The background of the slide is an aerial photograph of a city street scene. On the right side, a white geometric network of lines is overlaid on the image, representing a spatial data structure. The lines form a series of interconnected triangles and polygons, primarily concentrated on the right half of the image. The text is overlaid on the left half of the image.

EBM and ERM: Metadata and Lineage information

Jörgen Spradau and Regine Elling, BKG

Webinar for EuroGeographics Data Producers, 30.10.2018

Agenda

- Harmonisation between EBM and ERM
- Metadata for EBM (repetition and news)
- Metadata for ERM
- Lineage information for EBM and ERM
- Conclusion

Harmonisation between EBM and ERM

■ Status quo

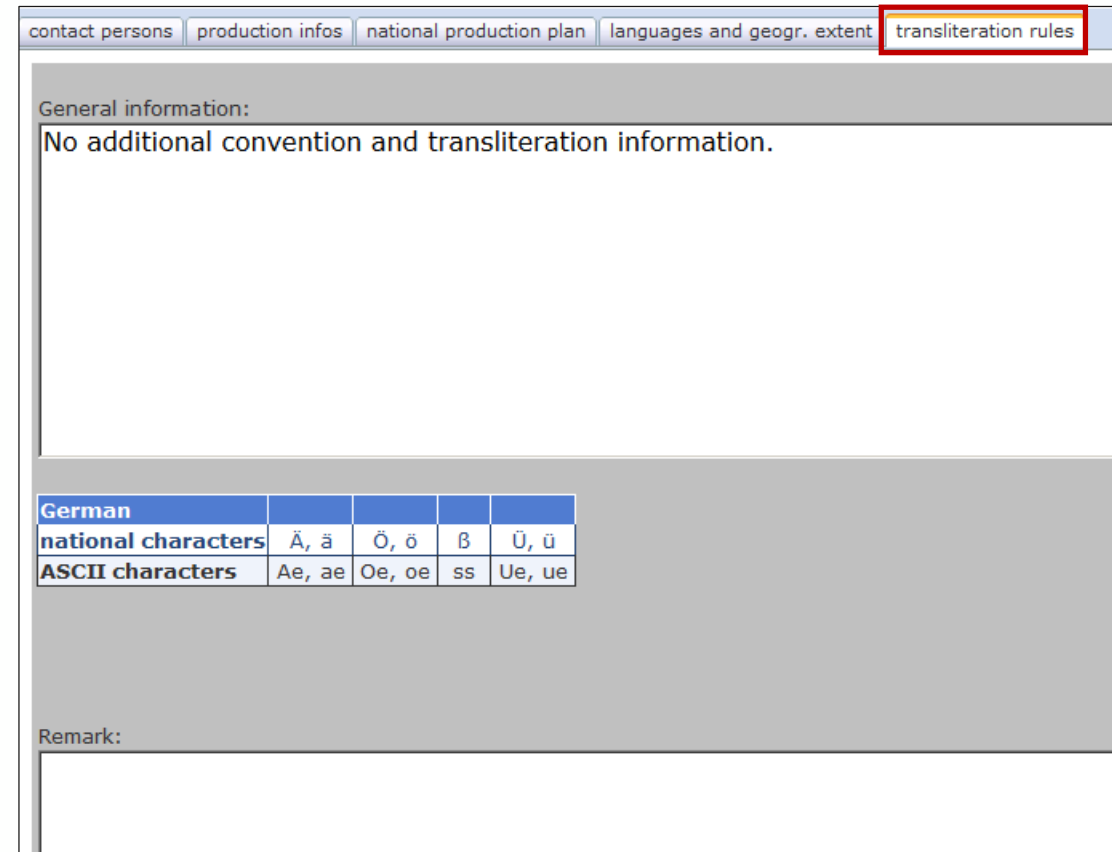
- ✔ Metadata for country datasets for EBM → ISO and INSPIRE conform
 - No metadata for “country datasets” for ERM
 - Lineage information for country datasets for EBM
 - Lineage information for “country datasets” for ERM
- ✔ Metadata for full Europe EBM and ERM datasets → Already harmonised 2017
 - Lineage information for full Europe EBM and ERM datasets

■ Aim

- Provision of metadata for “country datasets” for ERM (ISO and INSPIRE conform)
- Same naming convention and transliteration rules for EBM and ERM
- Maintenance of lineage information for EBM and ERM in PMS

