

Water Pollution in the News, 2019-2026: Attention, Geography and Tone of Global Coverage of Polluted Water, and How It Compares with Research and Invention

Fliar BI · Prism Research Layer · Working paper, October 2026 · Dataset and code: github.com/fliarbi/prism-news-api · Licence CC BY-NC 4.0

Abstract

We measure how water pollution was covered in a global news index from January 2019 to July 2026, using 36,432 de-duplicated articles about polluted rivers, lakes, seas, groundwater and drinking water, and set that coverage beside 11,739 research papers and 8,141 patent families on the topic. Six results stand out:

1. **Falling share.** Water pollution took 3.2 of every 10,000 news articles in 2019 and 1.98 in 2025, a 38.1% smaller share. Raw counts rose, but the index grew faster.
2. **Events set the peaks.** The share peaked at 5.8 per 10,000 in October 2021, the month of the oil spill off Orange County, California. Oil spills are named in 26.5% of all matched openings.
3. **Geography.** The United States holds the largest raw share of located coverage (31.65%) but is under-represented (lift 0.65). India (1.73) and the United Kingdom (1.74) are over-represented, and the Philippines (6.9), New Zealand (4.39) and Nigeria (2.79) most of all among countries with at least 100 articles. Within India, Madhya Pradesh (6.58) leads; within the United States, Maryland (3.49), Michigan (2.66) and Oregon (2.18).
4. **Shifting attention.** The United Kingdom's attention fell from 5.01 to 2.55 per 10,000 of its news between 2023 and 2025. The Philippines rose to 31.68 per 10,000 in 2023 and fell back to 1.81 in 2025.
5. **Tone and urgency.** 67.9% of articles are negative in tone (all news: 33.6%), and 88.4% are rated critical priority (all news: 42.6%).
6. **Research and invention.** Papers on the topic grew from 1.5 to 1.84 per 10,000 papers between 2015 and 2025. Patent families grew 3.17-fold from 2015 to 2024, and 88.9% of them were filed in China.

Findings stated for citation

- **F1.** Water pollution's share of news fell 38.1% from 2019 to 2025 (3.2 to 1.98 per 10,000 articles).
- **F2.** October 2021, the month of the Orange County oil spill, was the peak month, at 5.8 per 10,000.
- **F3.** August 2020, the month of the MV Wakashio spill, reached 4.08 per 10,000.
- **F4.** 26.5% of matched articles named an oil spill; 14.3% used the phrase "water pollution".
- **F5.** The United States' share of located coverage (31.65%) was 0.65 times its share of all news; India's (22.84%) was 1.73 times and the United Kingdom's (10.14%) 1.74 times.

- **F6.** Among the 11 countries with at least 100 articles, the Philippines (6.9), New Zealand (4.39) and Nigeria (2.79) were the most over-represented; Australia (0.63) the least.
- **F7.** 67.9% of articles were negative in tone (2.02 times all news); 88.4% were critical priority (2.08 times).
- **F8.** Clean-water access advocacy appeared in 15.36% of themed articles, 143.36 times its rate in all news.
- **F9.** Papers on the topic rose 1.23-fold as a share of all papers between 2015 and 2025.
- **F10.** Patent families grew 3.17-fold between 2015 and 2024; 88.9% were filed in China.
- **F11.** Within India, Madhya Pradesh (6.58), Tamil Nadu (1.53) and Punjab (1.42) were the most over-represented states.
- **F12.** Within the United States, Maryland (3.49), Michigan (2.66) and Oregon (2.18) were the most over-represented states.
- **F13.** The United Kingdom's attention fell to 0.51 times its 2023 level by 2025.
- **F14.** The Philippines reached 31.68 per 10,000 of its news in 2023 and 22.82 in 2024, against 1.81 in 2025.
- **F15.** Japan reached 15.07 per 10,000 of its news in 2023 (2.1 in 2022); 85.9% of Japanese articles were negative, 3.69 times the negative share of Japanese news.
- **F16.** Africa (1.77), Oceania (1.75) and Asia (1.41) were over-represented; North America (0.71) and Europe (0.95) were not.

1. Introduction

Water pollution covers the contamination of rivers, lakes, seas, groundwater and drinking water by sewage, industrial waste, farm runoff, oil and other substances. It harms ecosystems and spreads waterborne disease. Much of what the public learns about a sewage spill, a poisoned well or an oil slick comes from the news. Agencies measure pollution, and researchers study it. Few sources measure attention, meaning how much of the news water pollution takes, and when, where and in what tone.

This paper and its dataset do that. They combine three records for one topic: a global news index, research papers and patents. Each comparison uses a denominator, so that growth in the index or in publishing is not mistaken for growth in interest. The companion dataset publishes an article-level sample (9,056 rows) and full coverage tables, so every figure here can be re-derived. The [Prism News API](#) serves the full history.

2. Data and methods

News. The Prism news index holds articles from outlets worldwide; non-English articles are indexed in English translation. Each article carries its opening text (the first few sentences), a primary location, a graded tone label, an editorial priority rating (1–9), themes, keywords and named organisations. We count unique article identifiers; repeated rows for the same article are removed. When this release was built, 92.88% of the index was readable, so all counts are lower bounds.

