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Distribution maps

Feedback, Evaluation, possible Improvements

Second workshop on reporting under Resolution No. 8 (2012) of the Bern Convention, Paris, 8 November 2018

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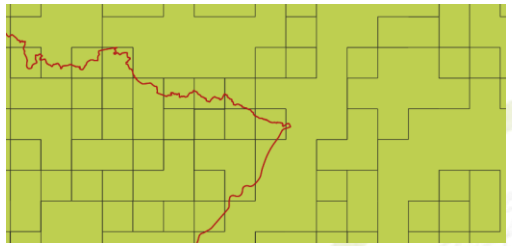
General status

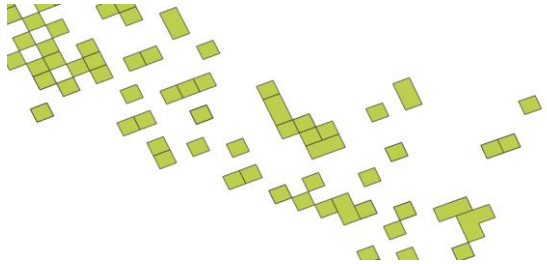
- Distribution maps received from 8 countries for 22 species/habitat distributions
  - 5 deliveries essentially conform with data requirements

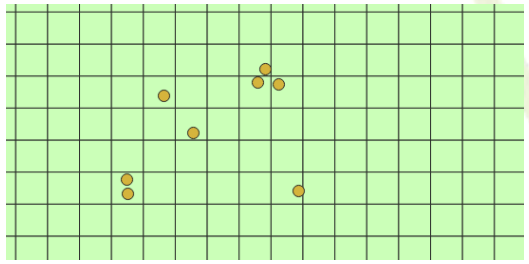


  - 10 deliveries principally correct with missing attributes or incomplete formal specifications

CELLCODE	EOFORIGIN	NOFORIGIN	CODE	Region	MS	CS_MS
10kmE151N465	1510000	4650000		CON	AA	FV
10kmE151N461	1510000	4610000		CON	AA	U1+
10kmE153N467	1530000	4670000		CON	AA	U1x
10kmE151N458	1510000	4580000		CON	AA	FV
10kmE155N463	1550000	4630000		ALP	AA	FV
10kmE175N450	1750000	4500000		MED	AA	U1x
10kmE175N452	1750000	4520000		MED	AA	U1-

  - 7 deliveries either not conform with specifications, not converted into grid format or showing crucial issues





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General feedback

- Good starting point but clarification needed
  - Only few fully compliant distribution maps received
  - Many minor issues, only few critical inconsistencies and invalid datasets
- No real standardization of reported data so far
  - Both spatially as well as for tabular attribution gaps and weaknesses found
  - Type of reporting very inconsistent:
    - Representation form: EEA grid, national grid systems, points, polygons
    - Format: Shapefiles vs. MapInfo
  - Different attributes defined by almost every reporting country
- Framework of spatial form generally understood
  - Nonetheless resulting data very heterogeneous in terms of structure and format

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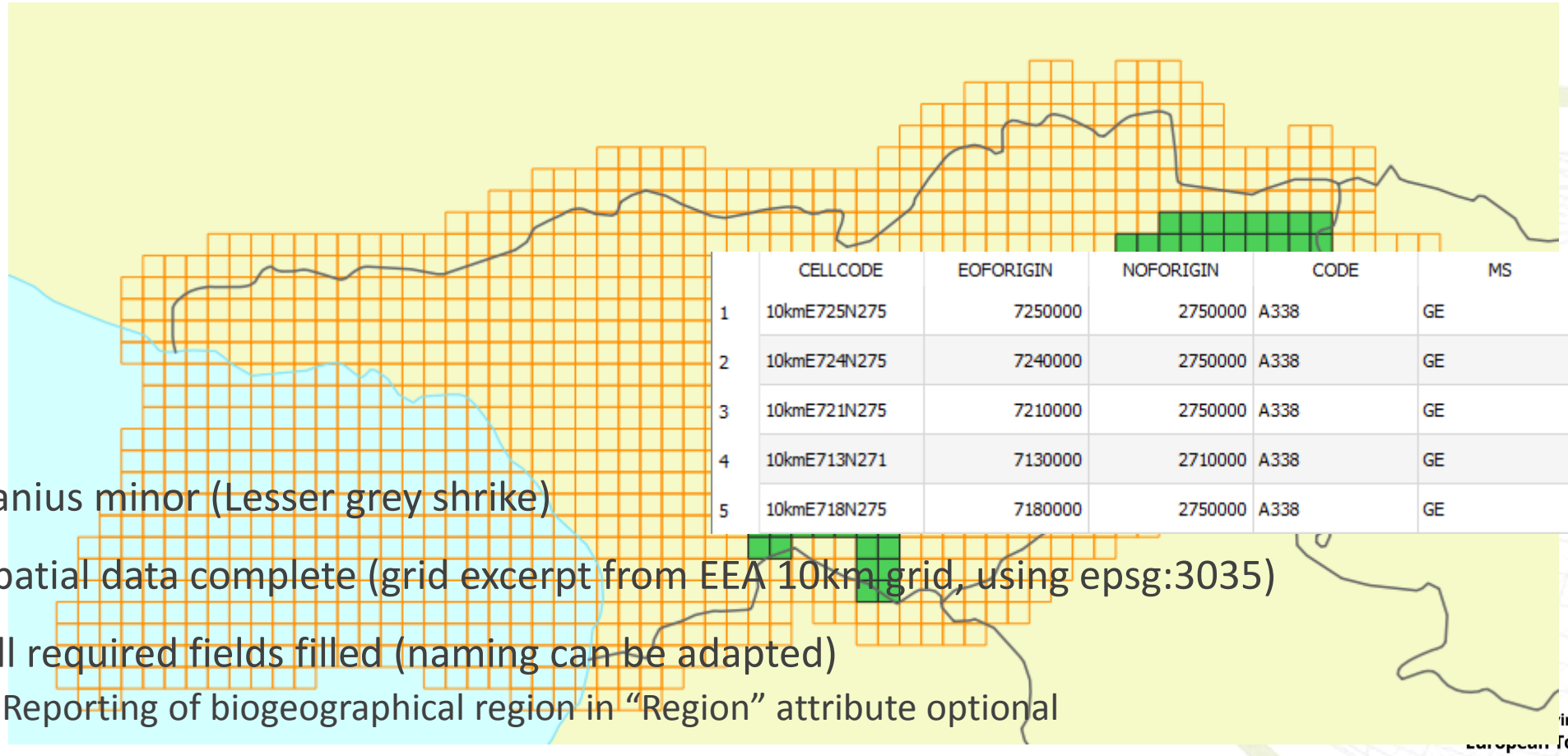
Good example



