



Just Lipa

# DROP THE BOTTLE

Rethinking drinking water consumption with data-driven insights

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**Bottled water booming  
despite worries over waste**

**The  
Guardian**

**If we care about plastic waste, why  
won't we stop drinking bottled water?**

**How the plastic bottle went from  
convenience to curse**

The  
Economist

Environmental impact of bottled water  
'up to 3,500 times greater than tap  
water'

Britain's love affair with bottled water -  
a national scandal?

**BBC**

London's plastic water bottle waste is  
out of control, mayor is told

Nanoplastics make up around 90% of the plastic  
particles found in bottled water

EU urged to ban 'carbon neutral' claims for food  
and drink: 'There's no such thing as a CO2 neutral  
banana'

## Why do we buy bottled water?

# Case Study: United Kingdom



- Availability of official data
- 100% access to tap water
- High standards of living
- Moderate climate



# Hypotheses



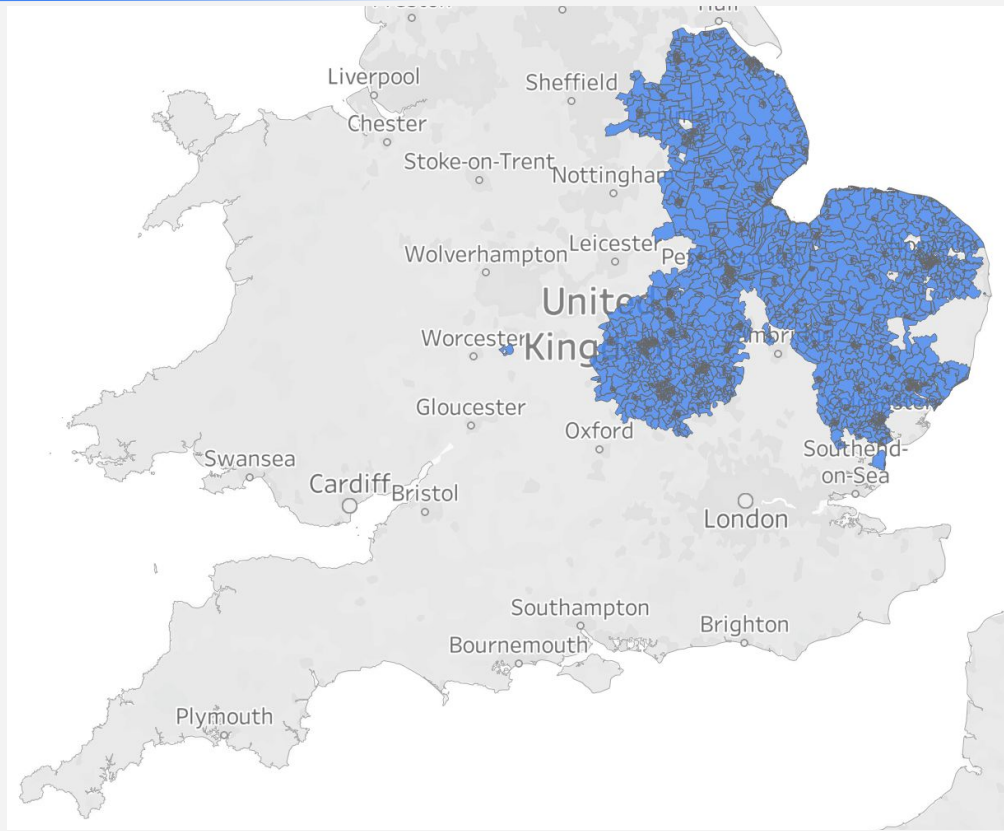
- I. **Quality** of tap water is comparable to bottled water.
- II. Demand for bottled water is driven by **weather** patterns and socio-political **events**.
- III. While seemingly **convenient**, bottled water is **excessively priced**.