Matching. An article is about water pollution when its opening text contains one of 26 reviewed phrases as whole words. They fall into five groups:

- general terms: *water pollution, polluted water, water contamination, contaminated water*;
- drinking water and groundwater: *contaminated drinking water, drinking water contamination, groundwater contamination*;
- rivers and sewage: *river pollution, polluted river(s), sewage spill(s), sewage discharge(s), raw sewage, untreated sewage, sewage overflow(s), sewage pollution*;
- industry and farming: *industrial effluent(s), nitrate pollution*;
- the sea: *marine pollution, ocean pollution, oil spill(s)*.

The phrase *water quality* was tested and rejected, because it mainly returns routine monitoring and bathing-water notices. Service advertisements and job notices are excluded; these patterns removed 77 matches. One reviewer read 40 randomly drawn matched openings, and a second check re-read 15 of them. 35 concerned the pollution of water (precision 87.5%), and in 23 (57.5%) water pollution was the main subject. The false positives were oil spills on land, business articles that cite a past spill as an example, a general essay and a farming article that mentions water contamination only in passing. Seven of the 40 openings were research-paper abstracts carried in the index rather than news reports.

Measures. Coverage over time is expressed per 10,000 articles in the index that month or year, because the index grew from 11,807,177 articles in 2019 to 26,990,006 in 2025. Seasonality uses each year's within-year month shares, averaged over the complete years 2019–2025. Geography, tone, priority and themes use January 2023 – July 2026. Geography is expressed as lift: a country's share of matched articles divided by its share of all located articles. Lift above 1 means over-represented. Place tags derived from ordinary words (such as "Congress", "Earth", "Winter" or "Cloud") were treated as unlocated in every location field, which removed 15.3% of city-tagged articles.

Research and patents. Research papers are de-duplicated articles and reviews (2000–2025) with *water pollution, water contamination, river pollution, groundwater contamination, marine pollution, sewage pollution, polluted water* or *oil spill* in the title. Repository deposits are excluded. Patent families (2005–2024) use a similar title rule (adding *contaminated water* and *sewage discharge*) and are counted once per filing office.

3. Results

3.1 How much and when

The index holds 36,432 water-pollution articles from January 2019 to July 2026. Raw counts rose from 3,774 in 2019 to 5,345 in 2025, but the share of all news fell: 3.2 per 10,000 in 2019, 2.49 in 2024 and 1.98 in 2025 (Table 1). That is 38.1% below 2019. In 2020 the share dropped to 2.0, 37.5% below 2019, and it did not regain its 2019 level in any later complete year.

Year	Articles	All articles in index	Per 10,000
2019	3,774	11,807,177	3.2
2020	3,242	16,230,014	2.0
2021	4,547	17,281,220	2.63
2022	4,774	19,115,515	2.5
2023	4,971	20,484,506	2.43
2024	5,813	23,311,896	2.49
2025	5,345	26,990,006	1.98

Table 1. Water-pollution articles per year and as a share of the index. 2026 (January-July) is partial and omitted. Monthly peaks follow single events (Figure 1). The highest share was October 2021, at 5.8 per 10,000, the month of the oil spill off Orange County, California. January 2026 (5.51), January 2022 (4.85) and August 2020 (4.08), the month of the MV Wakashio spill off Mauritius, follow. Oil spills are a large part of the topic in the news: 9,638 matched openings (26.5%) name an oil spill, against 5,211 (14.3%) that use the phrase "water pollution".

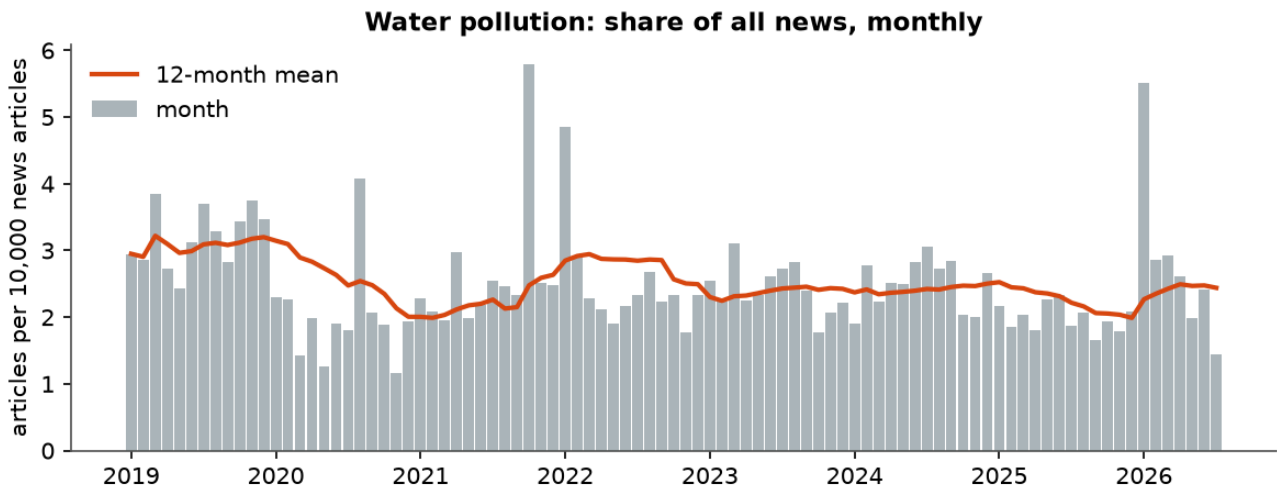


Figure 1. Water-pollution coverage as articles per 10,000 news articles, monthly, January 2019 – July 2026. Bars are months; the line is the 12-month mean.