	CELLCODE	EOFORIGIN	NOFORIGIN	CODE	MS	GE_CS
1	10kmE725N275	7250000	2750000	A338	GE	Unknown
2	10kmE724N275	7240000	2750000	A338	GE	Unknown
3	10kmE721N275	7210000	2750000	A338	GE	Unknown
4	10kmE713N271	7130000	2710000	A338	GE	Unknown
5	10kmE718N275	7180000	2750000	A338	GE	Unknown

- Lanius minor (Lesser grey shrike)
- Spatial data complete (grid excerpt from EEA 10km grid, using epsg:3035)
- All required fields filled (naming can be adapted)
  - Reporting of biogeographical region in "Region" attribute optional

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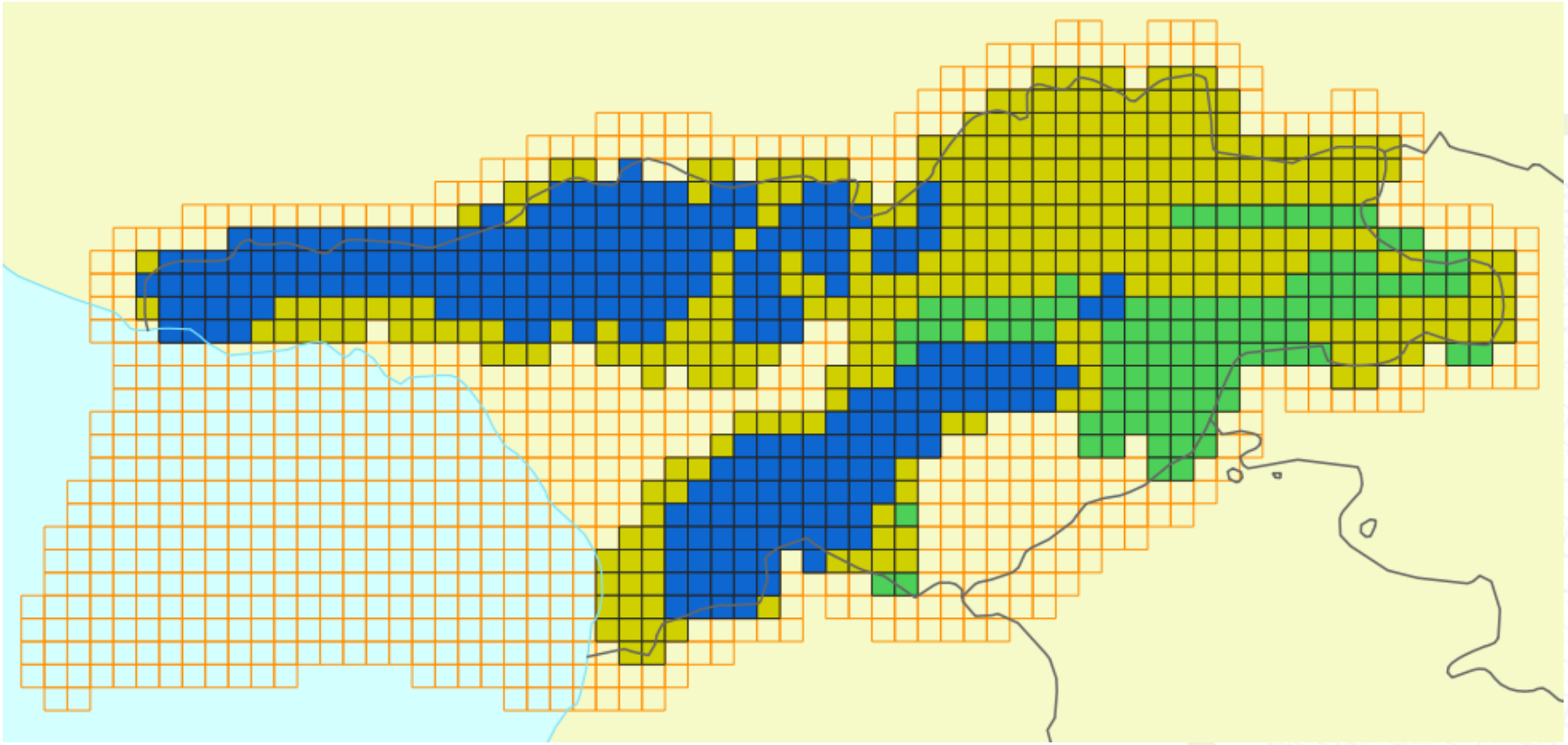
Good example



- Ursus arctos (Brown bear, light green), Coniferous woodland dominated by Cupressaceae or Taxaceae (G3.9 or G3.17 like defined in spatial attributes?)

