

High Quality and Resilient Historical Vector Data

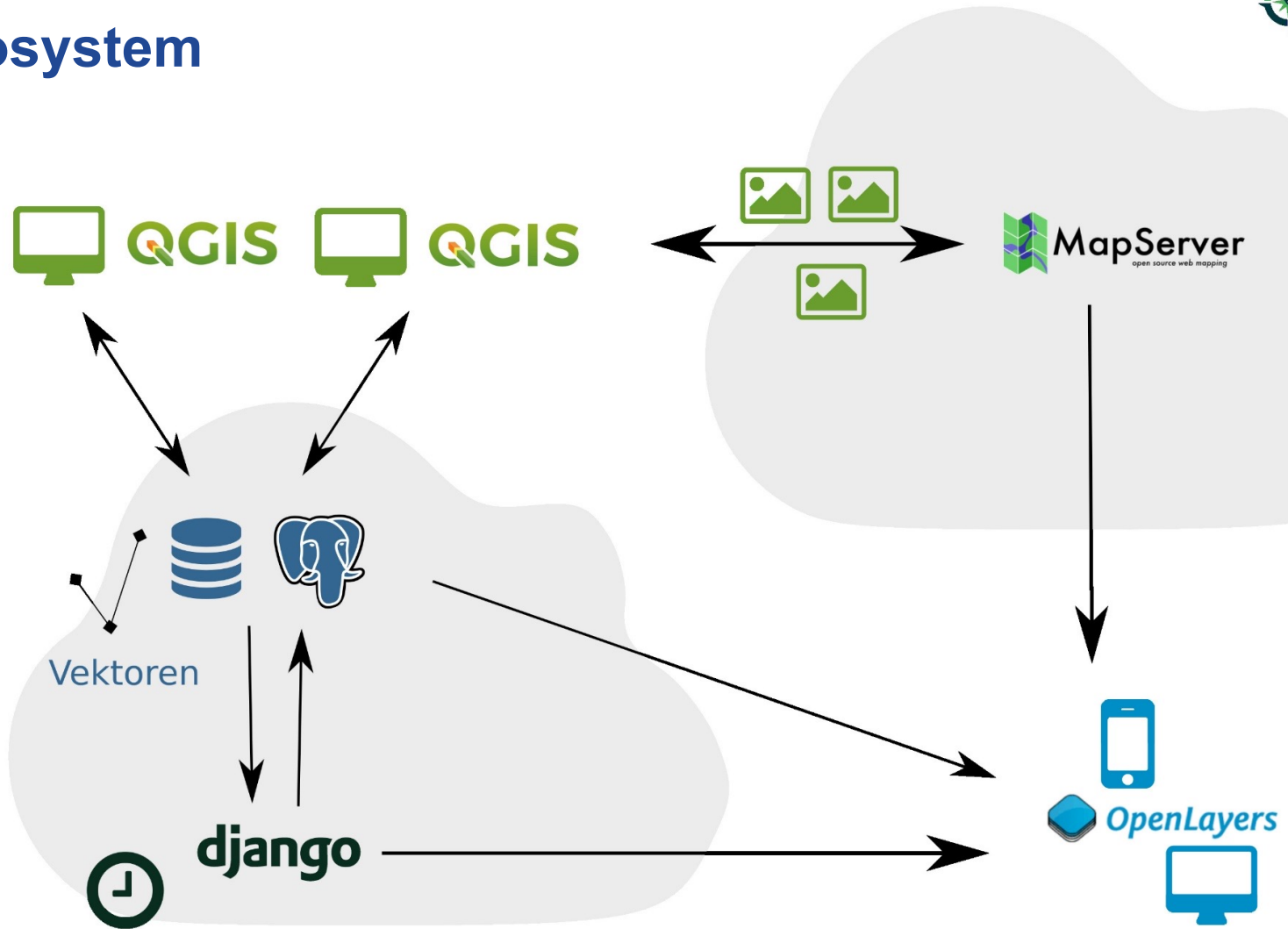
An open-source workflow for the creation of historical geospatial data