Harmonisation between EBM and ERM

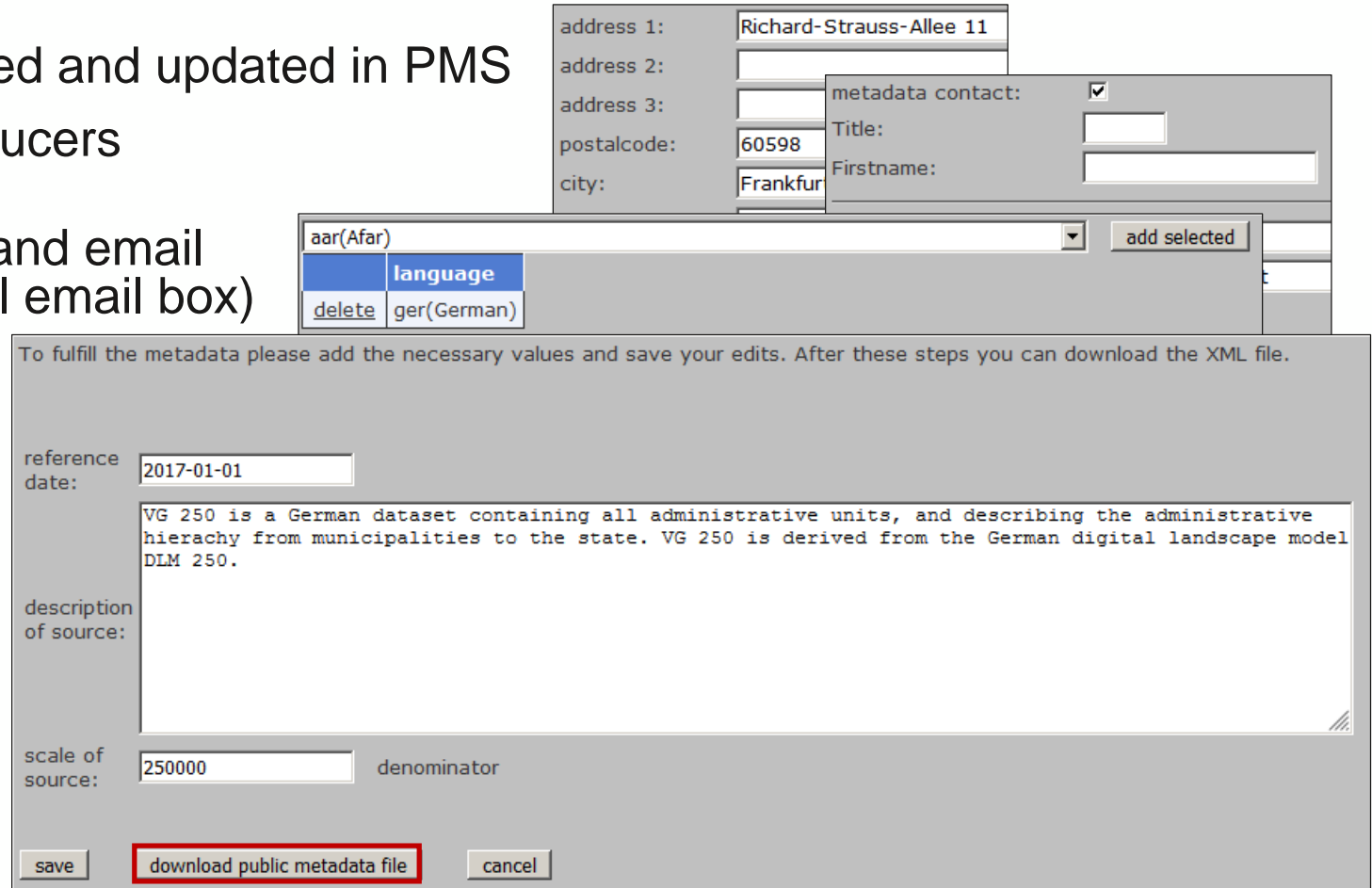
- Languages and Geographic extent are set last year
→ Should be controlled
- New: Common naming convention and transliteration rules for EBM and ERM
→ Please check!
 - If anything is wrong please contact Production Management Team at BKG:
ebm@bkg.bund.de



German				
national characters	Ä, ä	Ö, ö	ß	Ü, ü
ASCII characters	Ae, ae	Oe, oe	ss	Ue, ue

Metadata for EBM

- Since 2017 EBM metadata are stored and updated in PMS
- Needed information from Data Producers for EBM metadata:
 - Contact for metadata: address and email (possibility of usage of universal email box)
 - Used language(s)
 - Geographic extent
 - Reference date
 - Short description and scale of source data
- Metadata available as XML for Eurostat and public version