# Tap Water Data Source

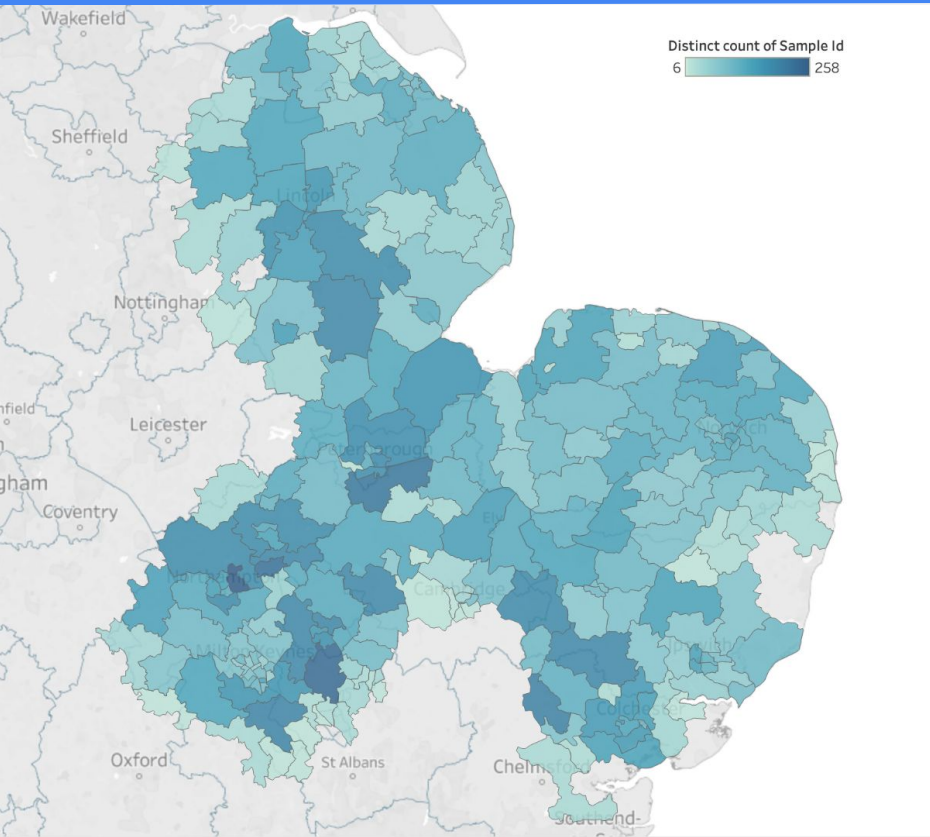


## Anglian Water Quality Data 2022

**14,439** samples from consumer taps in  
**250** districts tested for  
**87** determinands (biological & chemical)



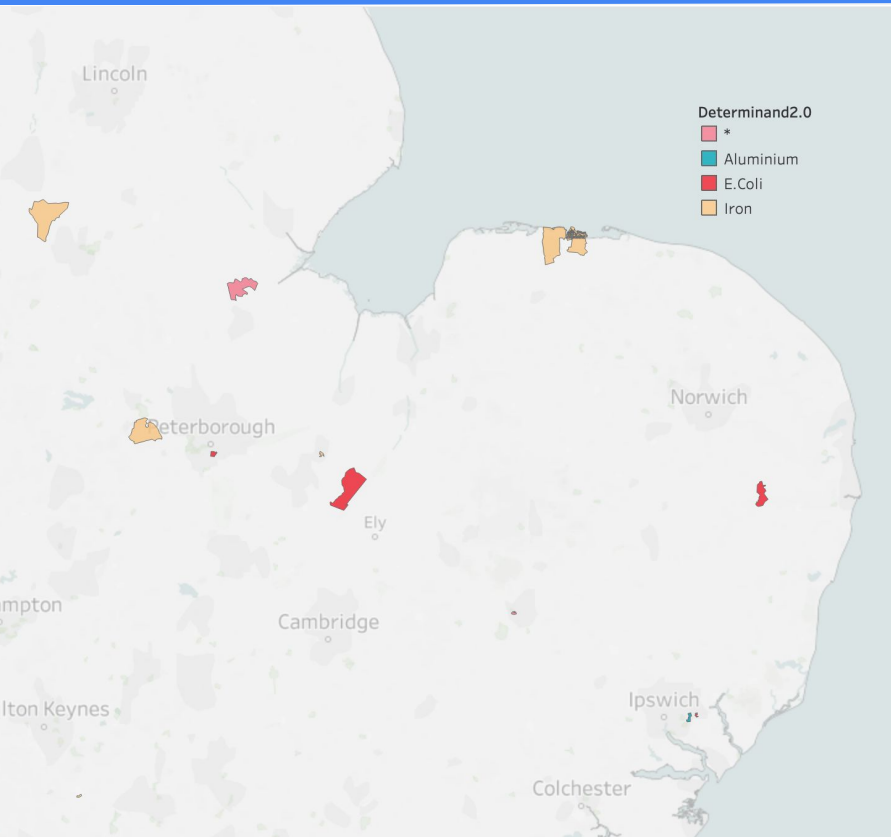
# Tap Water Test Frequency



Average of **5** samples per **month** per district

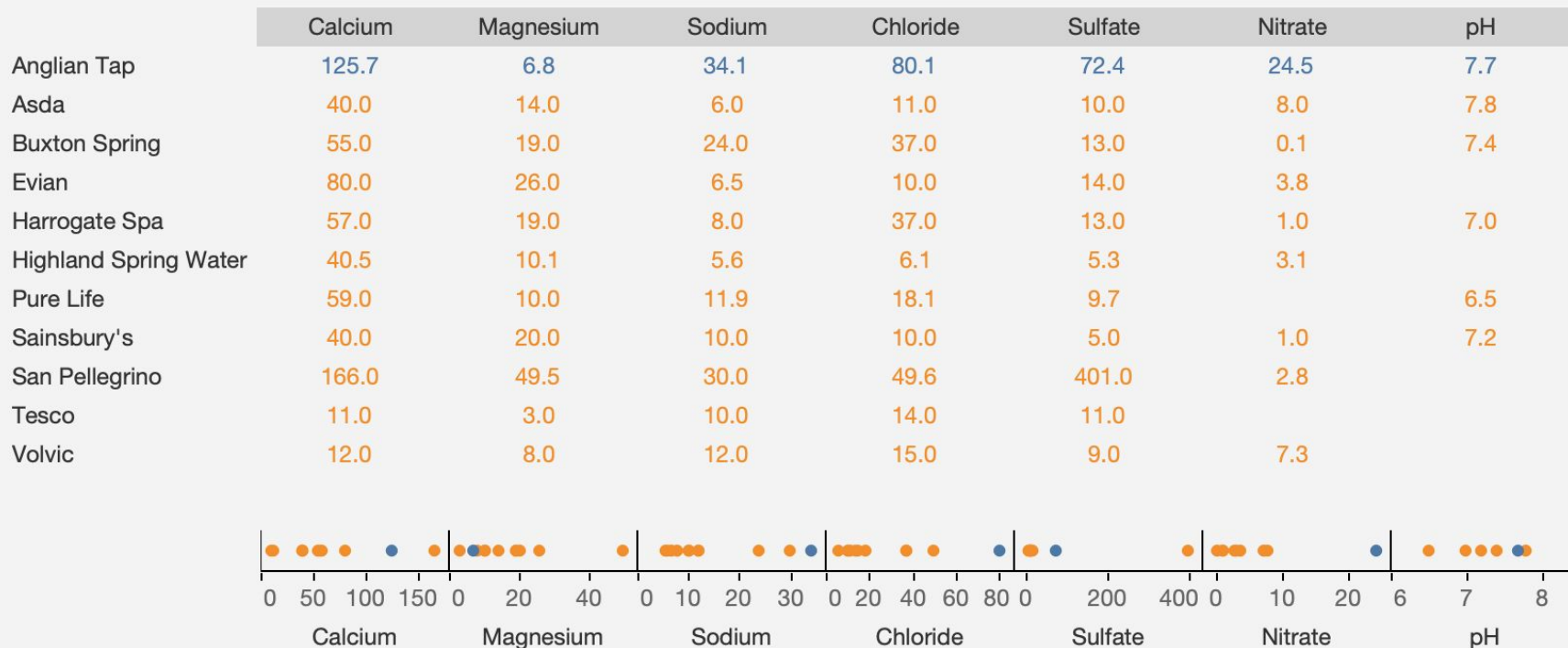
**99.9%** of results within legal limit

# Results over Legal Limit



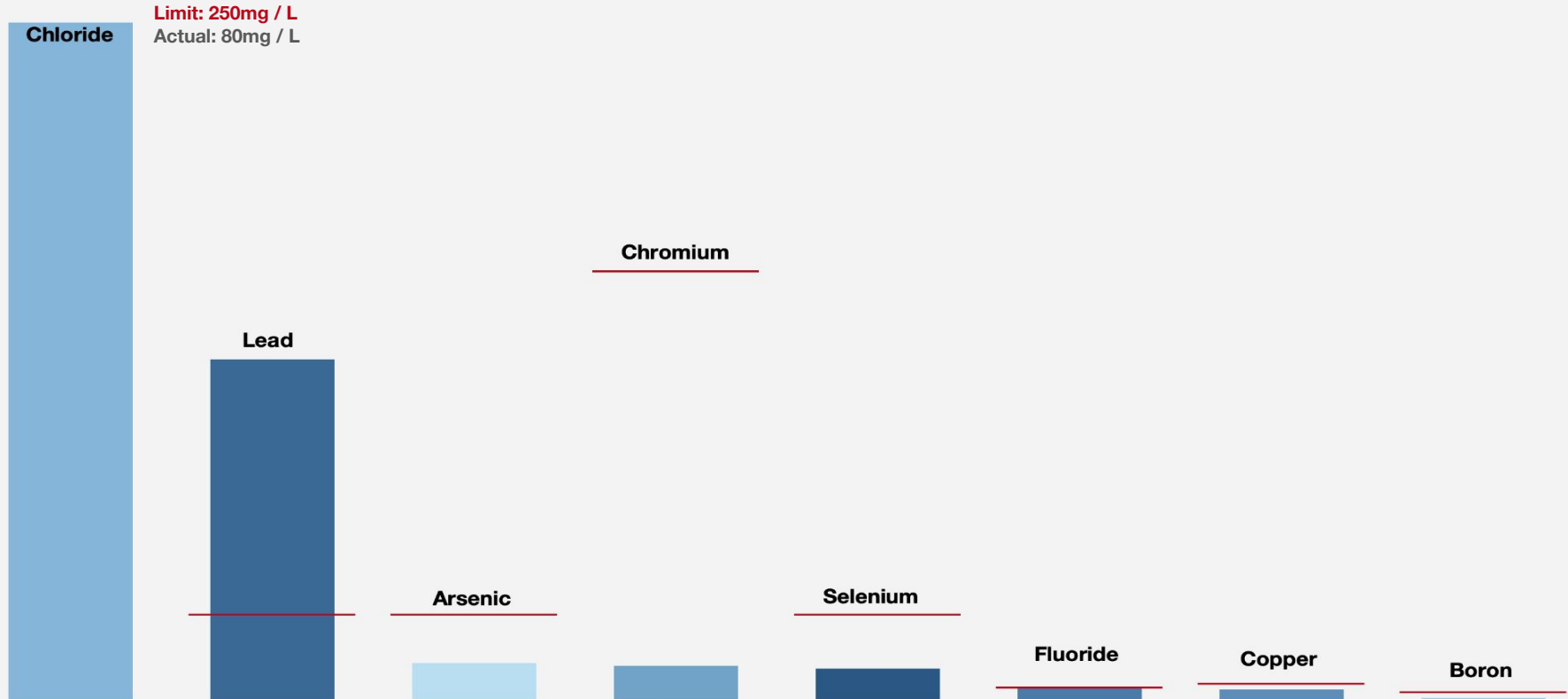
Area	AreaDistrict	Day of Sample Date	Determinand	Max. Value	
Central Bedfordshire	LU7	18 August 2022	Iron	1,495	µg/l Fe
	LU95	18 August 2022	Iron	1,495	µg/l Fe
East Suffolk	IP4	21 June 2022	Aluminium	203.8	µg/l Al
	IP5	18 May 2022	E.Coli	9	No. /100ml
		21 June 2022	Aluminium	203.8	µg/l Al
Fenland	PE14	1 June 2022	E.Coli	1	No. /100ml
	PE15	1 June 2022	E.Coli	1	No. /100ml
		30 August 2022	Iron	220	µg/l Fe
North Lincolnshire	DN20	9 May 2022	Iron	351	µg/l Fe
	DN38	9 May 2022	Iron	351	µg/l Fe
North Norfolk	NR23	12 August 2022	Iron	202	µg/l Fe
Peterborough	PE2	9 March 2022	E.Coli	89	No. /100ml
	PE8	21 November 2022	Iron	277	µg/l Fe
South Holland	PE11	30 May 2022	Iron	284	µg/l Fe
			Manganese	185.9	µg/l Mn
South Kesteven	NG23	13 December 2022	Iron	280	µg/l Fe
South Norfolk	NR35	24 February 2022	E.Coli	1	No. /100ml
West Suffolk	IP32	27 July 2022	Aluminium	251.5	µg/l Al
			Manganese	122.8	µg/l Mn

