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ERM
Quality Management

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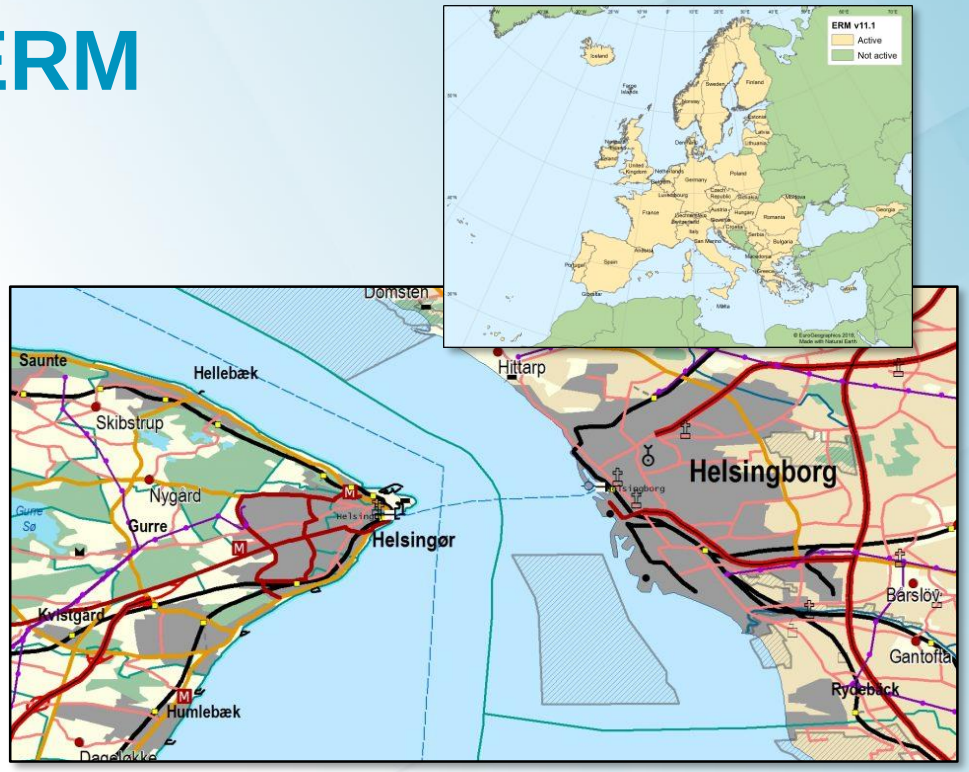
ERM

EuroRegionalMap
1:250.000
36 countries, 7 themes:
Administrative boundaries (BND)
Water network (HYDRO)
Transport network (TRANS)
Settlement theme (POP)
Vegetation and soils theme (VEG)
Named locations (NAME)
Miscellaneous theme (MISC)