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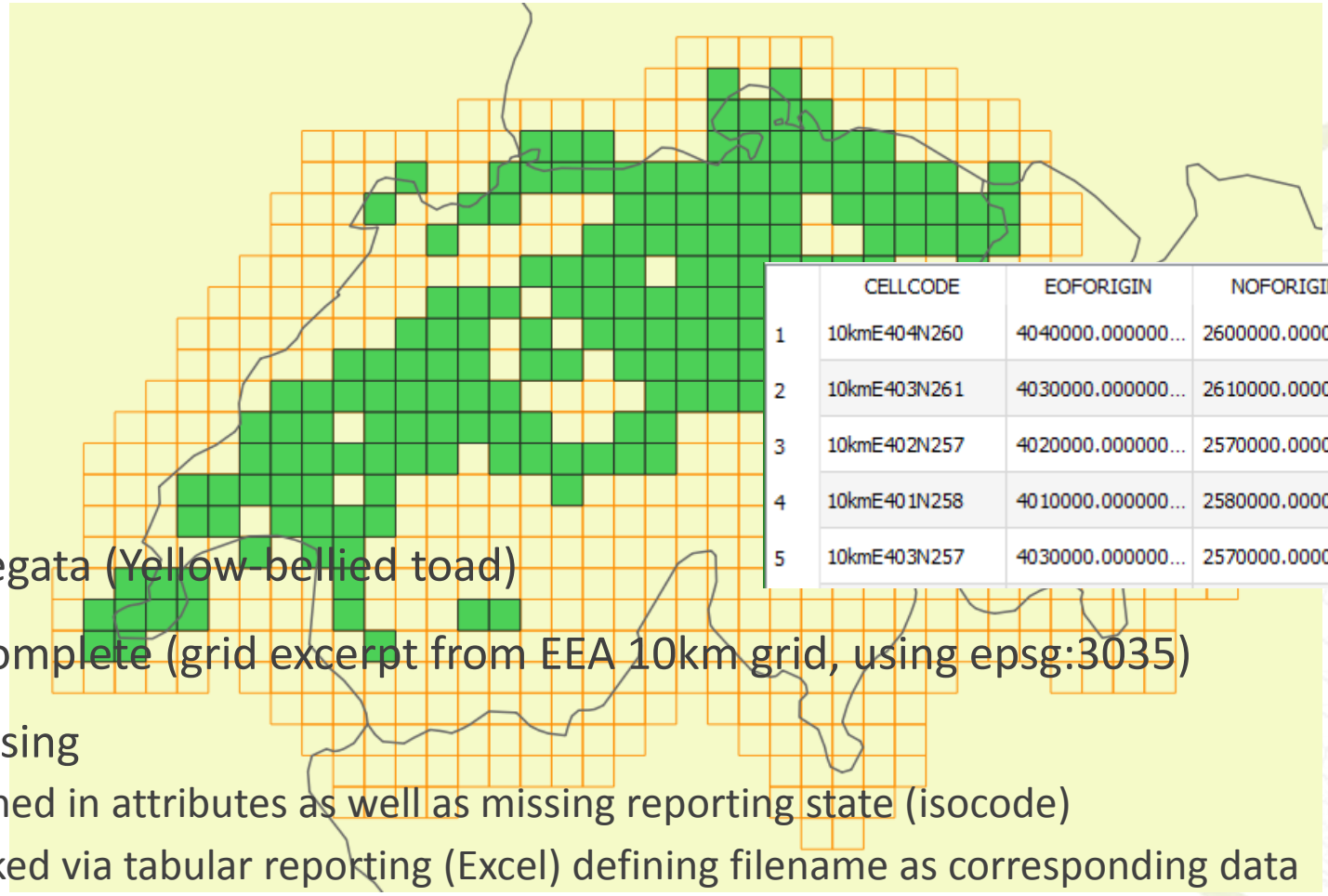
Minor issues and incomplete examples



	CELLCODE	EOFORIGIN	NOFORIGIN
1	10kmE404N260	4040000.000000...	2600000.000000...
2	10kmE403N261	4030000.000000...	2610000.000000...
3	10kmE402N257	4020000.000000...	2570000.000000...
4	10kmE401N258	4010000.000000...	2580000.000000...
5	10kmE403N257	4030000.000000...	2570000.000000...

- Bombina variegata (Yellow-bellied toad)
- Spatial data complete (grid excerpt from EEA 10km grid, using epsg:3035)
- Attributes missing
  - NO code defined in attributes as well as missing reporting state (isocode)
  - Code only linked via tabular reporting (Excel) defining filename as corresponding data

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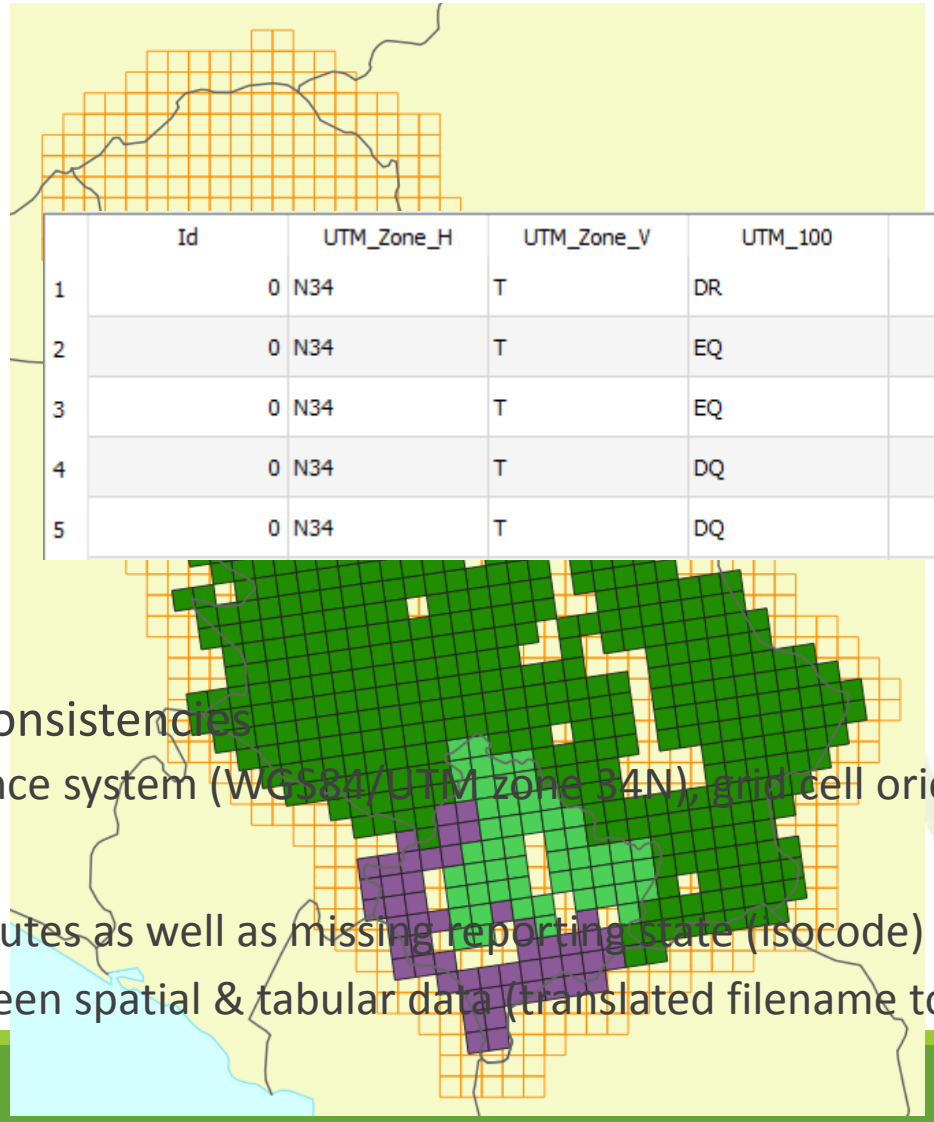
Minor issues and incomplete examples