The screenshot shows a web form for entering metadata. It includes fields for address (address 1, 2, 3), postalcode (60598), city (Frankfur), and contact information (Title, Firstname). There is a 'metadata contact' checkbox. Below these is a dropdown menu showing 'aar(Afar)' and a table with 'language' and 'ger(German)' options. A 'delete' button is next to the language table. An 'add selected' button is also present. A large text area for 'description of source' contains the text: 'VG 250 is a German dataset containing all administrative units, and describing the administrative hierachy from municipalities to the state. VG 250 is derived from the German digital landscape model DLM 250.' Below this is a 'reference date' field with '2017-01-01' and a 'scale of source' field with '250000' and a 'denominator' field. At the bottom are 'save', 'download public metadata file' (highlighted with a red box), and 'cancel' buttons. A message at the top of the form says: 'To fulfill the metadata please add the necessary values and save your edits. After these steps you can download the XML file.'

address 1: Richard-Strauss-Allee 11

address 2:

address 3:

postalcode: 60598

city: Frankfur

metadata contact: ☒

Title:

Firstname:

aar(Afar)

language
ger(German)

delete

add selected

To fulfill the metadata please add the necessary values and save your edits. After these steps you can download the XML file.

reference date: 2017-01-01

description of source: VG 250 is a German dataset containing all administrative units, and describing the administrative hierachy from municipalities to the state. VG 250 is derived from the German digital landscape model DLM 250.

scale of source: 250000 denominator

save download public metadata file cancel

Metadata for EBM

- Control contact information in PMS

NMCA	Name english	EBM	ERM	EGM
BKG	Federal Agency for Cartography and Geodesy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

NMCA

EBM - Release

ERM - Release

NMCA:

BKG

EBM: ☒

ERM: ☒

EGM: ☒

ERM Region:

Group A (The Netherlands (Ben))

Name original:

Bundesamt für Kartographie und Geodäsie

Name english:

Federal Agency for Cartography and Geodesy

Web:

www.bkg.bund.de

1

2

address 1:

Richard-Strauss-Allee 11

address 2:

address 3:

postalcode:

60598

city:

Frankfurt am Main

metadata address:

☒

contact persons

production infos

national production pla

☐ Show old contacts (Until attributes is filled)

metadata contact:

☒

Title:

Firstname:

Department:

Jobtitle:

Metadata contact

calling code:

phone:

fax:

mail_1:

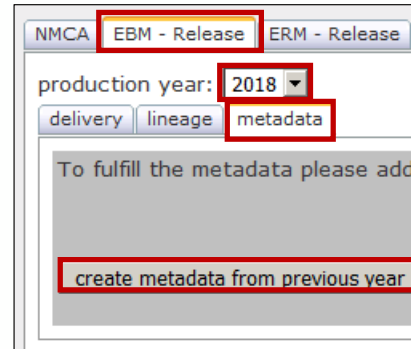
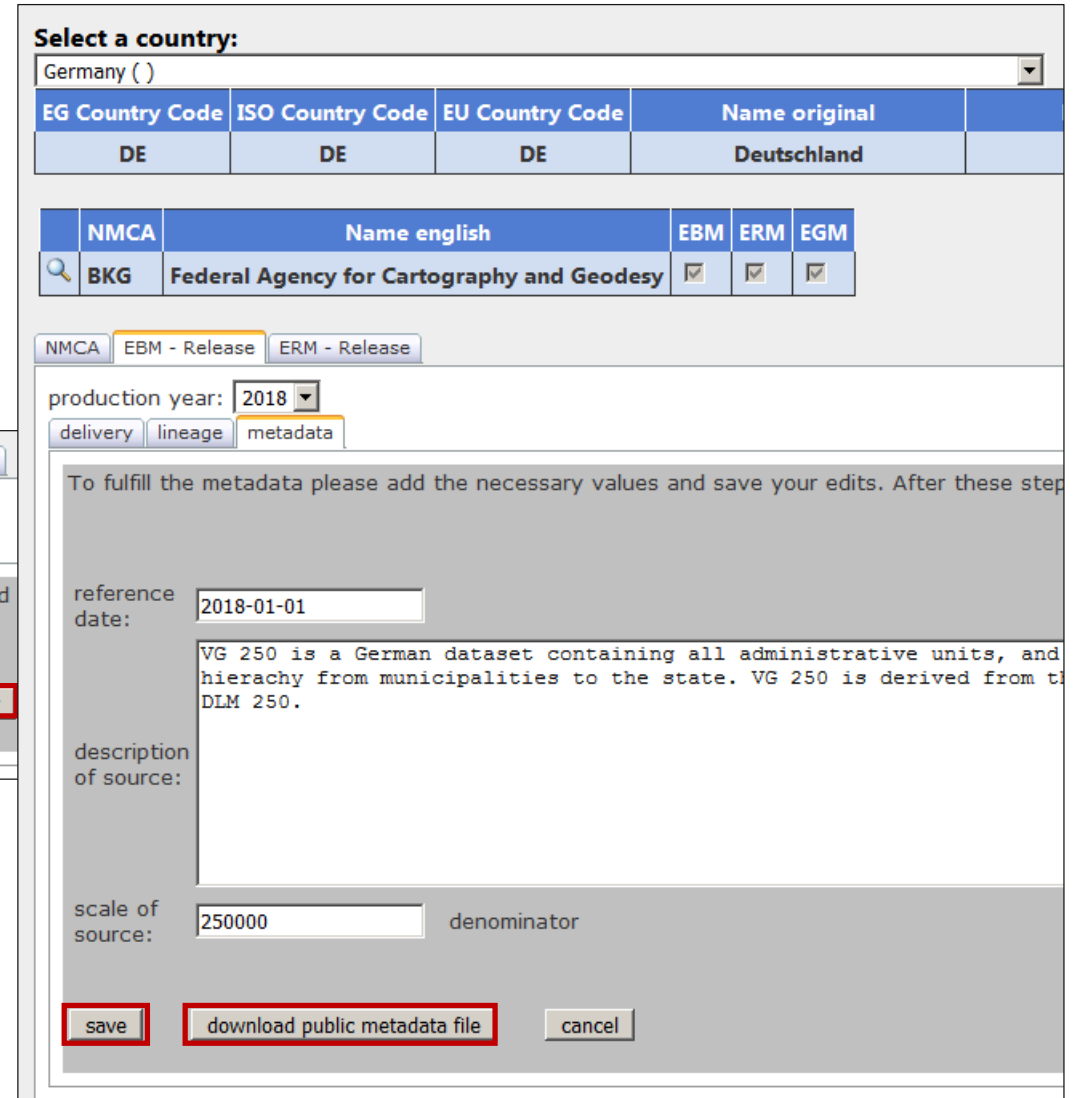
ebrm@bkg.bund.de

EBM role:

ERM role:

Metadata for EBM

- New place for Reference date and short description and scale of source data
 - EBM – Release (left side)
 - Choose production year: 2018
 - Go to “metadata”
 - Create from previous year
 - Update information for
 - Reference date
 - Short description of source
 - Denominator for source scale
 - Save your updates!
- Download metadata as XML
 - Check metadata

Select a country:

Germany ()

EG Country Code	ISO Country Code	EU Country Code	Name original
DE	DE	DE	Deutschland

NMCA	Name english	EBM	ERM	EGM
BKG	Federal Agency for Cartography and Geodesy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

NMCA EBM - Release ERM - Release

production year: 2018

delivery lineage metadata

To fulfill the metadata please add the necessary values and save your edits. After these steps

reference date: 2018-01-01

description of source: VG 250 is a German dataset containing all administrative units, and hierarchy from municipalities to the state. VG 250 is derived from the DLM 250.

scale of source: 250000 denominator

save download public metadata file cancel

Metadata for ERM

- ERM: No provision of country datasets,
But provision of metadata for “country datasets”
→ Harmonisation efforts with EBM
- Creation of metadata for “country datasets”:
 - Select your country and your NMCA
 - Choose ERM – Release
 - Choose production year: 2018
 - Choose metadata
 - Create metadata from previous year

Select a country:

Germany ()

EG Country Code	ISO Country Code	EU Country Code	Name original	Name english
DE	DE	DE	Deutschland	Germany

NMCA	Name english	EBM	ERM	EGM
<input type="checkbox"/> BKG	Federal Agency for Cartography and Geodesy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

NMCA EBM - Release **ERM - Release**

production year: 2018

delivery lineage **metadata**

production year: 2018

delivery lineage metadata

To fulfill the metadata please add the necessary values and save your edits. After these steps you can download the XML file.

create metadata from previous year

Metadata for ERM

- Insert following information:
 - Description of source
 - Short
 - Mention of main and ancillary data sources
 - Denominator of main source scale
- Don't forget to save information!
- Download metadata as XML
→ Check metadata

To fulfill the metadata please add the necessary values and save your edits. After these steps you can download the XML file.