https://eurogeographics.org/products-and-services/euroregionalmap/

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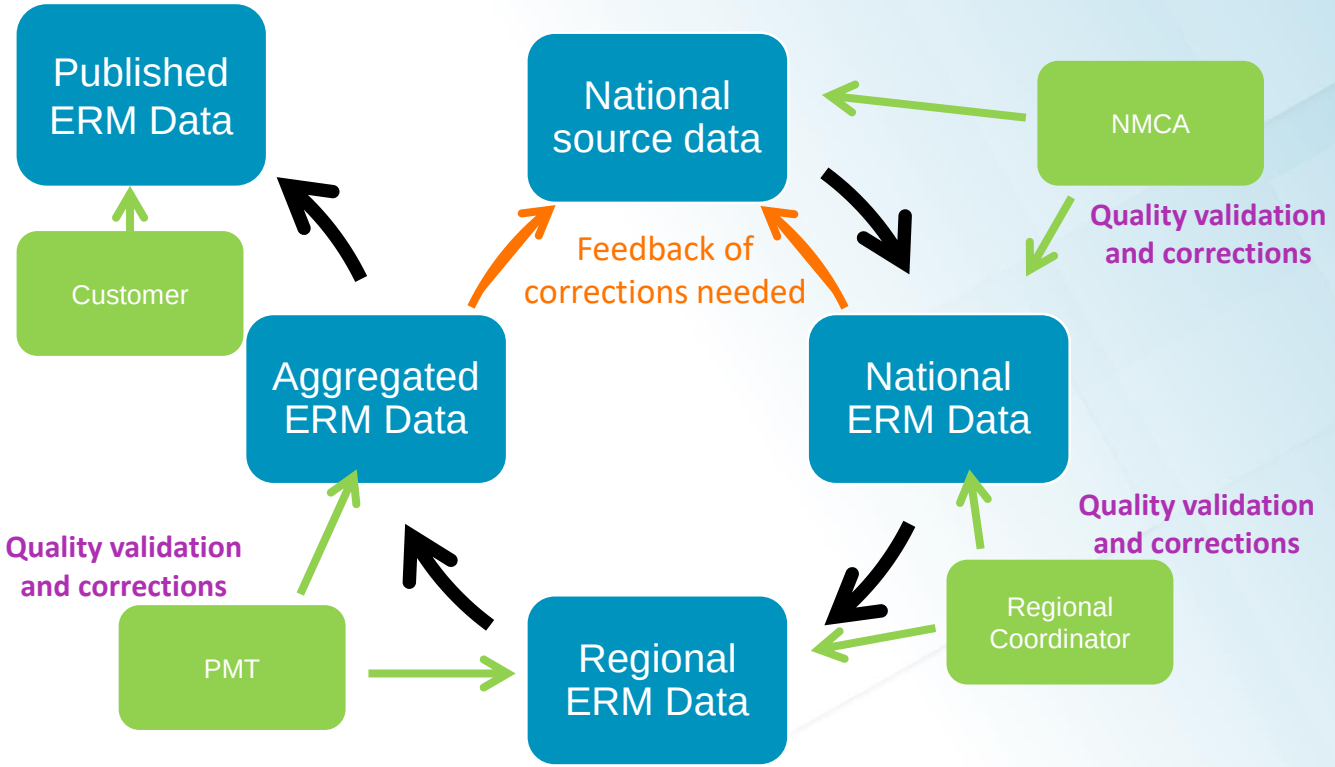
ERM in 2014/2015



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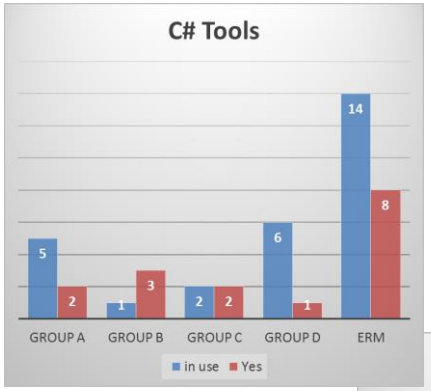
ERM in 2014/2015



Many different validation tools:

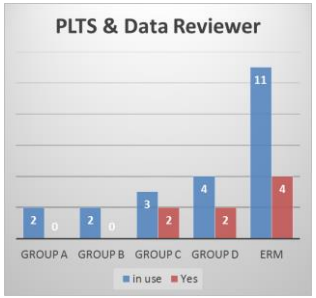
C#

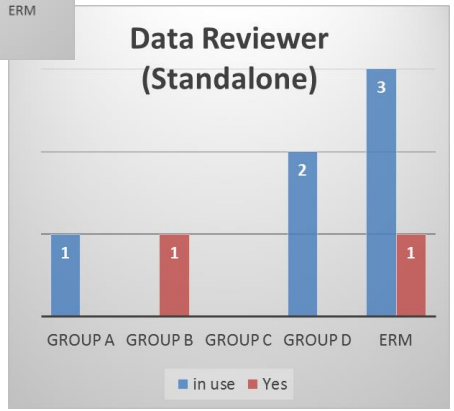
ArcGIS Data Reviewer

ExM Python tools

FME workbenches

National checks





Problems:

- Consistency
- Maintenence
- Licenses
- Documentation
- Metadata process

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New approach

One validation tool:

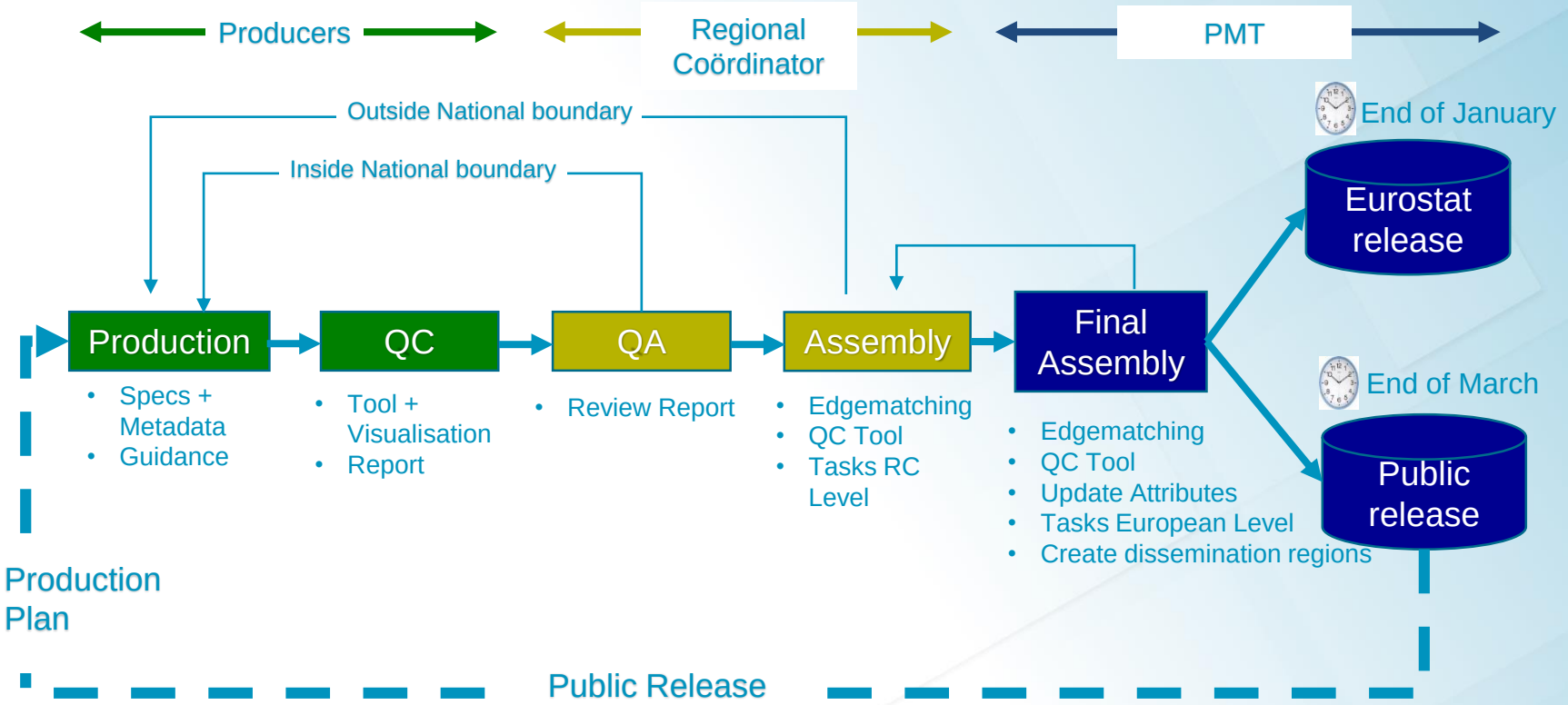
Used by producers, RCs and PMT

Objectives:

- ArcGIS >10.1
- Easy to use
- Simple documentation
- Flexible & adjustable
- Spatial display of results