# Comparison of Nutritional Values

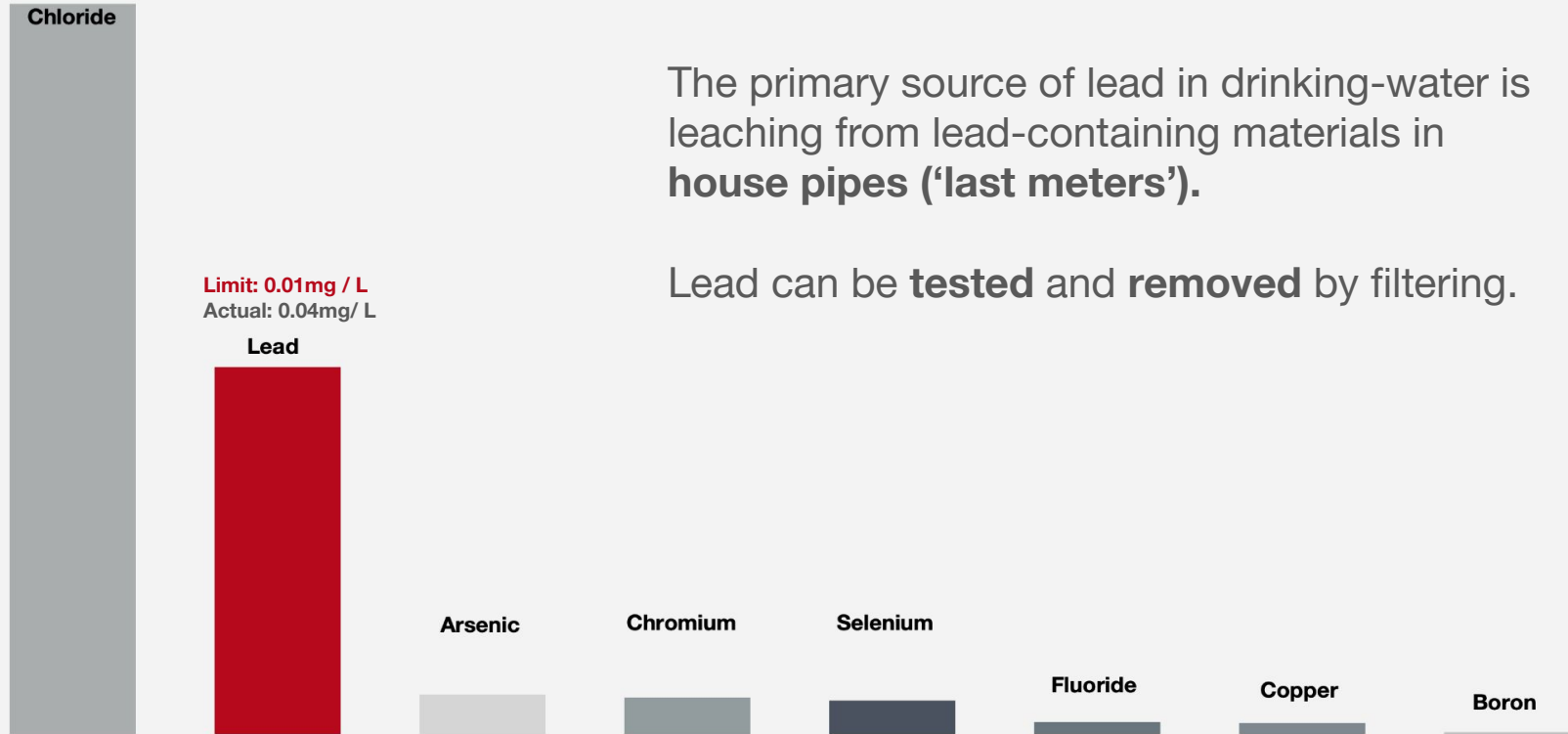




# Tap Water Meets WHO Standards



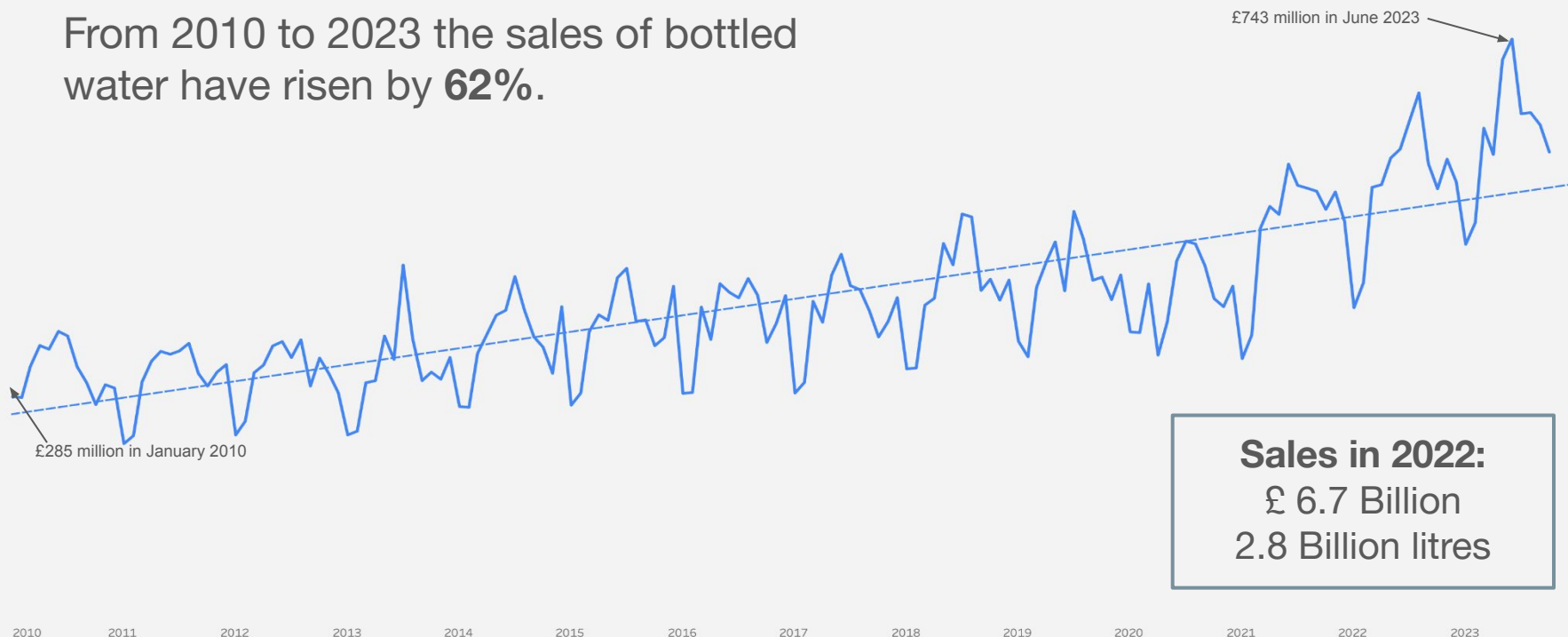