description of source:	Main data source: Production Database 250 (DLM250), a topologically structured vector dataset at resolution 1:250 000, available as an ESRI geodatabase.	
	Ancillary data sources: (+) VG250, vector dataset with related tables, containing all administrative units of all hierarchical administrative levels. (+) GN250, the Geographical Names Book. (+) River Basins provided by the German environmental agency Umweltbundesamt (UBA). (+) Bundeswasserstraßenkarte DBWK 1000.	
scale of main source:	<input type="text" value="250000"/>	denominator
<input type="button" value="save"/> <input type="button" value="download public metadata file"/> <input type="button" value="cancel"/>		

Hint:
Use “(+)” and “.” to
separate data sources
→ Looks clear in XML

Lineage information for EBM and ERM

- Kind of information and structure are similar to the old word files, but harmonised!
 - General information:
 - Naming conventions and transliteration rules
 - Production processing
 - Theme oriented information:
 - Deviations from specification
 - National specifics
 - Special attribute information (ERM)
 - National administrative hierarchy (EBM)
 - Update remarks

Lineage information for EBM and ERM

- Select your country and NMCA
- Go to „EBM - Release“ / Go to „ERM - Release“
- Choose production year: 2018
- Go to „lineage“
- Create from previous year: [create lineage from previous year](#)

Select a country:

Germany ()

EG Country Code	ISO Country Code	EU Country Code	Name original
DE	DE	DE	Deutschland

NMCA	Name english	EBM	ERM	EGM
BKG	Federal Agency for Cartography and Geodesy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

NMCA **EBM - Release** ERM - Release

production year: 2018

delivery lineage metadata

Select a country:

Germany ()

EG Country Code	ISO Country Code	EU Country Code	Name original
DE	DE	DE	Deutschland

NMCA	Name english	EBM	ERM	EGM
BKG	Federal Agency for Cartography and Geodesy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

NMCA EBM - Release **ERM - Release**

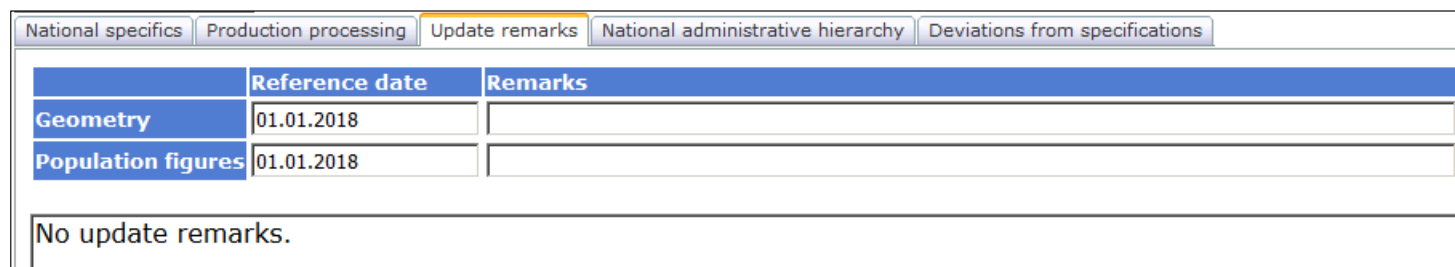
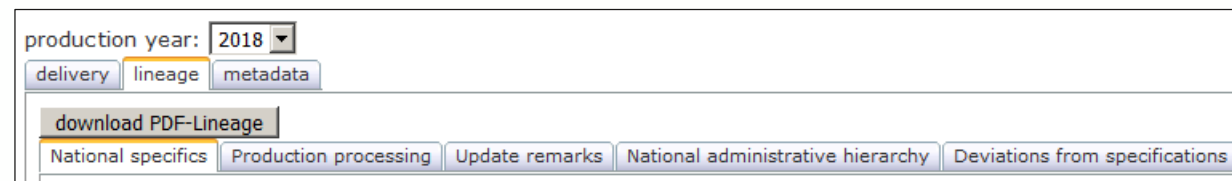
production year: 2018

delivery lineage metadata

Lineage information for EBM and ERM

■ Lineage for EBM

- National specifics
 - Possibility to provide information to national specifics
 - If not: “No national specifics.”
- Production processing
 - Description of process to derive EBM data from national data
- Update remarks
 - Reference date for geometry and population figures
 - Possibility to provide remarks



	Reference date	Remarks
Geometry	01.01.2018	
Population figures	01.01.2018	

No update remarks.