Unlike weather hazards, water pollution has little seasonal pattern (Figure 2). January (10.11%) and August (10.08%) are the busiest months of a typical year, and November is the quietest (6.85%). January and August together hold 20.19% of a year's articles. An even spread would give each month 8.3%.

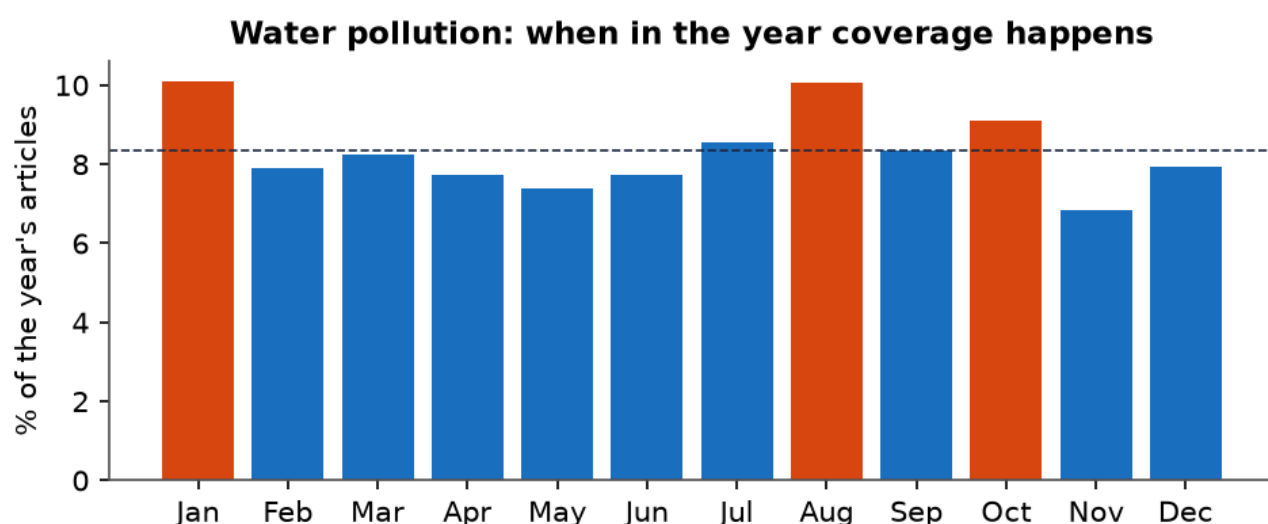


Figure 2. Share of each year's water-pollution articles published in each month, averaged over 2019–2025.

3.2 Where

Between January 2023 and July 2026, 8,589 of 20,092 matched articles (42.7%) carried a primary country. The United States holds the largest raw share (31.65%), but its lift is 0.65: water pollution takes a smaller share of American news than of news overall. India (22.84%, lift 1.73) and the United Kingdom (10.14%, lift 1.74) are over-represented. The Philippines (6.9), New Zealand (4.39) and Nigeria (2.79) have the highest lifts among the 11 countries with at least 100 articles (Table 2, Figure 3). Australia (0.63), the United States (0.65) and Canada (0.85) are the only three below 1.

Country	Located articles	Share %	Lift vs all news
United States	2,718	31.65	0.65
India	1,962	22.84	1.73
United Kingdom	871	10.14	1.74
Nigeria	328	3.82	2.79
New Zealand	244	2.84	4.39
Japan	208	2.42	2.28
Philippines	187	2.18	6.9
Singapore	168	1.96	2.2
Canada	156	1.82	0.85
Russia	118	1.37	1.82
Australia	116	1.35	0.63

Table 2. Countries with at least 100 located water-pollution articles, January 2023 – July 2026, with lift against all located news.