# The Lead Matter



# Bottled Water Sales Trend



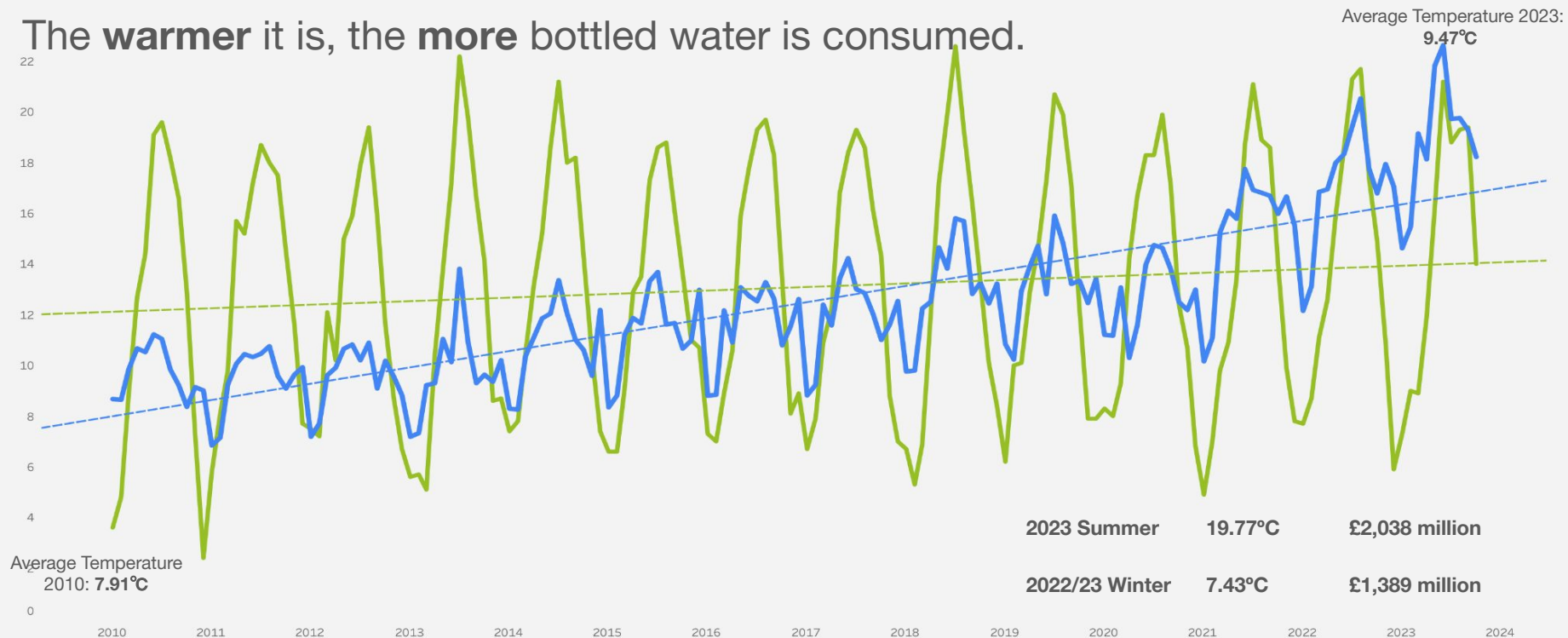
From 2010 to 2023 the sales of bottled water have risen by **62%**.



