
SPECNUM	Species Number	ОК
SPECNAME	Species Name	ОК
RESIDENT	Resident population	OK, but only "P"
POPULATION	Site Assessment: Population	ОК
CONSERVE	Site Assessment: Conservation	ОК
ISOLATION	Site Assessment: Isolation	ОК
GLOBAL	Site Assessment: Global	ОК

1.8. Table SPEC: Other important species

Number of records: 124

Field Name	Description	Comments
SITECODE	Site Code	OK
TAXGROUP	Taxonomic group	OK
SPECNAME	Species Name	Typing error for site nr. 12: "Chioptera sp."
POPULATION	Site Assessment: Population	No information given
MOTIVATION	Motivation for inclusion	12 records with no motivation

Field Name	Description	Comments
SITECODE	Site Code	ОК
ACT_CODE	Activity code	ОК
IN_OUT	In site / Out site	ОК
INTENSITY	Intensity code	ОК
COVER	% cover by activity	21 records with no cover given
INFLUENCE	Influence on site	ОК

1.9. Table ACTVTY: Impact and human activity in and around site

Number of records: 61

1.10. Table HABIT1: Resolution 4 (1996) Habitat Types

Number of records: 59 (all correct Res. 4 habitat codes)

Number of habitats: 11

Number of habitats in country Reference Database: 14 (No sites given for Marine habitats)

Field Name	Description	Comments
SITECODE	Site Code	ОК
HBCDAX	Habitat Code of Resolution 4	ОК
COVER	% cover by habitat	2 records with no % given
REPRESENT	Site Assessment: Representativity	ОК
REL_SURF	Site Assessment: Relative Surface	4 records with incomplete criteria (sites 5, 6
CONSERVE	Site Assessment: Conservation	and 14)
GLOBAL	Site Assessment: Global	

1.11. Table HABIT1A: Other important Habitat Types

Field Name	Description	Comments
SITECODE	Site Code	ОК
HBCDAX	Habitat Code	ОК
COVER	% cover by habitat	ОК

1.12. Table HABIT2: General Habitat Types

Field Name	Description	Comments
SITECODE	Site Code	ОК
HABCODE	General habitat code	ОК
COVER	% cover by general habitat type	ОК

1.13. Table REGCODE: Regions

Field Name	Description	Comments
SITECODE	Site Code	ОК
REC_CODE	Region Code	ОК
COVER	% cover by region	ОК

Field Name	Description	Comments
SITECODE	Site Code	ОК
DESICODE	Designation Code	ОК
COVER	% cover by designation	10 records with no % indicated

1.14. Table DESIGC: Site designation codes

1.15. Table DESIGR: Relation to designated sites

Field Name	Description	Comments
SITECODE	Site Code	ОК
DESICODE	Designation Code	ОК
DES_SITE	Name of designated site	1 record without name indicated
OVERLAP	Overlap type	3 records without overlap type
OVERLAP_P	% overlap Emerald/Designated site	1 record with no %

1.16. Table CORINE: Relation to CORINE Biotopes sites

Field Name	Description	Comments
SITECODE	Site Code	N/A
CORINE	Corine Biotopes code	N/A
OVERLAP	Overlap type	N/A
OVERLAP_P	% overlap Biotope/Designated site	N/A

1.17. Table SITREL: Relation to other EMERALD Sites

No need to indicate relationships ?

Field Name	Description	Comments
SITECODE	Site Code	
OTHERTYPE	Type of related EMERALD site	
OTHERSITE	Site Code related EMERALD site	

1.18. Table MAP: Map information

No records available

Field Name	Description	Comments
SITECODE	Site Code	
MAP_NO	Map number	
SCALE	Map Scale	
PROJECTION	Map Projection	
DETAILS	Digitized boundaries details	

1.19. Table PHOTO: Aerial photographs and slides

Field is removed in new SDF; no need to indicate information

Field	Description	Comments
Name		
SITECODE	Site Code	
ТҮРЕ	Aerial photograph or slide	
REFNUM	Aerial photo reference	
LOCATION	Photo/Slide location	
DESCRIPT	Photo/Slide description	
DATE	Photo/Slide date	
AUTHOR	Slide Author/Copyright	

1.20. Table HISTRY: History information

No need to indicate information

Field Name	Description	Comments
SITECODE	Site Code	
KEYWORD	History keyword	
DESCRIPT	Description of change	
DATE	Change date	

1.21. Table RESP: Respondent

Field Name	Description	Comments		
RESPOND	Respondent information	ОК		

2. SPATIAL DATA: COMPLETENESS AND ACCORDANCE WITH DESCRIPTIVE DATA

The purpose of this check is to ensure integrity of tabular and spatial datasets and to correct possible errors before preparations for the bio-geographical seminar.