Lineage info

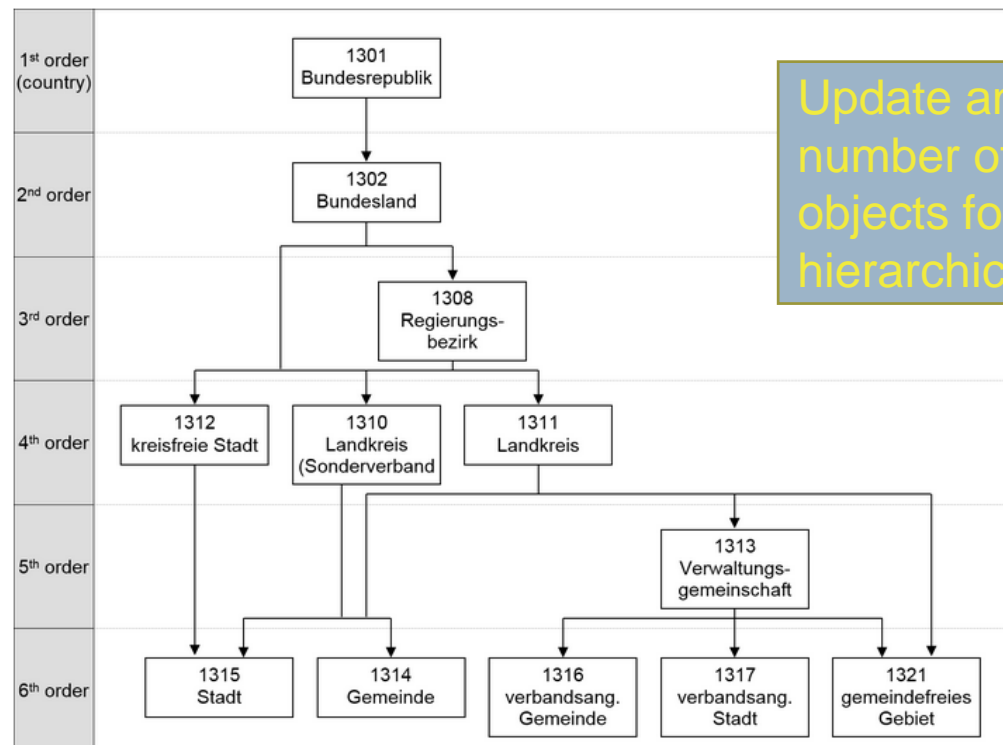
- Lineage for EBM
 - National administrative hierarchy

In case of changes regarding your administrative hierarchy, please contact ebm@bkg.bund.de!

Level of administration (USE)	Unique structure identifier (ISN)	Designation of the hierarchy level given in national characters (DESN)	Designation of the hierarchy level transliterated in ASCII characters (DESA)	English translation or equivalent of the designation	Significant digits of the SHN code	Number of objects
1st order (country)	1301	Bundesrepublik	Bundesrepublik	Country	2	1
2nd order	1302	Bundesland	Bundesland	Federal state	4	16
3rd order	1308	Regierungsbezirk	Regierungsbezirk	Administrative district	5	19
4th order	1310	Landkreis (Sonderverband)	Landkreis (Sonderverband)	District	8	3
	1311	Landkreis	Landkreis	District	8	291
	1312	kreisfreie Stadt	kreisfreie Stadt	District	8	107
5th order	1313	Verwaltungsgemeinschaft	Verwaltungsgemeinschaft	Administrative collectivity	11	1250
6th order	1314	Gemeinde	Gemeinde	Municipality	14	1760
	1315	Stadt	Stadt	City	14	1437
	1316	verbandsangehörige Gemeinde	verbandsangehörige Gemeinde	Municipality belonging to an collectivity	14	7224
	1317	verbandsangehörige Stadt	verbandsangehörige Stadt	City belonging to an collectivity	14	623
	1321	gemeindefreies Gebiet	gemeindefreies Gebiet	Non-municipal area	14	212

save

	USE1	USE2	USE3	USE4	USE5	USE6
SHN	D E	0 0	0	0 0 0	0 0 0	0 0 0



Update and save number of objects for each hierarchical level

Lineage information for EBM and ERM

- Lineage for EBM
 - Deviations from specification
 - Possibility to provide information to deviations from specification
 - If not: “No deviations from specification.”
 - Save before changing the tab!
 - Download EBM lineage as PDF: [download PDF-Lineage](#)

National lineage information: Germany, country dataset for EuroBoundaryMap 2019

1st order (country)

2nd order

3rd order

4th order kreisfreie Stadt

5th order

6th order Stadt

USE

SHN Example

Copyright © EuroGeographics

National lineage information: Germany, country dataset for EuroBoundaryMap 2019

No update remarks.