	Id	UTM_Zone_H	UTM_Zone_V	UTM_100	UTM_50	UTM_100_X	UTM_100_Y	POVKM2
1	0	N34	T	DR	2	0	0	100.00000000000
2	0	N34	T	EQ	1	3	9	100.00000000000
3	0	N34	T	EQ	1	4	9	100.00000000000
4	0	N34	T	DQ	1	1	9	100.00000000000
5	0	N34	T	DQ	1	0	9	100.00000000000

- Beech forests
- Spatial data showing inconsistencies
  - Invalid coordinate reference system (WGS84/UTM zone 34N), grid cell orientation incorrect, *(split files)*
- Attributes incomplete
  - NO code defined in attributes as well as missing reporting state (isocode)
  - No linkage possible between spatial & tabular data (translated filename to English links to Excel sheets)

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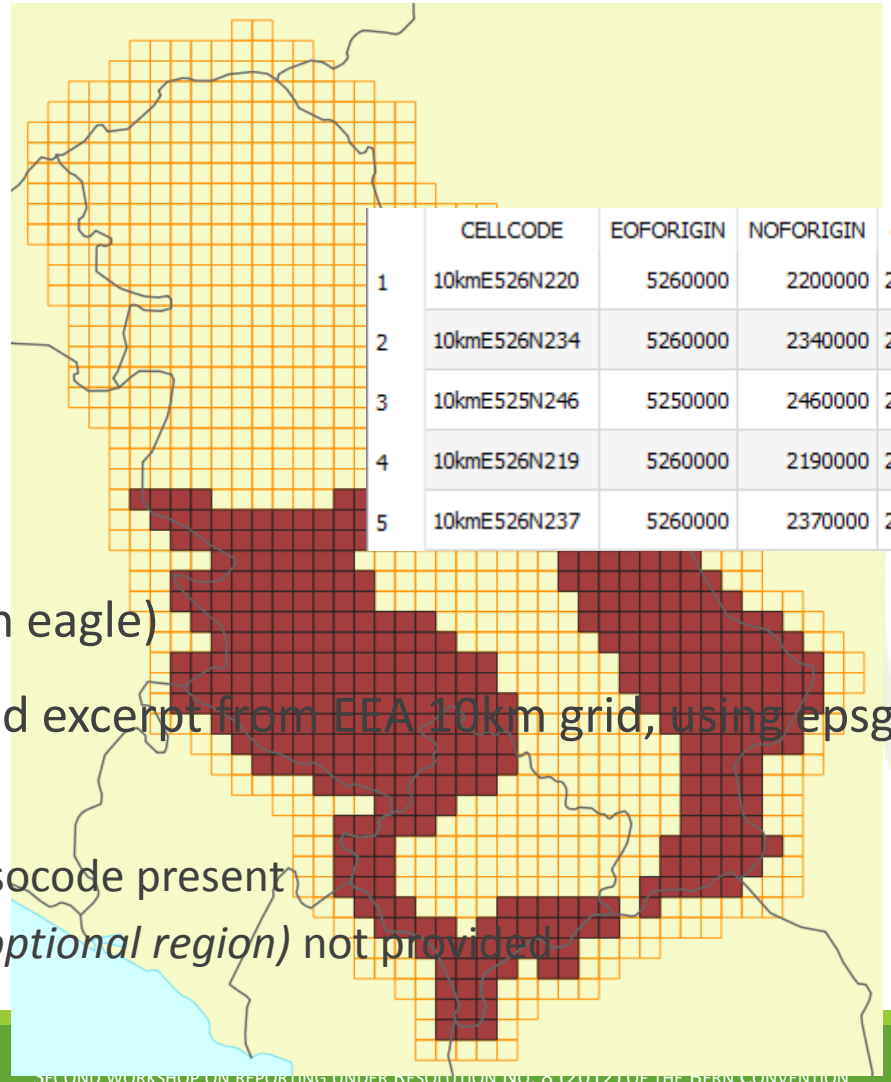
Minor issues and incomplete examples



	CELLCODE	EOFORIGIN	NOFORIGIN	code	category	isocode	refgrid	sensitive	maptype
1	10kmE526N220	5260000	2200000	2960	Species	RS	EEA-10km GRID	sensitive	Distribution
2	10kmE526N234	5260000	2340000	2960	Species	RS	EEA-10km GRID	sensitive	Distribution
3	10kmE525N246	5250000	2460000	2960	Species	RS	EEA-10km GRID	sensitive	Distribution
4	10kmE526N219	5260000	2190000	2960	Species	RS	EEA-10km GRID	sensitive	Distribution
5	10kmE526N237	5260000	2370000	2960	Species	RS	EEA-10km GRID	sensitive	Distribution

- Aquila chrysaetos (Golden eagle)
- Spatial data complete (grid excerpt from EEA 10km grid, using epsg:3035)
- Attributes provided
  - Code attribute as well as isocode present
  - Conservation status *(and optional region)* not provided