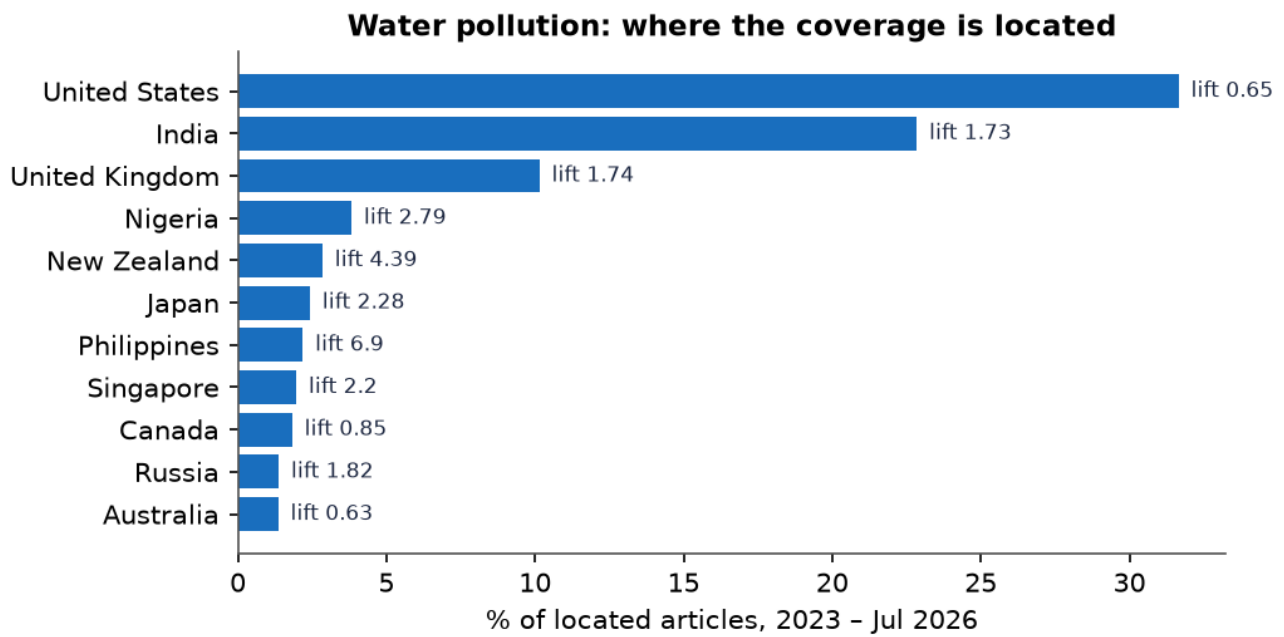


Figure 3. Leading countries by share of located water-pollution articles, 2023 – Jul 2026, labelled with lift against all located news.

3.3 Geo intelligence: continents, states and shifting attention

The world map (Figure 4) shows the pattern at a glance. Water pollution is over-represented in the news of the Philippines, New Zealand, Nigeria, Japan, Singapore, Russia, the United Kingdom and India, and under-represented in Canada, the United States and Australia. Countries with fewer than 100 articles, China among them, are grey. By continent, Africa (1.77), Oceania (1.75), Asia (1.41) and South America (1.14) are over-represented, while Europe (0.95) and North America (0.71) are not (Figure 7, left).

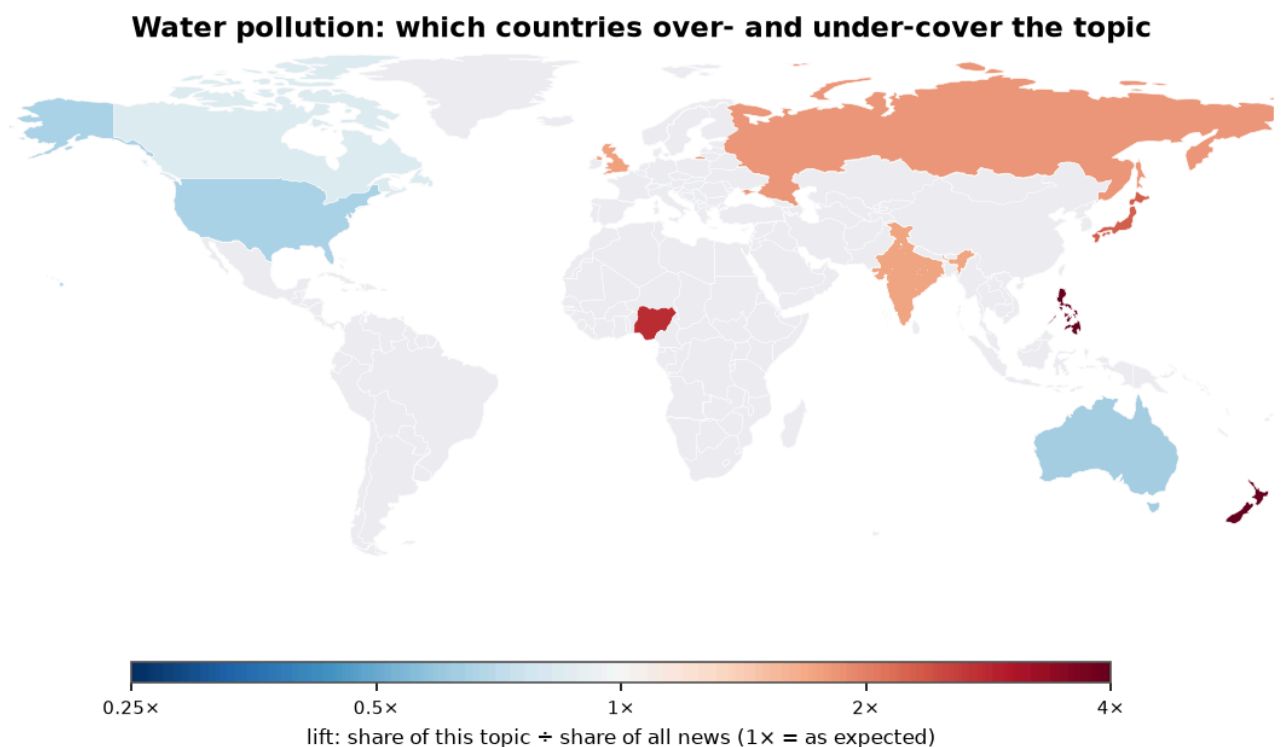


Figure 4. Lift of each country's share of located water-pollution articles, January 2023 – July 2026 (red = over-represented, blue = under-represented, grey = fewer than 100 articles). India is drawn with its official outline.