Raise quality of ERM data

New approach



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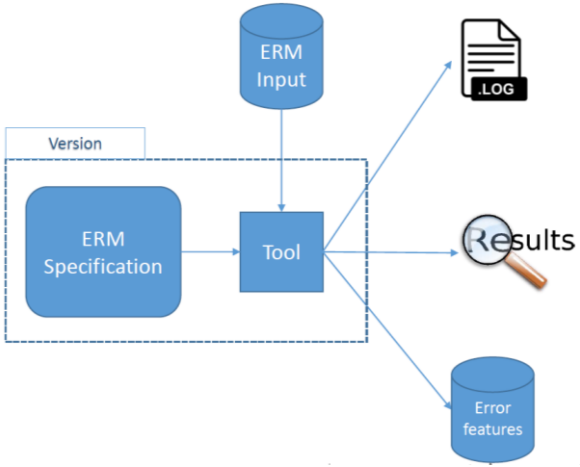
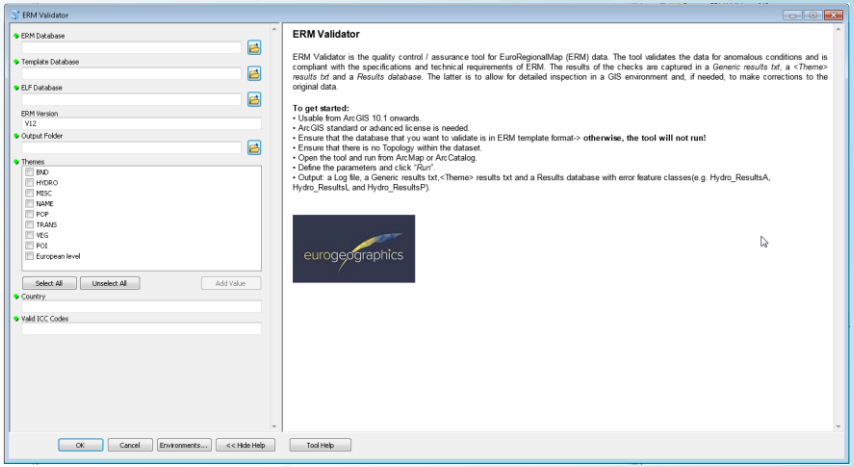
ERM Validator 1.0

Producers meeting Zagreb – November 2018

Release ERM Validator 1.0





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ERM Validator 1.0

25 validators

5 ERM themes: HYDRO, MISC, POP, TRANS, VEG,

~~POI, NAME, BND~~

	Validation code	Check	Implemented in ERM Validator 2020.0 tool?
General Data Delivery	H001	feature classes AQUEDCTL, COASTA, COASTL, DAML, DAMC, LAKERESA, LANDICEA, ISLANDA, SEAA, SEASTRTL, SPRINGP, SPRINGC, SWAMPA, RAPIDSL, RAPIDSC, WATRCRSA, WATRCRSL, WELLP	☑
	H002	coordinate system (GEOGRAPHIC, decimal degrees)	☑
	H003	map extent (-25° < Lambda < 40° and 30° < Phi < 80°)	☑
	H004	mandatory feature classes COASTA, COASTL, DAML, DAMC, LAKERESA, LANDICEA(BJ030), ISLANDA, SEAA, SWAMPA, WATRCRSA, WATRCRSL must have features	☑
	H005	Empty or missing tables	☑
Geometric resolution (Tested in projection ETRS89 LAEA)	H006	Valid Geometry	☑
	H007	minimum allowed area size: 60 000m²	☑
	H008	minimum allowed distance between vertices of line and area features: 5m	☑
	H009	minimum allowed length of a line segment: 50m	☑
	H010	statistics of average distance between vertices	☐
Selection criteria (Tested in projection ETRS89 LAEA)	H011	The number of LAKERESA less than 400 000m²	☑
	H012	The number of WATRCRSA less than 200 000m²	☑
	H013	The number of SWAMPA, LANDICEA less than 400 000m²	☑
	H014	The number of ISLANDA less than 400 000m²	☑
	H015	The number of dams and locks less than 125m	☑
	H016	The number of dangling AQUEDCTL, WATRCRSL shorter than 1600m	☑
	H017	The number of shoreline construction (SEASTRTL) shorter than 125m	☑
Data Model and attributes structure	H018	geometrical definitions (polygon, polyline, point)	☑
	H019	attributes: complete list, ordering, definition	☑
	H020	attributes: has core attributes (FCSubtype, inspireId, beginLifespanVersion, F_CODE, ICC, SN)	☑
	H021	correct value of ICC (all FCs)	☑
	H022	Name attribute: no special character in NAMA1 or NAMA2	☑
	H023	allowed attribute values for COASTA (MCC, NAMxx)	☑
	H024	allowed attribute values for ISLANDA (NAMxx)	☑
	H025	allowed attribute values for LAKERESA (HYP, HydroID, TID, ZV2, NHI, NAMxx)	☑
	H026	allowed attribute values for LANDICEA (NAMxx)	☑
	H027	allowed attribute values for WATRCRSA (NVS, HOC, HYP, HydroID, NHI, TID, NAMxx)	☑
	H028	allowed attribute values for SWAMPA (TID)	☑
	H029	allowed attribute values for SEASTRTL (PWC)	☑
	H030	allowed attribute values for AQUEDCTL (EXS)	☑
	H031	allowed attribute values for RAPIDSL (NAMxx)	☑
	H032	allowed attribute values for WATRCRSL (NVS, HOC, HYP, HydroID, LDV, LOC, NHI, TID, WCH, WD7, WD8, NAMxx)	☑
	H033	allowed attribute values for DAML (HydroID, NAMxx)	☑