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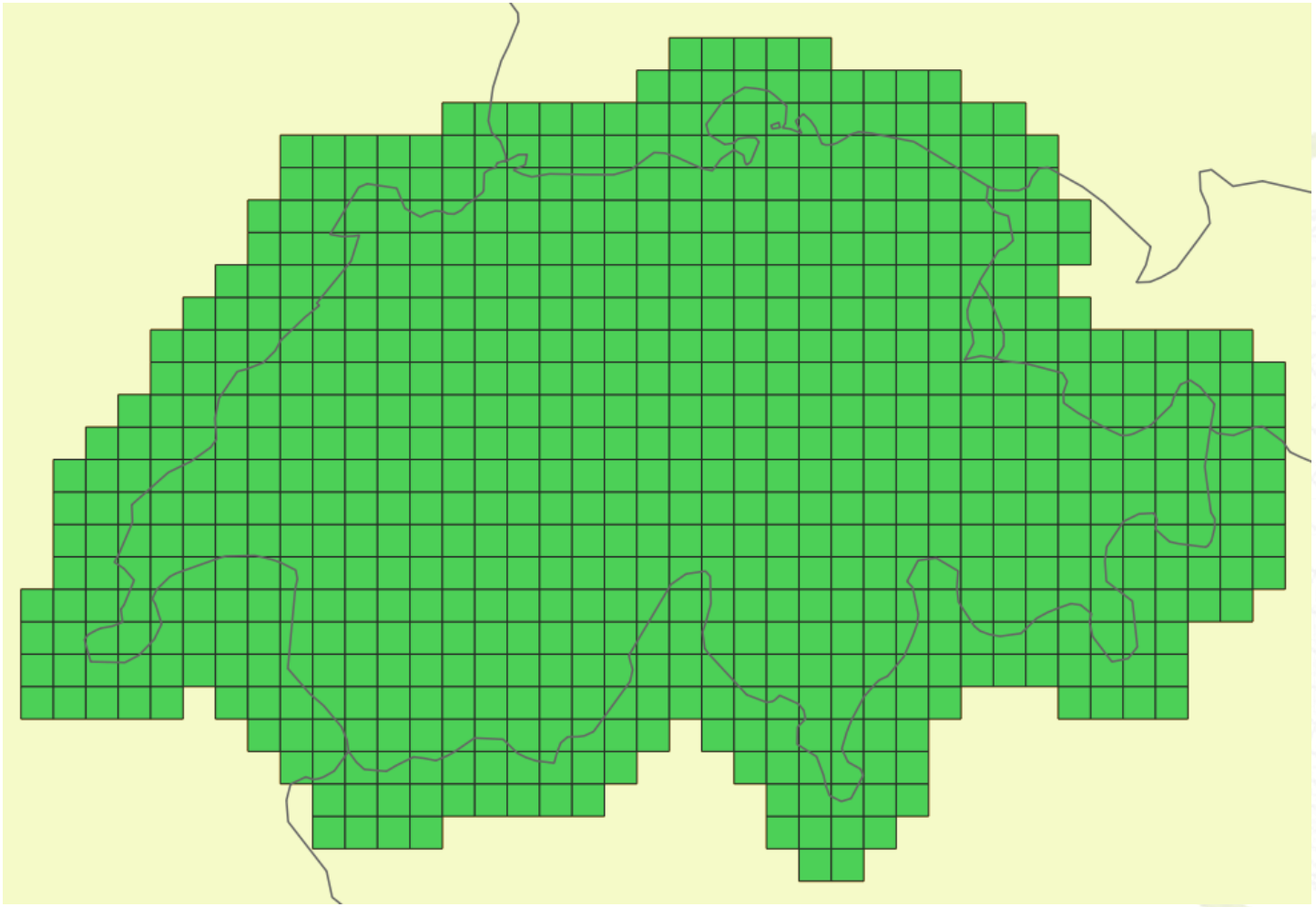
Minor issues and incomplete examples



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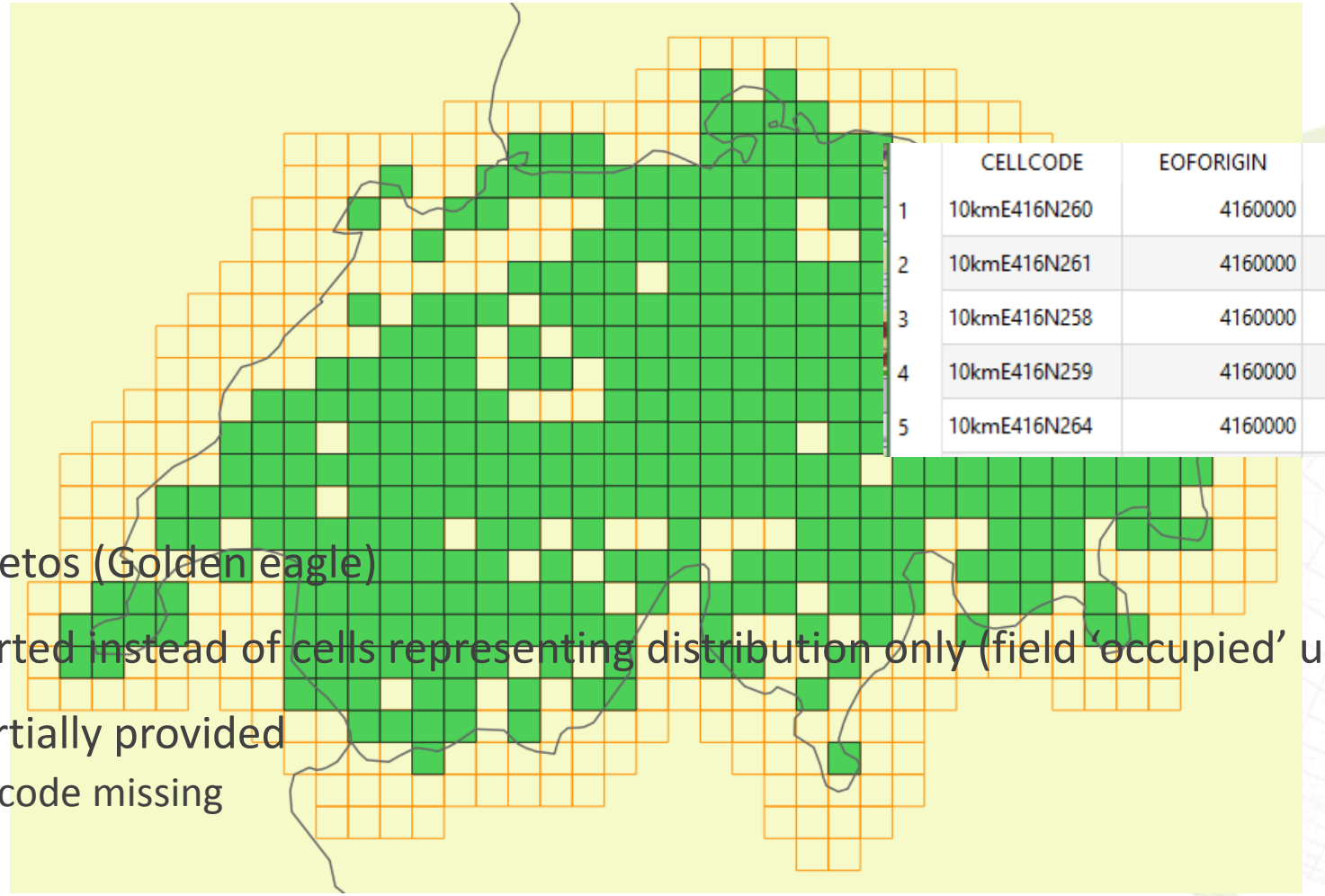
Minor issues and incomplete examples