Within countries, the picture is sharper (Table 3). In India, measured against each state's share of Indian news, Madhya Pradesh (6.58) is far ahead of every other state. Much of its coverage comes from a single outbreak of drinking-water contamination in January 2026. Tamil Nadu (1.53), Punjab (1.42) and Kerala (1.39) follow. Maharashtra (0.67), Uttar Pradesh (0.81) and Gujarat (0.85) are under-represented despite large article counts (Figure 5). In the United States, Maryland (3.49), Michigan (2.66) and Oregon (2.18) lead by lift. New Jersey (0.17), New York (0.45) and Pennsylvania (0.52) are far below their weight in American news (Figure 6). Rhode Island shows a lift of 13.83 on exactly 50 articles, but in the sample nearly all of its rows are copies of one April 2026 offshore-drilling story whose place tags include a person's surname read as a town; it is left out of the text and the table. States with fewer than 50 articles are also left out.

India: state	Articles	Lift	United States: state	Articles	Lift
Madhya Pradesh	360	6.58	Maryland	83	3.49
Tamil Nadu	142	1.53	Michigan	145	2.66
Punjab	67	1.42	Oregon	51	2.18
Kerala	63	1.39	Wisconsin	57	1.83
Karnataka	113	1.1	Florida	202	1.6
Rajasthan	69	1.07	California	367	1.57
<i>Lowest:</i> Telangana	59	0.92	<i>Lowest:</i> Texas	96	0.7
Gujarat	52	0.85	Pennsylvania	73	0.52
Uttar Pradesh	191	0.81	New York	124	0.45
Maharashtra	198	0.67	New Jersey	73	0.17

Table 3. States with the highest and lowest lift in water-pollution coverage, January 2023 – July 2026, among states with at least 50 articles (Rhode Island excluded as a single-story artefact). Lift = the state's share of the country's located articles ÷ its share of all located news from that country.

Water pollution: states of India by lift

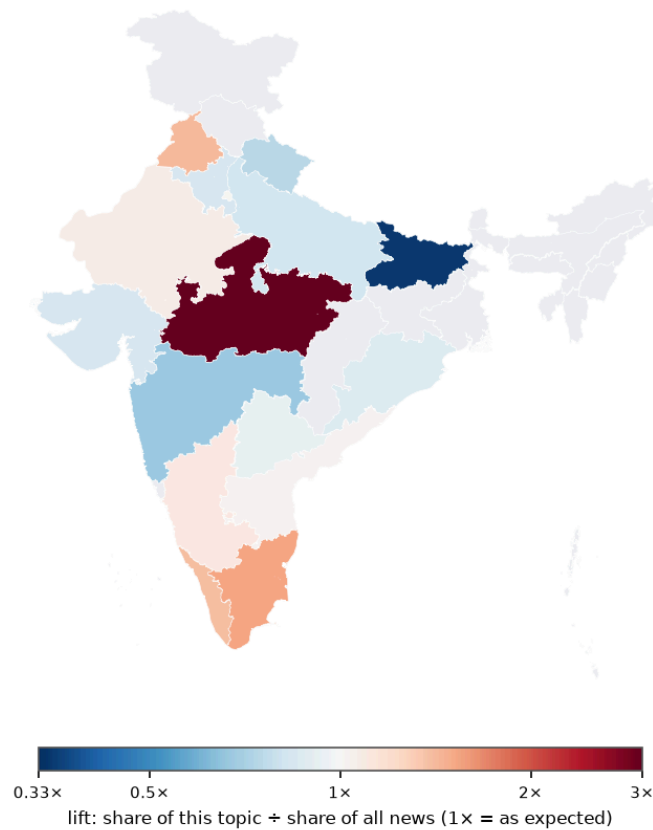


Figure 5. Lift of each Indian state's share of located water-pollution articles against its share of all located Indian news, January 2023 – July 2026. Official outline; Ladakh is drawn within Jammu and Kashmir in the boundary file used.