2.1. Check geographical integrity (scale, projection). General observations.

Description
Analysed spatial dataset: Georgia_Site_GE_2014_01.shp, downloaded from http://cdr.eionet.europa.eu/ge/coltlvahq/coltlvamg/envuveh5w (Envelope of 2013). Coordinate system: ETRS_1989_LCC.
Analysed tabular database: CNTRYGE.MDB, downloaded from <u>http://cdr.eionet.europa.eu/ge/coltlvahq/coltlvamg/envuveh5w</u> (Envelope of 2013).

Number of sites in spatial data set: 21

Map: distribution of sites with codes within country:



Remarks:

Site codes from GE00001 to GE00017 in spatial database consist only of 5 digits (7 digits in the tabular data base).

Please ensure that site codes in spatial data set are equal to the site codes in the tabular database.

2.2. Compatibility and completeness between tabular data site-code and site-code indicated in the GIS-layers

Sitecodes not in tabular database:

Sitecode	Notes
-	All site codes that are in spatial dataset are found in spatial database.

Sitecodes not in spatial database:

Sitecode	Notes
-	All site codes that are in tabular database are found in spatial dataset

2.3. Are all centroids within polygons of respective sites?

Sitecode	Longitude	Latitude	Notes
GE00005	E 43 41 25	N 41 13 10	Given centroide approx. 1 km outside from
			the site border.
GE00006	E 42 10 30	N 41 46 50	Given centroide approx. 44 km outside from
			the site border.
GE00009	E 44 36 20	N 42 38 37	Site consists of many parts. Given centroide
			is not within any of these parts.
GE00011	E 43 35 40	N 42 51 15	Given centroide approx. 1 km outside from
			the site border.
GE0000021	E 44 56 99	N 42 39 55	Given centroide is not within the respective
			site polygon, but within the site GE00002
			polygon.

Sitecodes where this is not the case

2.4. Tabular site surface area in comparison with polygon area

Sitecode	Area: spatial, ha	Area: tabular, ha	Difference, ha	% difference
GE00001	21351,82	22367,69	-1015,874868	-4,8
GE00002	23648,60	24857,84	-1209,236406	-5,1
GE00003	8230,55	8592,53	-361,98052	-4,4
GE00004	1012,95	1057,12	-44,174404	-4,4
GE00005	206,52	215,55	-9,034858	-4,4
GE00006	43275,54	45474,26	-2198,72215	-5,1
GE00007	36562,47	38165,97	-1603,498071	-4,4
GE00008	108941,41	114375,44	-5434,028128	-5,0
GE00009	8768,94	9216,63	-447,685536	-5,1
GE00010	70547,81	73907,59	-3359,77632	-4,8
GE00011	260924,27	274332,57	-13408,29623	-5,1
GE00012	221242,97	233147,75	-11904,77696	-5,4
GE00013	7048,29	7375,27	-326,978054	-4,6
GE00014	12822,55	13437,36	-614,813904	-4,8
GE00015	2846,39	2985,96	-139,574984	-4,9
GE00016	15019,91	15737,40	-717,489025	-4,8
GE00017	645,71	674,2	-28,490698	-4,4
GE0000018	4611,29	4838,75	-227,457203	-4,9

Sitecode	Area: spatial, ha	Area: tabular, ha	Difference, ha	% difference
GE0000019	3164,65	3305,97	-141,31562	-4,5
GE0000020	965,40	1010,36	-44,956933	-4,7
GE0000021	111652,21	24857,84	86794,37014	77,7

2.5. Site location in the bio-geographical region, according to the spatial data set.

This is for your information only. Please see recommendations in QAQC Chapter 3.