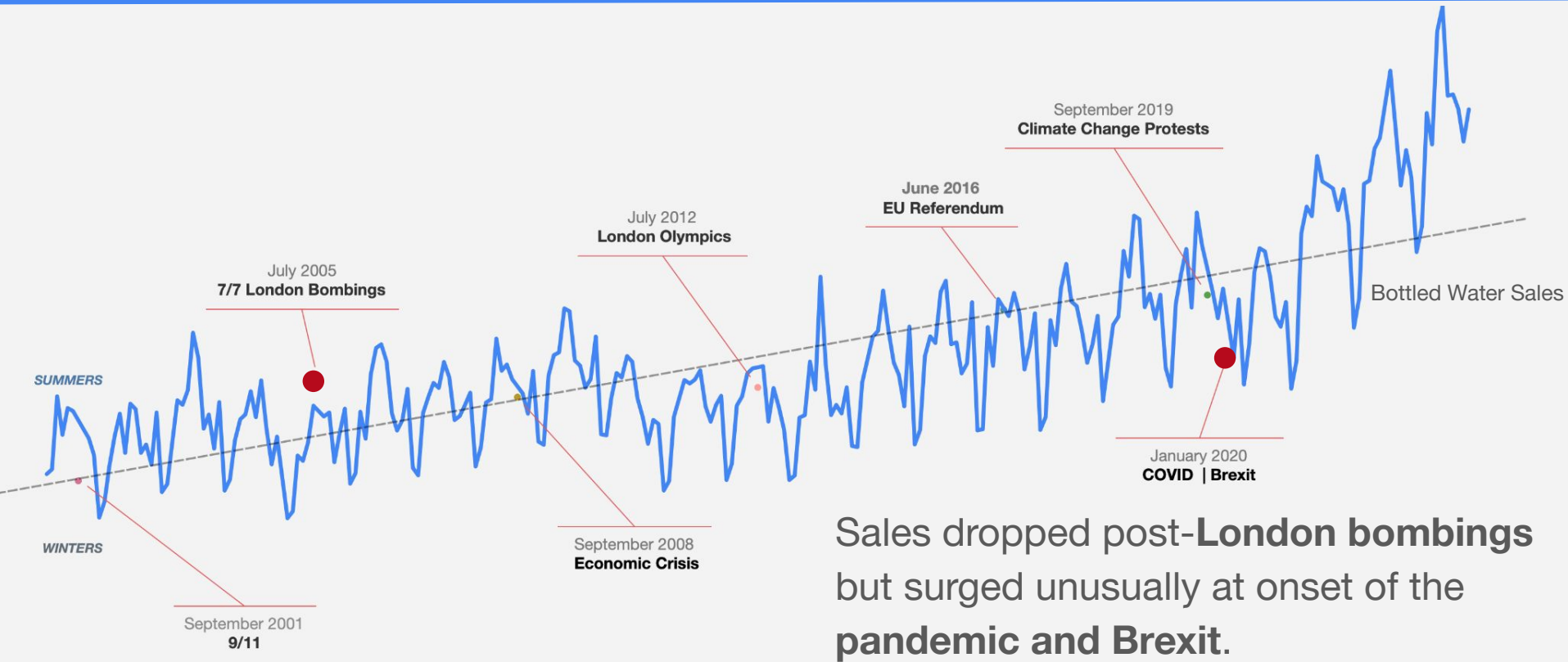
# The Effect of Temperature on Sales



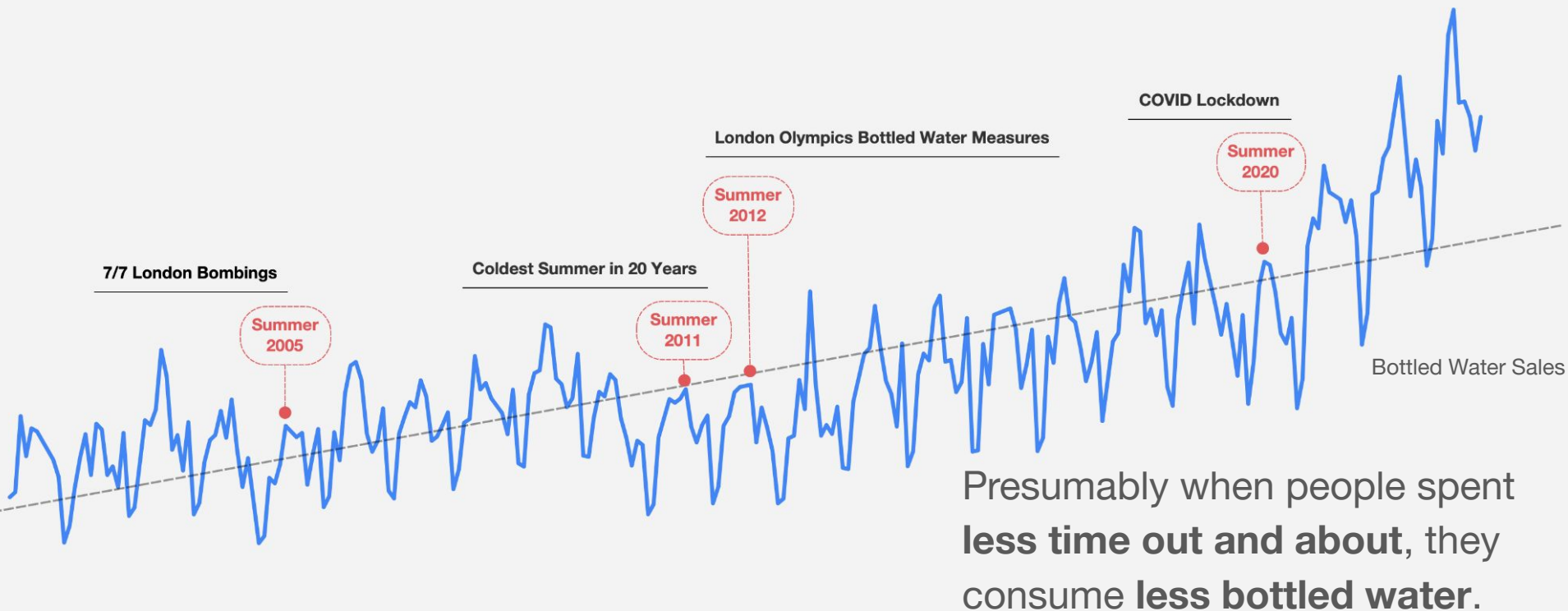
The **warmer** it is, the **more** bottled water is consumed.