2.4 Reference date

Geometry

Population figures

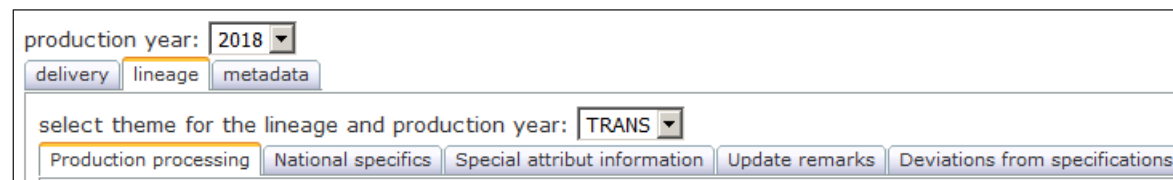
2.5 National administration

Level of administration	Unique structure identifier			
USE	ISN			
1st order (country)	1301			
2nd order	1302			
3rd order	1308			
4th order	1310			
	1311			
	1312			
5th order	1313			
6th order	1314			
	1315			
	1316			
	1317			
	1321			
	1321			
USE				
SHN Example	D E			
national	A, a	Ö, ö	ß	Ü, ü
ASCII	Aa	Oe, oe	ss	Ue, ue

Lineage information for EBM and ERM

■ Lineage for ERM

- Theme oriented
→ According to production year
- Production processing
 - Valid for all themes
 - Description of process to derive ERM data from national data
 - Some information might be doubled with “Description of source” of the metadata
- National specifics
 - Possibility to provide information to national specifics
 - If not: “No national specifics.”



The screenshot shows a web form for ERM lineage information. It has a 'production year' dropdown menu set to '2018'. Below this are three tabs: 'delivery', 'lineage' (which is selected and highlighted with an orange border), and 'metadata'. Under the 'lineage' tab, there is a 'select theme for the lineage and production year' dropdown menu set to 'TRANS'. At the bottom, there are five buttons: 'Production processing' (highlighted with an orange border), 'National specifics', 'Special attribut information', 'Update remarks', and 'Deviations from specifications'.

Lineage information for EBM and ERM

- Lineage for ERM

- Special attribute information

Production processing National specifics **Special attribute information** Update remarks Deviations from specifications

- More information about filling of some attributes

Theme	Attributes
TRANS	RTT
POP	PPL PP1 / PP2
HYDRO	WCH WD7 / WD8 NHI NVS

Lineage information for EBM and ERM

- Lineage for ERM
 - Update remarks
 - Reference date for each feature class delivered
 - Possibility to provide remarks

select theme for the lineage and production year: [download complete PDF-Lineage](#)

[Production processing](#) [National specifics](#) [Special attribut information](#) [Update remarks](#) [Deviations from specifications](#)

Completion of the Hydro-ID to all lakes, dams and locks. The Hydro-ID uniquely identifies the mentioned water objects in its entirety for the ERM dataset. The Hydro-ID for watercourses (WatcrsA/WatcrsL) is assigned only for watercourses with a drainage area > 500 km² as in the national DLM250 database. DamL and WatcrsL splitted at intersections. WatcrsL splitted at DamC. InspireIDs counted up at splitted objects.