GeoHumanities '23, November 13, 2023, Hamburg, Germany

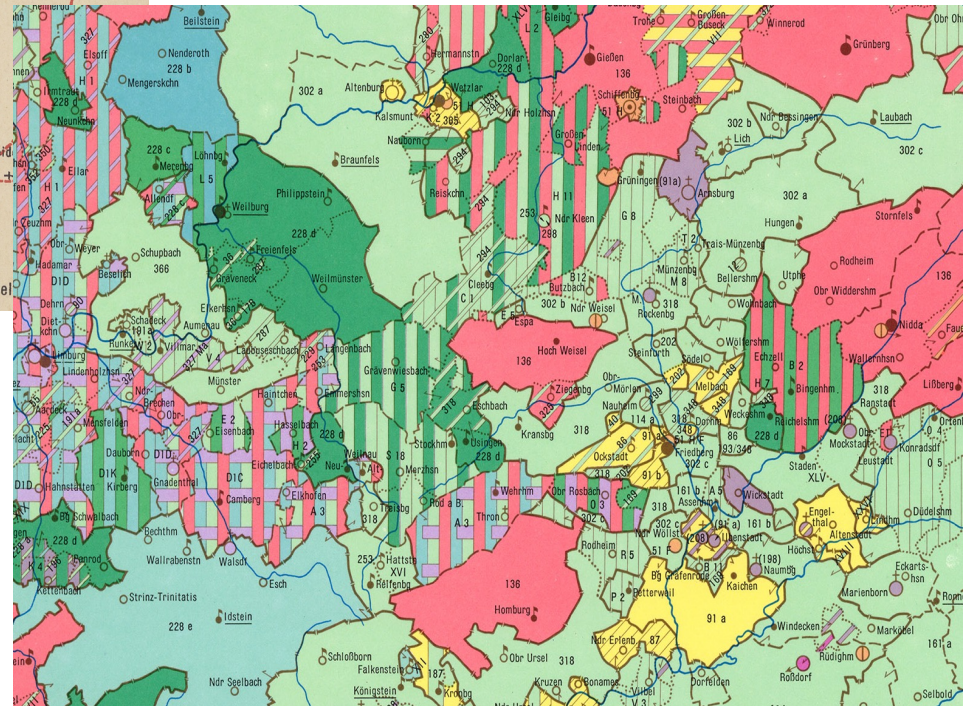
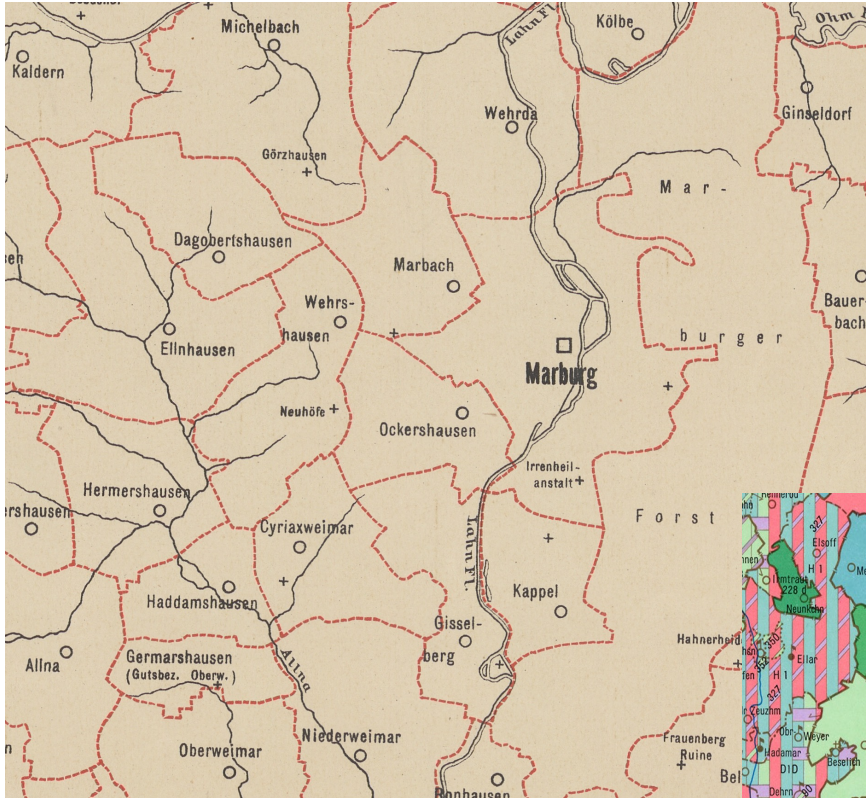
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Ecosystem