Water pollution: states of United States by lift

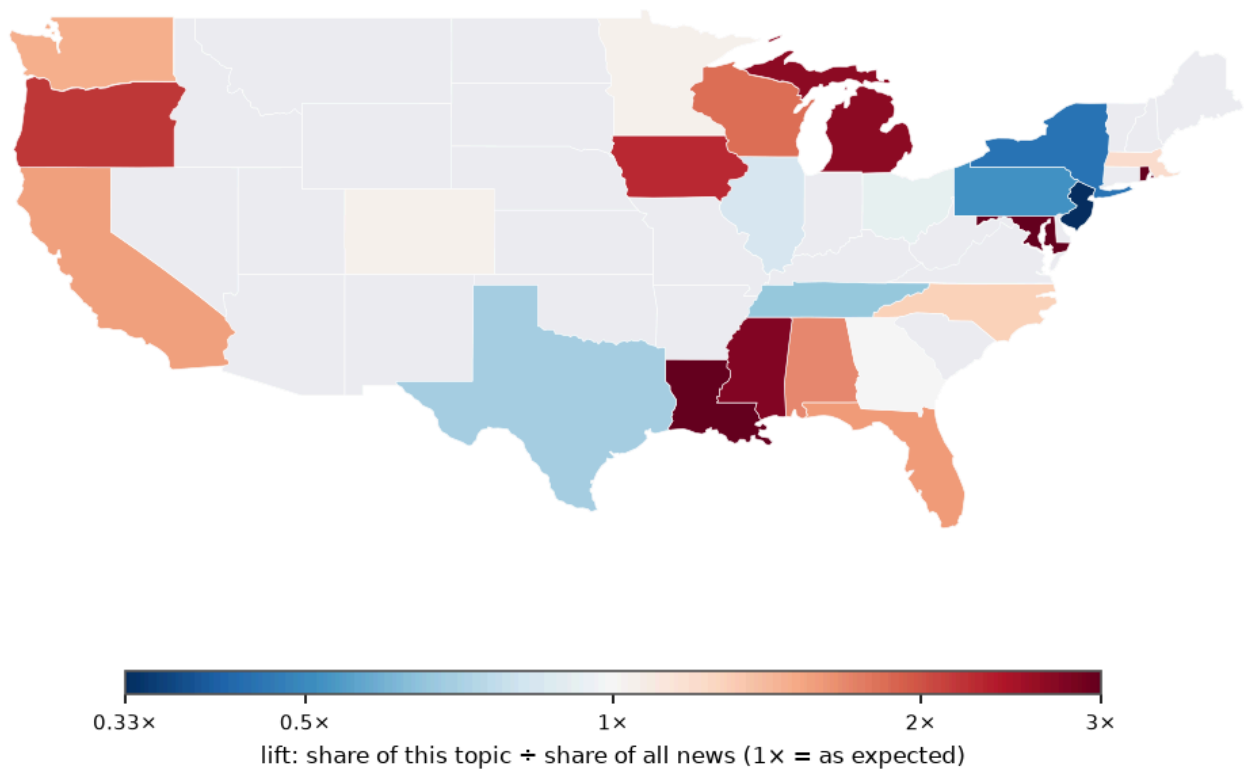


Figure 6. Lift of each US state's share of located water-pollution articles against its share of all located US news, January 2023 – July 2026. Rhode Island's shading reflects one repeated story (see text).

Attention also moves between countries from year to year (Figure 7, right). Measured as articles per 10,000 of each country's located news, all four countries with at least 100 articles in 2025 gave the topic a smaller share than in 2023. The United Kingdom fell furthest, from 5.01 in 2023 to 2.55 in 2025 (0.51 times), after two years near 3.4 (3.46 in 2021, 3.44 in 2022). Nigeria eased from 7.37 to 6.39, the United States from 1.54 to 1.32 and India from 3.5 to 3.29. Among smaller baselines, the Philippines rose to 31.68 in 2023, the year of the MT Princess Empress oil spill, and fell to 1.81 in 2025. Japan reached 15.07 in 2023, the year treated water from the Fukushima plant began to be released, and 0.78 in 2025. New Zealand rose from 5.69 to 8.71.

In each of the six countries with the most articles, water-pollution coverage is more negative than that country's own news, but the gap varies. In Japan 85.9% of labelled articles were negative against 23.3% of Japanese news (3.69 times). The United Kingdom (85.5% against 36.9%) and the United States (78.1% against 33.1%) follow, then New Zealand (88.9% against 45.7%). Nigeria shows the smallest gap (77.2% against 44.4%), then India (77.3% against 41.2%).

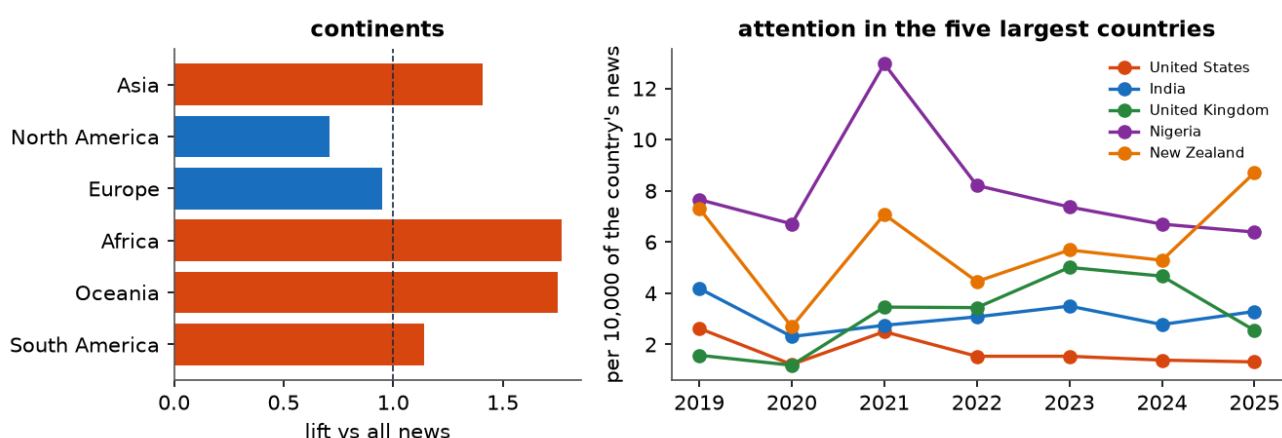


Figure 7. Left: lift by continent, January 2023 – July 2026. Right: articles per 10,000 of each country's located news, 2019–2025, for the five countries with the most articles.