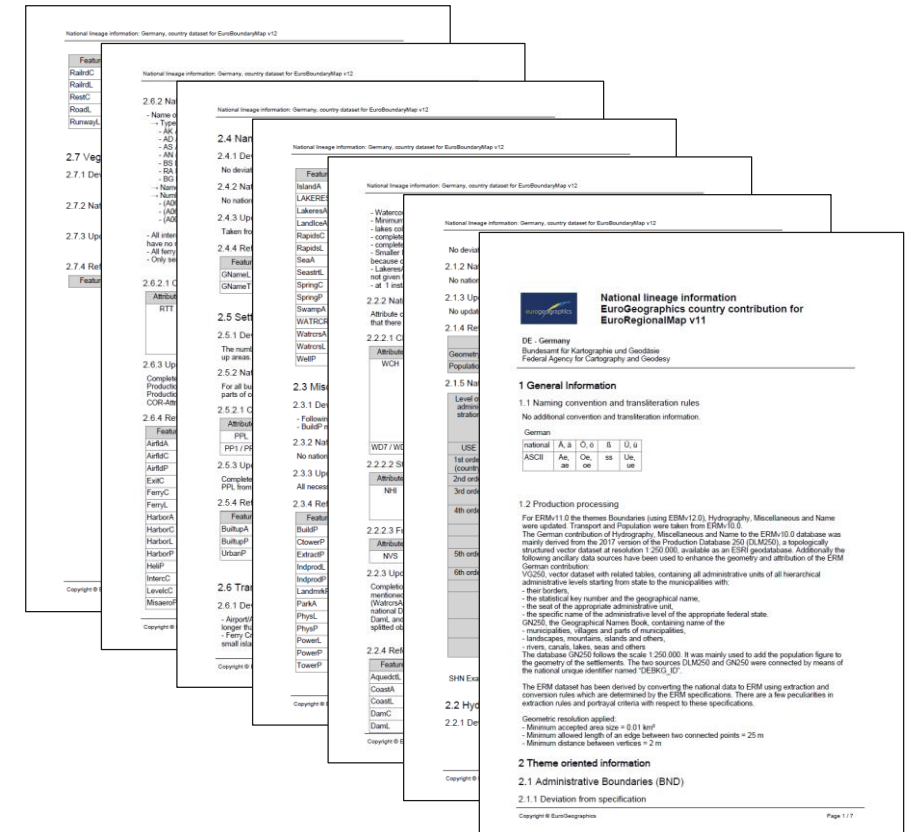
featureclass	reference date	remarks
AqueductL	<input type="text"/>	<input type="text"/>
CoastA	<input type="text" value="01.01.2017"/>	<input type="text"/>
CoastL	<input type="text" value="01.01.2017"/>	<input type="text"/>

Examples for remarks:

- Features doesn't exist in our country
- Features exist, but we don't have information about it
- Improvements planned for next update
- ...

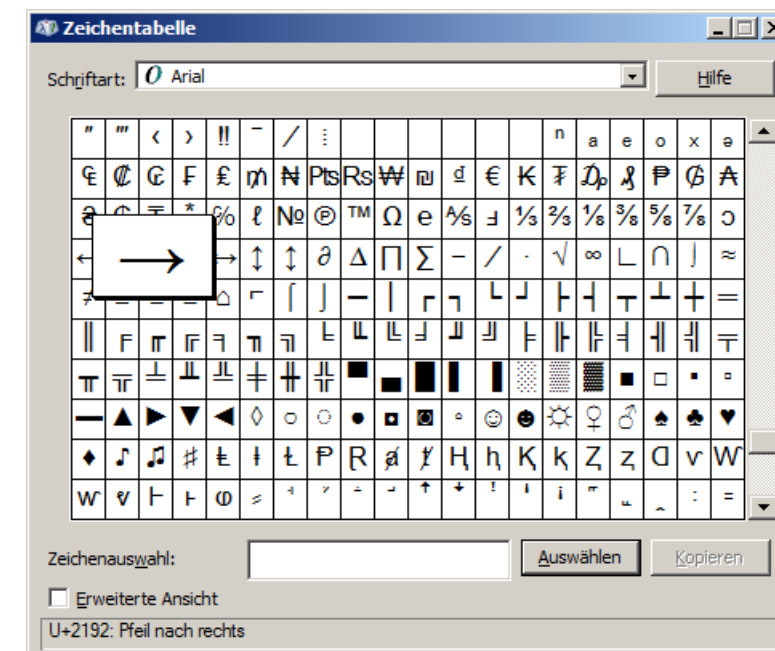
Lineage information for EBM and ERM

- Lineage for ERM
 - Deviations from specification
 - Possibility to provide information to deviations from specification
 - If not: “No deviations from specification.”
 - Save before changing the tab!
 - Information from EBM (= ERM-BND) are included automatically
 - Please check information from 2017
→ Included automatically in ERM lineage
 - Download ERM lineage as PDF: [download PDF-Lineage](#)



Conclusion

- EBRM Production Management Team populated PMS with ERM metadata, as well as lineage information for EBM and ERM for country datasets for 2016/2017
 - Make provision for 2018 metadata and lineage information for EBM and ERM comfortable for Data Producers
 - Information should be controlled
- Harmonised metadata and lineage information for EBM and ERM
- Metadata and lineage information are stored centrally in PMS
- No word or excel files needed any more:
Metadata as XML, lineage as PDF
- At the moment no information about completeness of ERM (former excel sheet)
 - Information could be provided in remarks of update information tab
- Almost no possibility for formatting (like in word)
 - Use character table



Webinar for EuroGeographics Data Producers, 30.10.2018

Thank you for your attention

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