Historical Context



Contents

- 1) State of HGIS
- 2) Historical Spatial Data Modelling
- 3) QGIS Time Editor
- 4) Applications
- 5) Outlook: Towards Collaboration

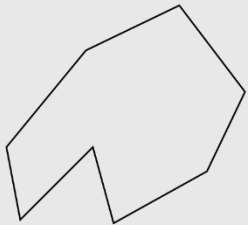
State of HGIS

- High Costs
- Long Term Preservation Issues
- Barriers
 - Institutional / Funding
 - Missing Open Source Solutions
 - Legal / Licensing

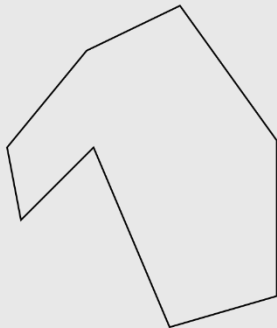
Data Modelling Principles

- Time-slice snapshot
- Lifespan encoded in attributes
- Extension: Least Common Geometries as building blocks (boroughs / parishes)

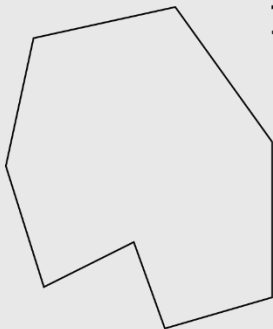
Gemarkung X



=> 1880

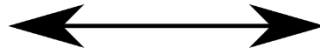


1881 => 1946



1947 =>

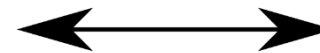
1875 => 1908



1909 => 1927



1928 =>



Standesamt X

1875 => 1908

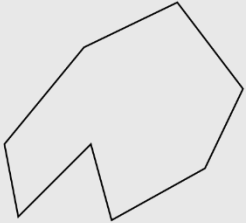
Standesamt Y

1875 =>

Standesamt Z

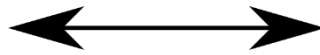
1928 =>

Gemarkung X



=> 1880

1875 => 1908



Standesamt X

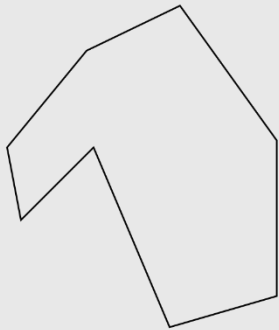
1875 => 1908

Standesamt Y

1875 =>

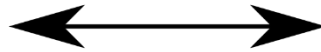
1877

Gemarkung X



1881 => 1946

1928 =>



Standesamt Y

1875 =>

Standesamt Z

1928 =>

1930



Time Editor

<https://github.com/hil-mr/time-editor>

Prüfe Datenintegrität

Spatial Integrity

Filter Expression

123

Minum Intersection (CRS-units squared, e.g. m²)

0,10

100%

100%

Checking timestamp 1969-12-31 (96 Features)
Checking timestamp 1970-01-01 (96 Features)
Checking timestamp 1981-12-31 (96 Features)
Checking timestamp 1982-01-01 (95 Features)
Checking timestamp 1986-12-31 (95 Features)
Checking timestamp 1987-01-01 (95 Features)
Checking timestamp 1987-12-31 (95 Features)
Checking timestamp 1988-01-01 (95 Features)
All dates have been checked

fid	fid2	date	reason	area	wkt_geometry
1	80380	1867-07-16	overlap	2158346.67154...	Polygon ...
2	80388	1867-07-16	overlap	10431893.8372...	MultiPolygon ...
3	80483	1867-07-16	overlap	10987071.7622...	MultiPolygon ...
4	80290	1867-07-17	overlap	2150246.67154...	Polygon ...