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ERM Validator 1.0

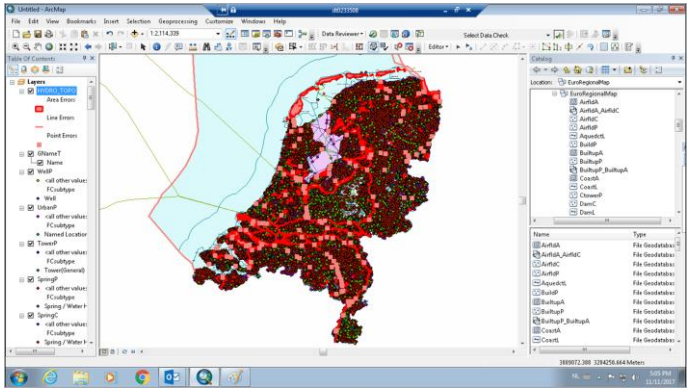
Results:

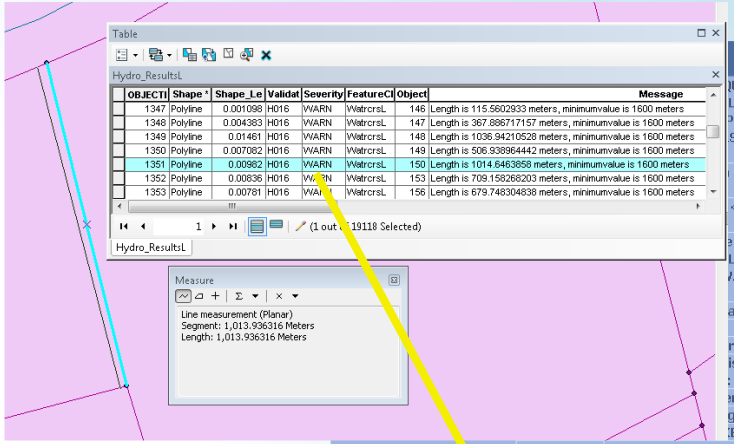
Runtime, Log file

Generic Results txt file

<theme> Results txt file

Results database





			implemented in the tool?
		UEDCTL, COASTA, COASTL, DAML, LANDICEA, ISLANDA, SEAA, , SPRINGC, SWAMPA, RAPIDSL, SA, WATRCRSL, WELLP	☑
		(GEOGRAPHIC, decimal degrees)	☑
		< Lambda < 40° and 30° < Phi <	☑
		classes COASTA, COASTL, DAML, LANDICEA(BJ030), ISLANDA, ATRCRSA, WATRCRSL must have	☑
		ables	☑
			☑
		rea size: 60 000m²	☑
		istance between vertices of line : 5m	☑
		ngth of a line segment: 50m	☑
		ge distance between vertices	☐
		ERESA less than 400 000m²	☑
in projection Lambert_Conformal_ onic_ WGS84)	H012	The number of WATRCRSA less than 200 000m²	☑
	H013	The number of SWAMPA, LANDICEA less than 400 000m²	☑
	H014	The number of ISLANDA less than 400 000m²	☑
	H015	The number of dams and locks less than 125m	☑
	H016	The number of dangling AQUEDCTL, WATRCRSL shorter than 1600m	☑
	H017	The number of shoreline construction (SEASTRTL)	☑

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Feedback

Generally very positive

One tool approach very useful

Easy to use

It is clear and user friendly

If only the errors are to be corrected I do not need the warnings

That you have to manually add all the ICC codes every time you run the tool

Next steps

- Add checks that are not yet implemented (validation report)
- One QC visualization template
- Integrate consistency checks from BKG – EBM/ERM
- Send overview of feedback received
- Modify user interface based on feedback received
- Add statistics session
- False positives?
- PMS results?
- How to handle exceptions?
- ArcGIS Pro?

Questions:

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