Sitecode	ALPINE	BLACK-	STEPPIC	Notes
		SEA		
GE00001	YES	NO	NO	100% in the Alpine biogeographical region.
GE00002	YES	NO	NO	100% in the Alpine biogeographical region.
GR00003	NO	NO	Yes	100% in the Steppic biogeographical region.
GE00004	YES	NO	NO	100% in the Alpine biogeographical region.
GE00005	YES	NO	NO	100% in the Alpine biogeographical region.
GE00006	No	Yes	No	100% in the Black Sea biogeographical region.
GE00007	Yes	No	Yes	279 ha (0.7% of the total site area) in the Alpine
				biogeographic region. 36 283 ha in the Steppic
				biogeographical region.





Emeraid site boundaries and site codes"

Georgia state boundary (submitted by the country) State boundaries (2001-2004 ESRI) Boundaries of Biogeographical Regions Black Sea Bio-geographical Region Steppic Bio-geographical Region

code labels indicated according to site codes in the at fGIS laver "Georgia Site GE 2014 01"

Legend

site



Sitecode	ALPINE	BLACK- SEA	STEPPIC	Notes
GE00014	YES	YES	NO	8854 ha (69% of the total site area) in the Black Sea biogeographical region. 3968 ha in the Alpine biogeographical region.
Georgia Black Sea	es and site codes" y (uluamized by the country) 1-2004 ESRI() tool		5E 00016	
	Kr			
GE00015 GE00016	YES VES	NU VES	NO NO	100% in the Alpine biogeographical region
	115	1123		Sea biogeographical region. 1699 ha in the Alpine biogeographical region.
The map of th	e site GE000	16 see above	·	
GE00017	YES	NO	NO	100% in the Alpine biogeographical region.
GE0000018	NO	YES	NO	100% in the Black Sea biogeographical region.
GE0000019	NO	NO	YES	100% in the Steppic biogeographical region.
GE0000020	YES	NO	NO	100% in the Alpine biogeographical region.



2.6. Are sites within the state boundaries?

As far as it can be judged from the available spatial data, all sites are located within the state's boundaries.

3. Descriptive data: scientific completeness and soundness

The aim of this check is to ensure scientific quality of the data and to minimize the need to correct/complete these issues during the preparations for bio-geographical seminars. Please correct the issues indicated below. 'OK' means that no action is required.

3.1. Problems with indication of bio-geographic regions?

No regions indicated

SITE_CODE	Description
-	OK. Regions indicated for all sites.

Please check region indications marked in pink. According to our analysis they seem to be wrong in tabular database and should be corrected according to <u>spatial</u> data (please see also spatial analysis chapter of QA/QC report).

SITE_CODE	Spatial			Tabular			Comments
	ALP	BLS	STE	ALP	BLS	STE	
GE0000001	YES	NO	NO	Yes	No	No	ОК
GE0000002	YES	NO	NO	Yes	No	No	ОК
GE0000003	NO	NO	YES	No	No	Yes	ОК
GE0000004	YES	NO	NO	Yes	No	No	ОК
GE0000005	YES	NO	NO	Yes	No	No	ОК
GE0000006	NO	YES	NO	No	Yes	No	ОК
GE0000007	YES	NO	YES	No	No	Yes	279 ha (0.7% of the total site area) also in ALP. Please add.
GE000008	YES	NO	NO	Yes	No	No	ОК
GE0000009	YES	NO	NO	Yes	No	No	ОК
GE0000010	YES	YES	NO	Yes	No	No	20 997 ha (30% of the total site area) also in BLS. Please add.
GE0000011	YES	YES	NO	Yes	No	No	53 115 ha (20%) also in the BLS. Please add.

SITE_CODE	Spatial			Tabular			Comments
	ALP	BLS	STE	ALP	BLS	STE	
GE0000012	YES	NO	NO	Yes	No	No	ОК
GE0000013	YES	NO	NO	Yes	No	No	ОК
GE0000014	YES	YES	NO	No	Yes	No	3968 ha (31%) also in the ALP. Please add.
GE0000015	YES	NO	NO	Yes	No	No	ОК
GE0000016	YES	YES	NO	No	Yes	No	1699 ha (12%) also in the ALP. Please add.
GE0000017	YES	NO	NO	Yes	No	No	OK
GE0000018	NO	YES	NO	Yes	No	No	100% in the BLS. Please correct.
GE0000019	NO	NO	YES	No	No	Yes	OK
GE0000020	YES	NO	NO	Yes	No	No	ОК
GE0000021	YES	YES	NO	Yes	No	No	32 637 ha (29%) also in the BLS. Please add.