Start Abbruch Exportiere CSV

Prüfe Datenintegrität

Time Integrity

Filter Expression

"hilfs_gmk" = 0

Minum Intersection (CRS-units squared, e.g. m²)

0,10

100%

fid	shared_id	reason
1	1717	634009080 Wrong Date History

Start Abbruch Exportiere CSV



Identifikationsergebnis

Objekt	Wert
gemarkung_master [3]	
▶ Titel	Gutsbezirk Domäne Marienrode (=> 1928-09-30)
▶ (abgeleitet)	
▶ (Aktionen)	
fid	77925
hilfs_gmk	0
land_id	06
gmk_id_off	062016
okz	63400112001
name	Gutsbezirk Domäne Marienrode
name_hist	NULL
bemerkung	NULL

Statistics ↑

Location Code:

634001120

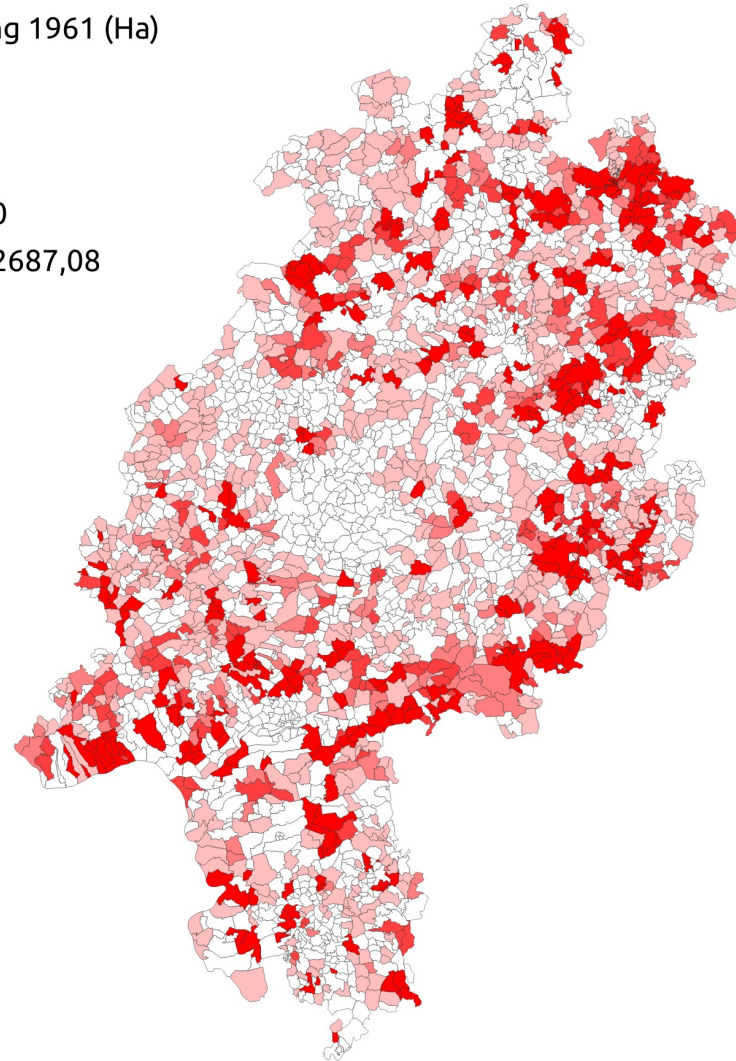
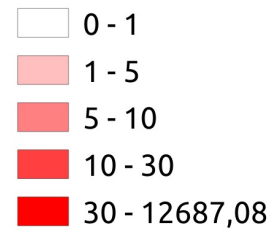
Land Usage Statistics:

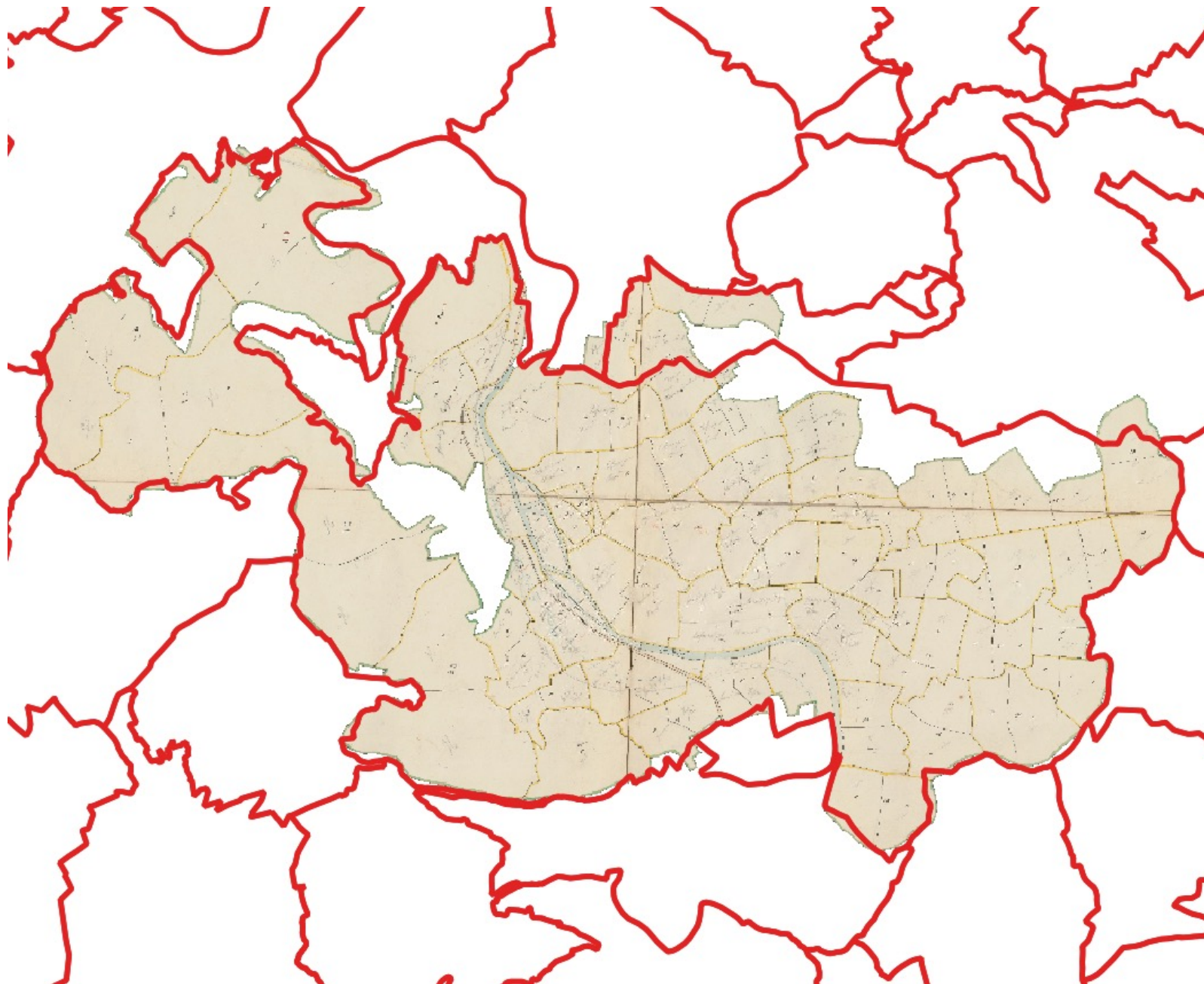
- 1742 (Kasseler Acker): 352 Land, 149 Wiesen.
- 1885 (Hektar): 183, davon 109 Acker (= 59.56 %), 27 Wiesen (= 14.75 %), 33 Holzungen (= 18.03 %)
- 1961 (Hektar): 554, davon 36 Wald (= 6.50 %)