# The Impact of Socio-political Events (2001-2023)



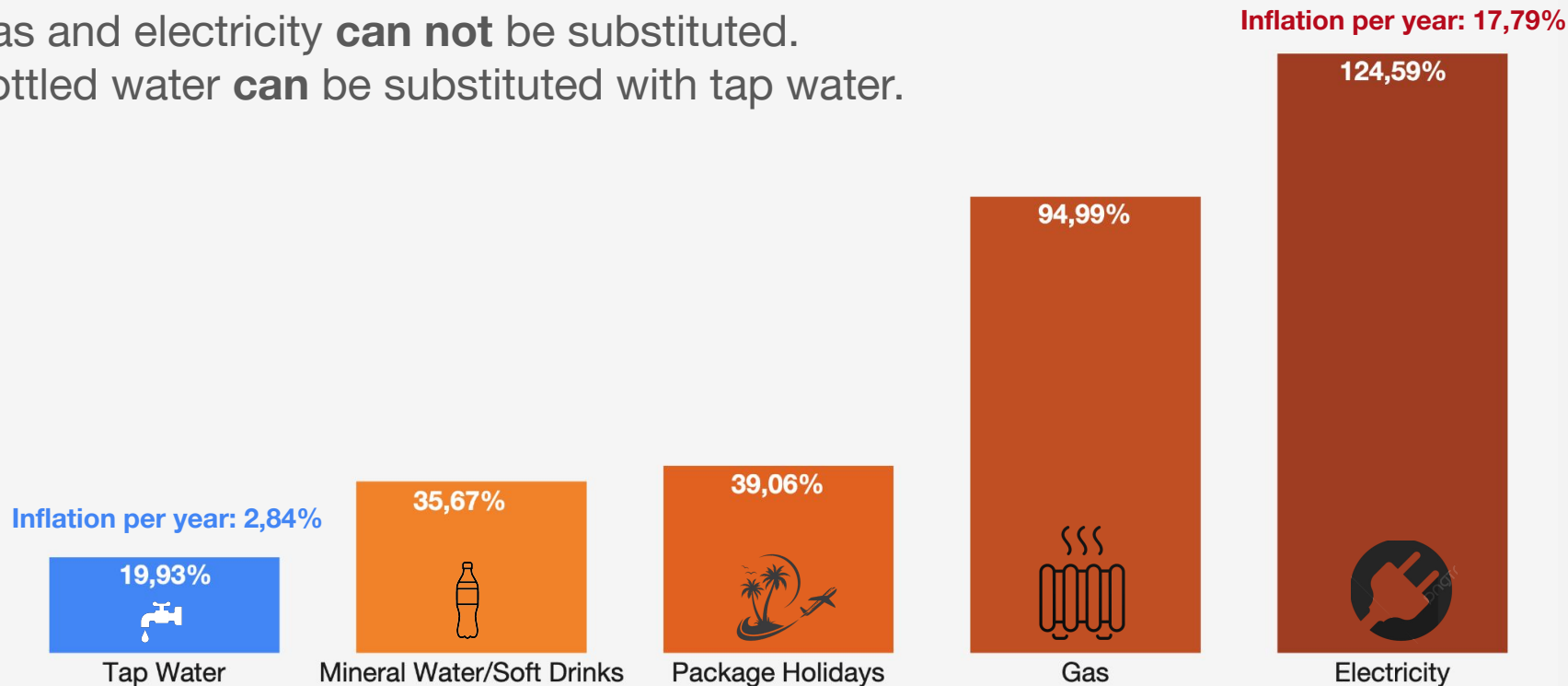
# Summers with Low Sales



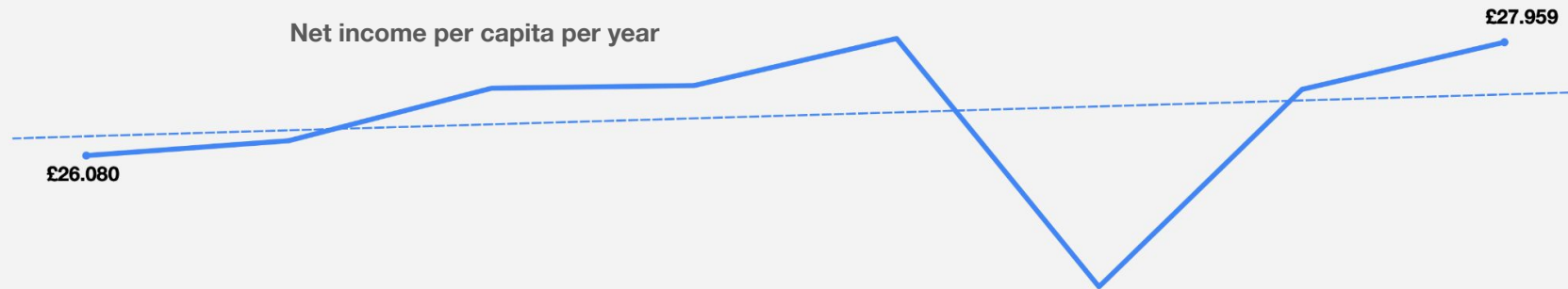
# Price Increase 2015 - 2023



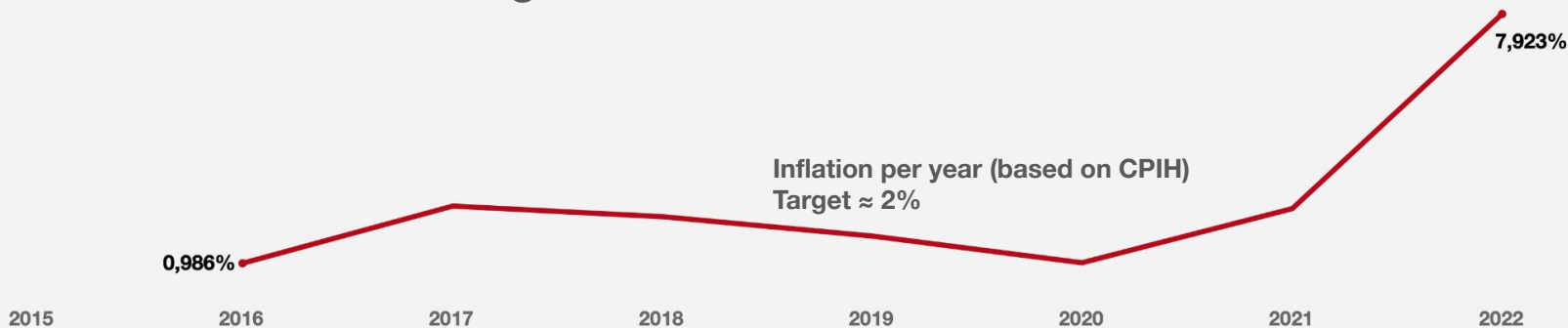
Gas and electricity **can not** be substituted.  
Bottled water **can** be substituted with tap water.



# Income and Inflation

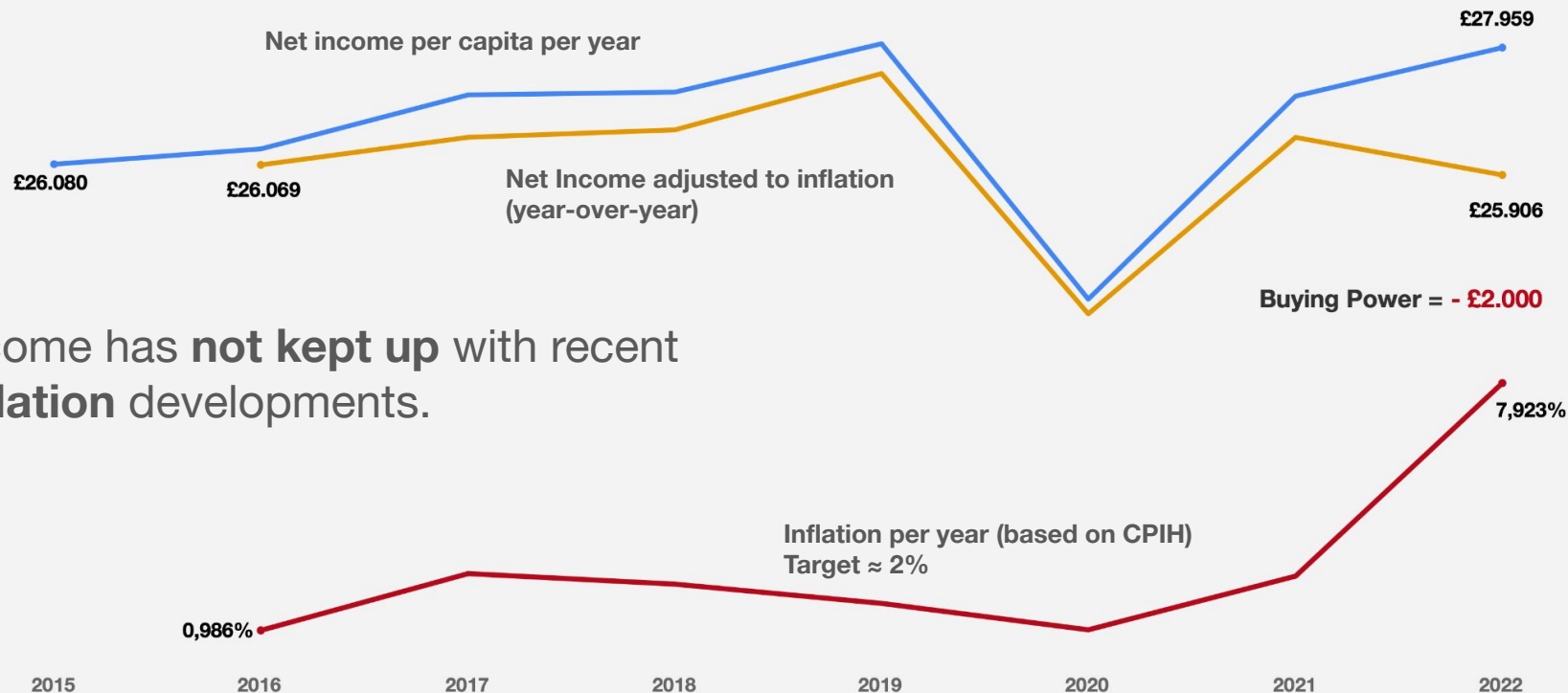


Income has seen **moderate growth**.

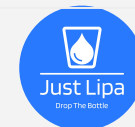








# Loss of Buying Power



# Cost Comparison

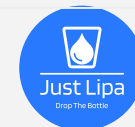


Recommended daily intake: **2 Liter**





Brand	Per Liter	Per Day	Per Year
	£ 1.00	£ 2.00	£ 720
	£ 0.60	£ 1.20	£ 432
	£ 0.20	£ 0.40	£ 244
	£ 0.006*	£ 0.012	£ 4.32

\* including sewage, based on 140 litres per day usage for a single household.

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**Gas: £ 720**  
**Electricity: £ 1,200**

\* including sewage, based on 140 litres per day usage for a single household.

# Key Takeaways



- Data on tap water quality is **available**.
- Quality of tap water is **comparable** to bottled water.
- Bottled water sale is driven by individual **convenience**.
- Bottled water is at least **50 times more expensive** than tap water.