3.4 Tone, urgency and themes

Water-pollution coverage is far more negative and more urgent than news in general (Figure 8). Among articles with a tone label, 67.9% are negative, against 33.6% across the index (2.02 times). Editorial priority puts 88.4% of articles at critical level (7 or higher), against 42.6% of all news (2.08 times).

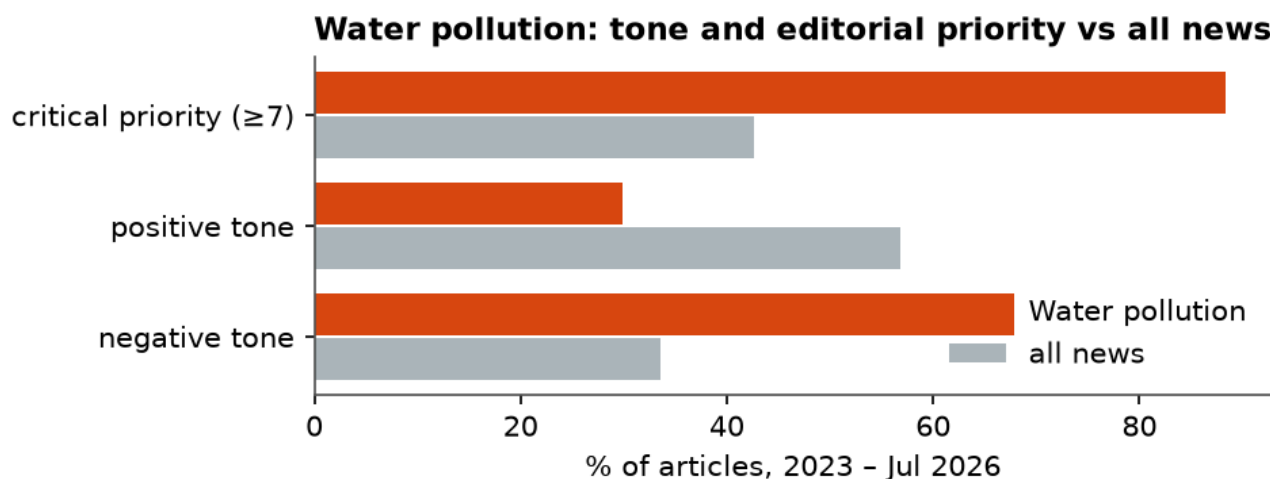


Figure 8. Tone and the share rated critical priority, water-pollution articles vs all news, 2023 – Jul 2026.

Themes show what the stories are about (Table 4). Environmental contamination incidents are the most common theme (17.8% of themed articles). Oil-spill themes are the most specific to the topic: oil spill cleanup technologies appear 302.83 times more often than in all news. Clean-water access advocacy (15.36%, lift 143.36) and sanitation and hygiene initiatives (4.18%, lift 140.87) carry the public-health side.

Theme	Articles	Share %	Lift
environmental contamination incidents	2,267	17.8	129.43
maritime disasters and oil spill cleanups	2,185	17.15	105.22
oil spill cleanup technologies	2,045	16.06	302.83
clean water access advocacy	1,956	15.36	143.36
environmental impact of oil spills	1,927	15.13	225.34
environmental impact of energy production	1,506	11.82	176.49
wastewater treatment and sludge management	483	3.79	182.95
sanitation and hygiene initiatives	532	4.18	140.87

Table 4. Leading themes in water-pollution coverage, with lift against all themed news, January 2023 – July 2026. The organisations named most often are regulators and utilities: the US Environmental Protection Agency (764 articles), England's Environment Agency (353), Nigeria's oil spill detection and response agency (261), the water regulator for England and Wales (190), and the water companies Thames Water (120) and United Utilities (113). Wire services also rank high, which reflects how the news is sourced.

3.5 Research attention and invention

Research on water pollution grew a little faster than the scientific literature as a whole. Papers with the topic terms in the title rose from 1.5 per 10,000 papers in 2015 to 1.84 in 2025, a 1.23-fold increase in share. Between 2015 and 2025, 11,739 such papers were published, and 21,486 since 2000. The most-cited include reviews of heavy-metal pollution, of plastic marine pollution policy and of drinking-water contamination, and work on the fate of oil from the Deepwater Horizon spill [1–6]. Others link water pollution to health outcomes [7, 8].

News attention does not track research attention (Figure 9). Research share rose slowly, while news share fell after 2019 and has moved with large spills since.

