



The Wallenborn CO₂-seeps

The Wallenborn Geysir, also known as 'der Brubbel', is one of few cold water geysers in the Eifel area. Simultaneously, it represents the spring with the highest gas flux in the West Eifel (Weinlich, 2005). In addition, several CO₂-enriched springs occur in the neighbourhood (Hänel, 2020).

Anomalies

The Wallenborn geysir emits (approximately) every half an hour a water jet up to 4 meters high, due to the high CO₂-supply, leading to gas saturation and gas exsolution (van Overmeeren, 2014). The geysir water contains 2970 mg/l CO₂ (Hänel, 2020), more than ten times the threshold value to be classified as Sauerling (Weertz and Weertz, 2007). The CO₂-rich springs in the surroundings are less extreme expressions of the same subsurface origin. They are located in a groundwater discharge area, where water (and dissolved gas) flows upwards along fractures and joints in Lower Devonian rocks (Weyer et al., 2012). The CO₂ has a volcanic origin, as indicated by the high flux density of mantle carbon in the Wallenborn-Gerolstein-Daun region (May, 2005) and by the association with H₂S gas (van Overmeeren, 2014).

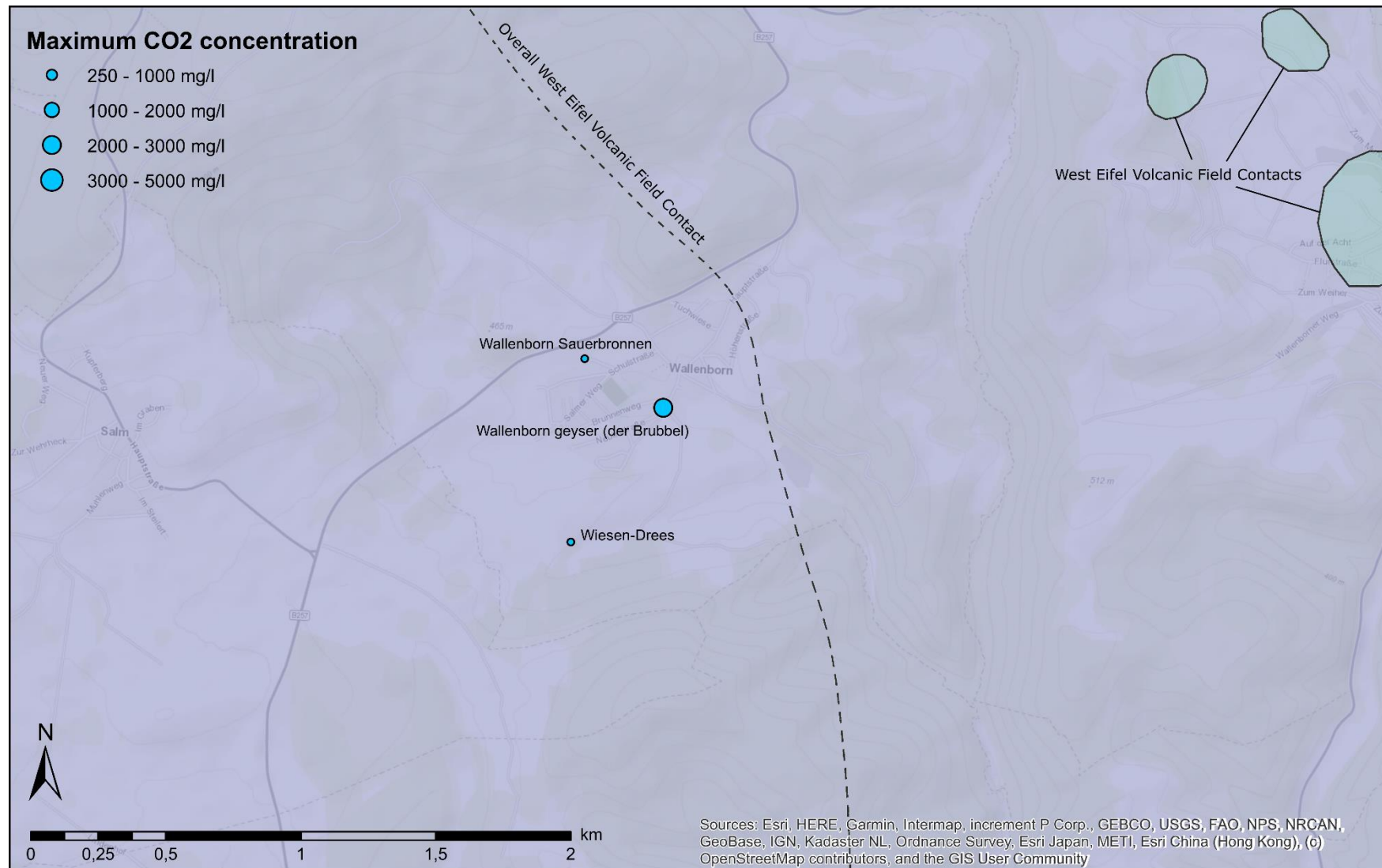


Figure 1: The Wallenborn CO₂-seeps



Data

ID	Coordinates	T	Depth	TDS°	Cl	Na	SO ₄	Free CO ₂	He	³ He/ ⁴ He	Analysis year	References
		°C	m	g/l	mg/l	mg/l	mg/l	mg/l	ppmv			
Wallenborn Geyser (Brubbel)	50°09'13" North 06°43'13" East		38.8					2970			<2020	Hänel (2020)
Sauerbrunnen Wallenborn	50°09'19" North 06°42'57" East											Hänel (2020); Datenbank der Kulturgüter in der Region Trier (2020)
									3	1992	Griesshaber et al. (1992)	
Wiesen-Drees	50°08'56" North 06°42'56" East											Datenbank der Kulturgüter in der Region Trier (2020)

° TDS = Total Dissolved Solids

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