	CELLCODE	EOFORIGIN	NOFORIGIN	occupied
1	10kmE416N260	4160000	2600000	yes
2	10kmE416N261	4160000	2610000	yes
3	10kmE416N258	4160000	2580000	yes
4	10kmE416N259	4160000	2590000	no
5	10kmE416N264	4160000	2640000	no

- Aquila chrysaetos (Golden eagle)
- Full grid reported instead of cells representing distribution only (field 'occupied' used)
- Attributes partially provided
  - Code and isocode missing

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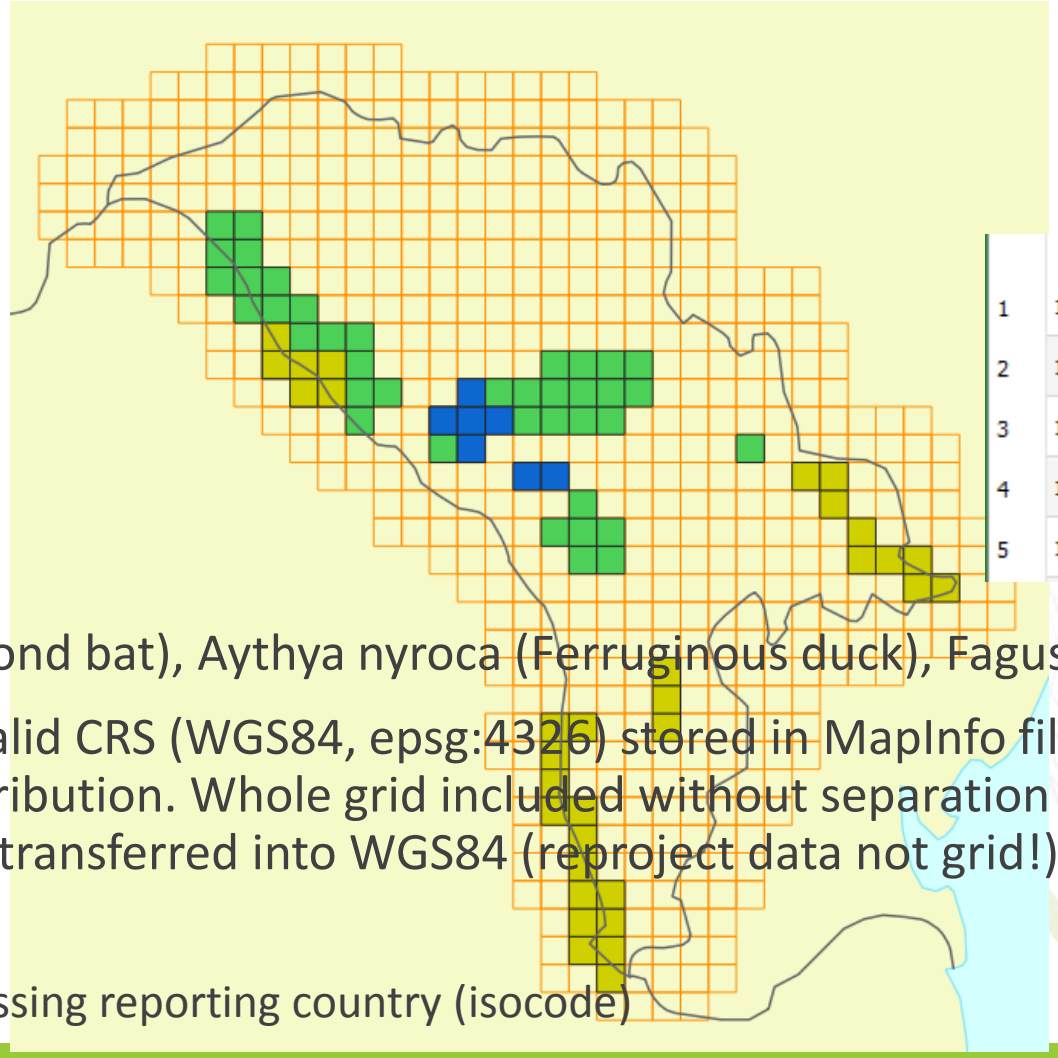
Minor issues and incomplete examples



	CELLCODE	EOFORIGIN	NOFORIGIN
1	10kmE580N283	5800000	2830000
2	10kmE579N283	5790000	2830000
3	10kmE562N286	5620000	2860000
4	10kmE561N286	5610000	2860000
5	10kmE560N287	5600000	2870000

- Myotis dasycneme (Pond bat), Aythya nyroca (Ferruginous duck), Fagus woodland habitat
- Spatial data using invalid CRS (WGS84, epsg:4326) stored in MapInfo file without clear attributes stating distribution. Whole grid included without separation of distribution and non-distribution. EEA grid transferred into WGS84 (reproject data not grid!)
- Attributes incomplete
  - NO code as well as missing reporting country (isocode)