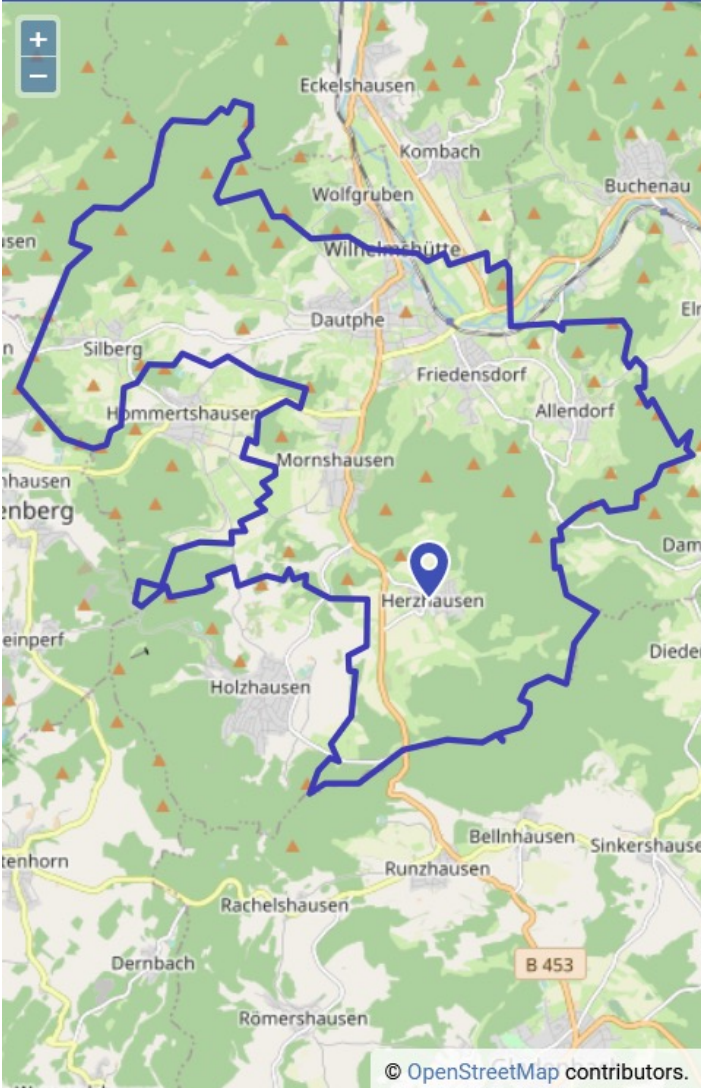
▶ Titel	Gutsbezirk Gilsenrode (=> 1928-09-30)
▶ (abgeleitet)	
▶ (Aktionen)	
fid	77927
hilfs_gmk	0
land_id	06
gmk_id_off	062016
okz	63400112003
name	Gutsbezirk Gilserhof
name_hist	NULL
bemerkung	NULL
documentation	NULL
valid_from	NULL
valid_to	1928-09-30
gemarkungstyp	Forstbezirk/Gutsbezirk

Abweichung 1961 (Ha)





Zu LAGIS **Personenstandsregister**  



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Suche
35232 Dautphetal - Herzhausen

Hommertshausen

Zeitraum: 1874 bis 1881


Anzeigen

Geburten **Heiraten** **Sterbefälle**

Dautphe

Zeitraum: 1882 bis 1974

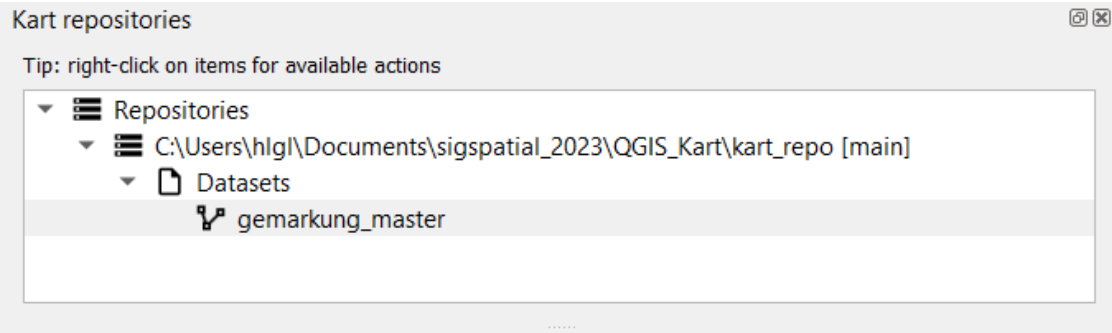
Wird angezeigt

2 Gebietsänderungen 

Geburten **Heiraten** **Sterbefälle**

Kart

<https://kartproject.org>



History

From: 1970/01/01 To: 2023/11/12 Filter:

Graph	Refs	Description	Author	Date	CommitID
	tempEdits	Regulated border Klein- Großenglis (1910-03-01)	Niklas Alt	2023-11-12T17:38:38Z	6a7a2ec
	main	Regulated historical boundary between Kleinenglis and Arnsbach (1910-03-01)	Niklas Alt	2023-11-12T17:35:01Z	61ae1a1
		Import from gemarkung_master.shp:gemarkung_master to gemarkung_master/	Niklas Alt	2023-11-12T17:27:37Z	5501423

SHA-1: 6a7a2ec5407d668b8e5d621923b59b87e8a0293c
Message: Regulated border Klein- Großenglis (1910-03-01)
Parents: 61ae1a1f4aecc1e8a82900e7879b494f4c79a502

name_hist			Unchanged
gmk_id_off	061865	061865	Unchanged
valid_from		1910-03-01	Modified
name	Arnsbach	Arnsbach	Unchanged
documentat			Unchanged

Thank You!

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