3.2. Is habitat cover filled at least for a majority of sites? Are records logical, i.e. do not exceed 100% (for the old SDF). Are there 0% values?

Account of possible problems in 'habit1' table:

SITE_CODE	Description
-	Generally OK. 'D' records comprise 19 of a total of 59 records. Decimals
	occasionally used for habitat cover.

3.3. Are site assessments complete at least for a majority of sites, i.e. at least POPULATION for species? Are there any obvious problems with the use of categories (ABCD)?

Account of possible problems

Table	Remarks
amprep	OK. No obvious problems. [Res. 6 species only]
bird	OK. But a bit high proportion of D records [Res. 6 species only]

fish	OK. No obvious problems. [Res. 6 species only]
invert	87 of 112 records are D. Need to discuss GE approach in using D category. [Res. 6 species only]
mammal	OK. But a bit high proportion of D records [Res. 6 species only]
plant	OK. But a bit high proportion of D records [Res. 6 species only]

3.4. Are there double-records for species/site?

Account of possible problems

Table	Remarks				
amprep	OK. No duplicates.				
bird	Please delete following duplicate records:				
	SITECODE	SPECNUM	Num	iber of duplicates	
	GE000002	A101	2		
	GE000003	A098	2		
	GE000006	A020	2		
	GE000006	A072	2		
	GE000008	A078	3		
	GE000008	A079	2		
	GE000008	A215	2		
	GE000009	A122	2		
	GE0000011	A078	2		
	GE0000016	A083	2		
	GE0000017	A026	2		
	GE0000017	A119	2		
fish	OK. No duplicates.				
invert	Please delete following duplicate records:				
	SITECODE	SPECNUM		Number of duplic	cates
	GE0000013	1042		2	
mammal	Please delete following duplicate records:				
	SITECODE	SPECNUM		Number of duplic	ates
	GE0000011	1304		2	
	GE0000019	1308		2	
plant	OK. No duplicates				

3.5. Are there double-records for habitats/site?

Account of possible problems

Table	Remarks
Habit1	OK. No duplicates.

3.6. Are numeric data available for POPULATION, at least for birds and mammals?

Account of possible problems

Remarks

No numeric data, with a very few exceptions. Please consider adding population counts at sites (at least for birds and mammals) as it could help increasing the quality of sufficiency evaluation.

3.7. Are there any obvious gaps in representation of all features of Resolutions 4 and 6 in the database (according to the Reference List)?

Account of possible problems

Group	Code	Description
Habitats	A2.12	Habitat in the Reference List but no site.
	A2.2	Habitat in the Reference List but no site.
	A3	Habitat in the Reference List but no site.
	D1.1	Habitat in the Reference List but no site.
	F7.3	Habitat in the Reference List but no site.
	F7.4	Habitat in the Reference List but no site.
	H1.1	Habitat in the Reference List but no site.
Non-avian species*	1026	Chondrostoma toxostoma. But not occurring in GE, according to IUCN. Error? Wrong code in Reference Database?
Birds	-	All species in Reference Database have sites. Where this is not the case, GE explanations are satisfactory.

3.8. Are there unrealistic POPULATION SIZE x SITE AREA relationships or use of species status categories?

 SITE_CODE
 Species name
 Description

 Not possible to check in absence of quantitative data.

Account of possible problems

3.9. Are there obvious or substantial gaps in site distribution?



Account of possible problems

Description

Site distribution relatively even in all regions. Gaps in the central part of ALP region? Relatively low cover in BLS and STE regions?

3.10. Are species names used correctly (obvious errors)?

Account of possible problems

Species name	Description
-	No obvious errors in this stage of evaluation

3.11. Are species and habitat codes used correctly (obvious errors)?

Account of possible problems

Feature code	Description
-	No obvious errors in this stage of evaluation

3.12. Does each site have at least one feature of Res. 4 and/or Res.6?

Account of possible problems

SITE_CODE	Description
-	OK. All sites contain Res. 4 and/or 6 features.

3.13. Other useful observations?

Account of possible problems

Description

Please check the Reference Database, if all features present in Georgia are included.

In particular, check habitats. Bulgaria, for example, in the other side of Black Sea, has 47 habitats in BLS region and 57 habitats in ALP region while GE has only 14 habitats in the whole country. We acknowledge that Natura 2000 habitats are not 1:1 to EUNIS system but the difference is striking!