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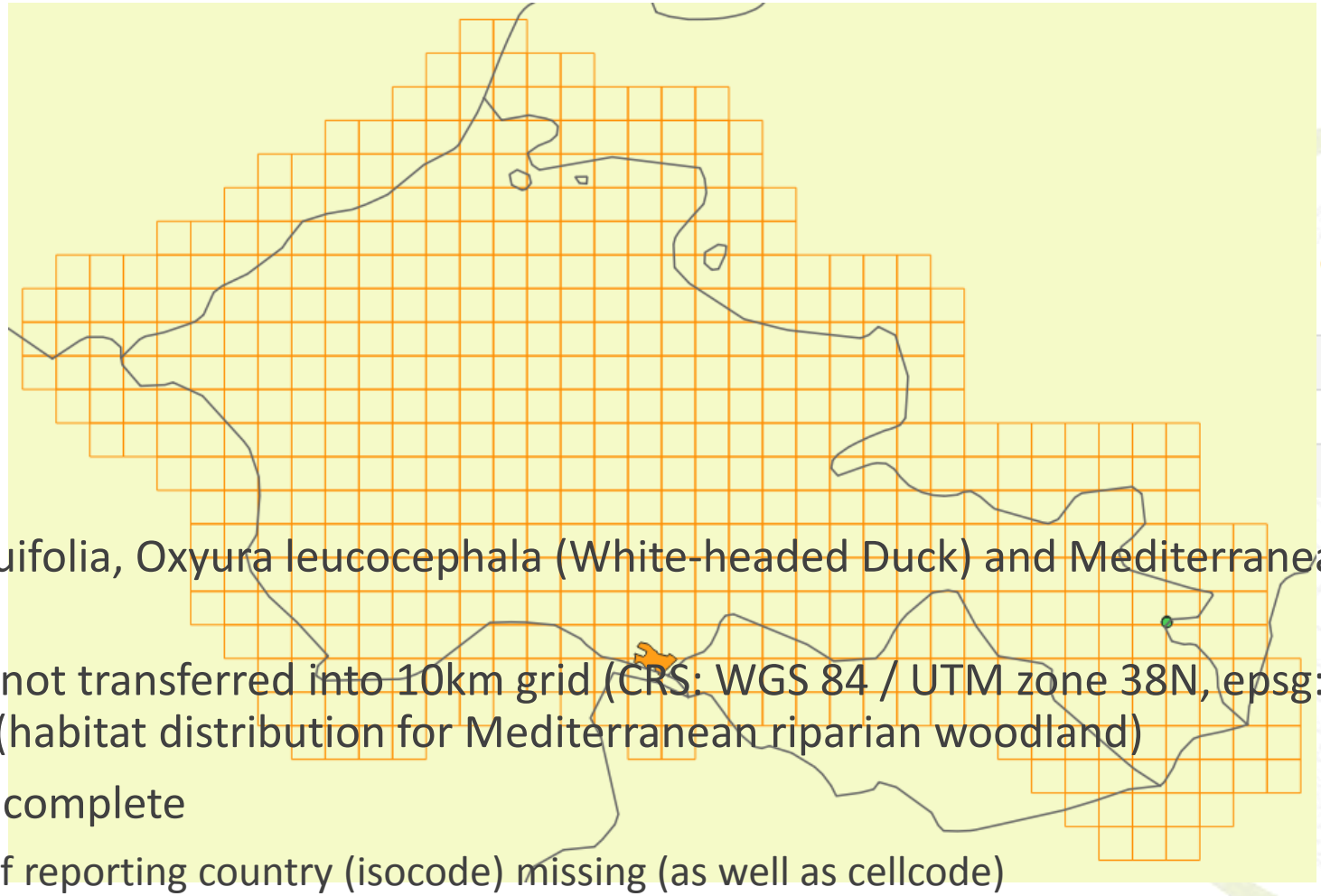
Non-conform examples



Code	Code_Speci
2098	2098-Paeonia tenuifolia-AM
2098	2098-Paeonia tenuifolia-AM
2098	2098-Paeonia tenuifolia-AM
2098	2098-Paeonia tenuifolia-AM

- Paeonia tenuifolia, Oxyura leucocephala (White-headed Duck) and Mediterranean riparian woodland
- Spatial data not transferred into 10km grid (CRS: WGS 84 / UTM zone 38N, epsg:32638) or empty data (habitat distribution for Mediterranean riparian woodland)
- Attributes incomplete
  - Definition of reporting country (isocode) missing (as well as cellcode)

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How to complete examples - 1

- Two types of completion
  - Addition or filling of missing attributes → spatial representation/grid principally correct
  - Correct transfer into 10km grid → spatial representation/grid not (fully) correct
- First Type: completion of attributes
  - Filling/adding required fields
    - **cellcode**
    - **code**
    - isocode (ISO2 code)
    - *CS (conservation status if available)*
    - *region (biogeographical region)*
    - *[category (Habitats / Species)]*

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How to complete examples - 2

- Second Type: correction of spatial representation
- Simple case of incorrectly projected grid: reprojection of grid into coordinate reference system epsg:3035
- Sub-select only actual distribution cells from full EEA 10km grid
  - Select all cells found to represent habitat/species distribution and export into new distribution-only shapefile
- Transfer of incorrectly oriented national grid into EEA 10km grid:
  - Union national grid with EEA 10km grid
  - Assign EEA grid cells representing distribution based on national grid
    → at least two approaches (actual representative cell or all cells overlapping with defined share)

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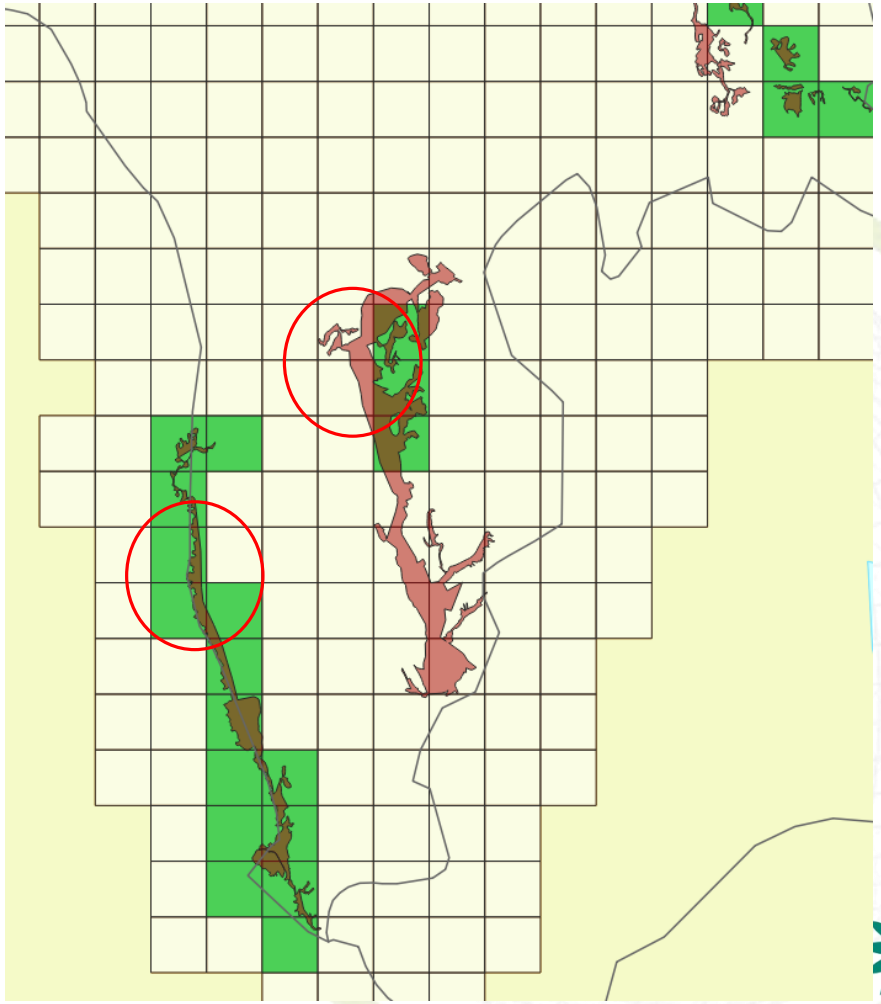
Further discussion

- Threshold of distribution:
  - Example Moldova
  - Logics behind selection of cells not clear
    → smaller area of cell covered results in cell present, bigger part covered does not cause cell to be covered
- Format of attributes
  - isocode ISO2
  - code: species code (e.g. 1354), for habitat code agreement on format is needed: G3-17 used instead of G3.17



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Further development

Name	Description	TYPE	Example
code	The Unique identifier. Use the code given in the checklist for reporting	string(15)	1530
maptype	Distribution	string(15)	Distribution
category	Habitats/Species	string(15)	Habitats
isocode	Country code: Use the two-digit codes from ISO 3166, except that UK should be used instead of GB for the United Kingdom. (See Annex too) A table giving the codes can be found on the Reference Portal.	string(2)	AT
refgrid	Information about EEA GRID used and its mesh size such as 10x10km, 1x1km, …	string(25)	EEA-10km GRID
sensitive	Description if data contains sensitive information “sensitive” or “non-sensitive”	string(15)	sensitive

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Thank you!

Thanks for your attention

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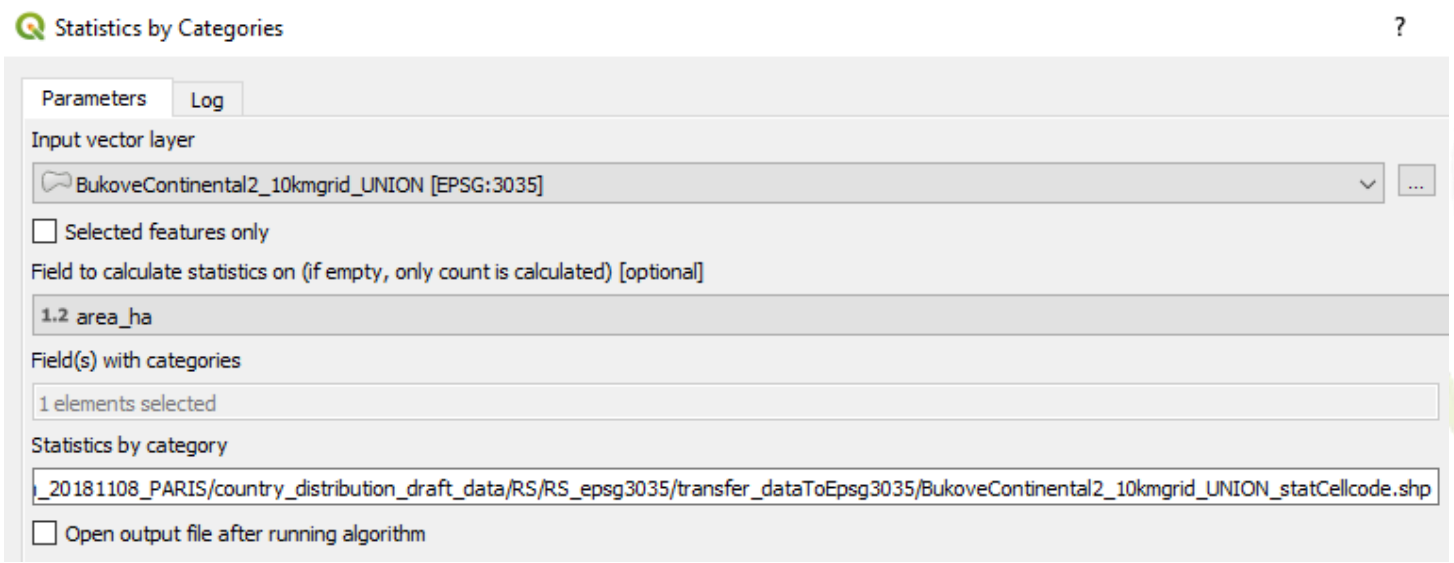
Annex – transfer national grid to EEA 10km grid

Find representative cell (only one cell with biggest overlap per national grid cell maintained)

Easier but less precise way: select all cells which overlap for certain amount or more

- Create unique identifier (e.g national grid cellcode) natID
- Union between 10km EPSG3035 grid and national grid
- Calculate area



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Annex – transfer national grid to EEA 10km grid

- Open .dbf and create pivot table over natID and area_ha
  - Display max per natID
- Create copy of area column (complicated to use direct pivot output in Excel)
- Add new area_id in main table (initial .dbf) as “natID & “_” & area_ha”
- Create corresponding id areaID from pivot output (natId & “_” & copy of max of area_ha)
- Copy CELLCODE in new column right of initial .dbf
- Use VLOOKUP to search for corresponding CELLCODE of cell represented by max of area_ha → “=VLOOKUP(areaID,main table .dbf,2,FALSE)”
- Save as .xlsx and load into GIS
- Join via CELLCODE
- Select all fields with values in joined data (e.g. "maxVal_area_ha" is not NULL) and export as separate shapefile

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