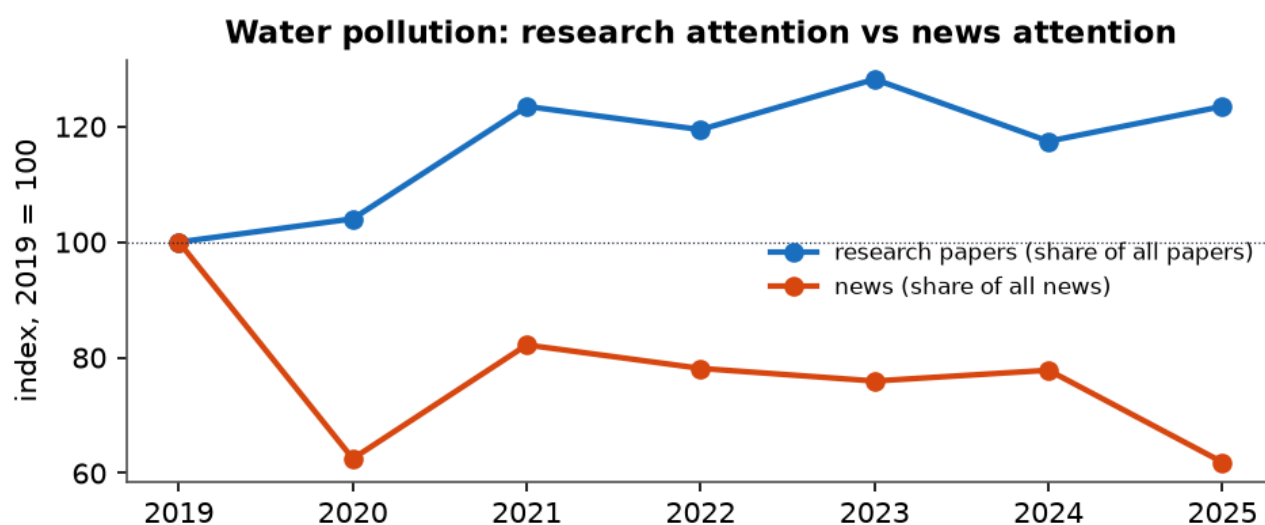


Figure 9. Research papers on the topic (share of all papers) and water-pollution news (share of all news), each indexed to 2019 = 100.

Patenting rose faster: 339 patent families were published in 2015 and 1,075 in 2024 (3.17 times), with a peak of 1,409 in 2021. China's office holds 88.9% of families from 2015 to 2024, followed by South Korea (2.8%) and Japan (2.0%) (Figure 10). The leading technology classes are water treatment (C02F, 1,066 families), climate-change adaptation technologies (Y02A, 651) and chemical and physical analysis (G01N, 465).

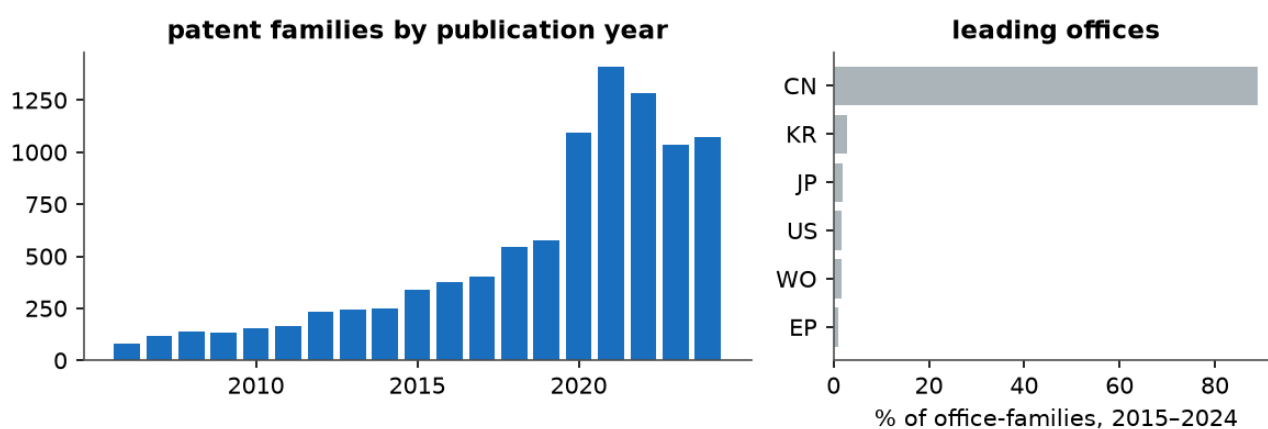


Figure 10. Patent families on the topic by publication year (left) and the leading filing offices, 2015–2024 (right).

4. Discussion

Three points matter for anyone who uses news as a record of water pollution. First, coverage measures attention. Water pollution took a smaller share of the news in 2025 than in 2019, and its peaks came in the months of single large spills. Second, raw shares mislead. The United States leads in raw terms but is under-represented relative to its weight in the index. The countries where the topic takes the largest share of attention include the Philippines, whose coverage peaked in the year of a large oil spill, Nigeria, where the national oil spill detection agency is among the most-named organisations, New Zealand, and the United Kingdom, where the water regulator and water companies are among the most-named organisations. Third, "water pollution" in the news is to a large degree oil-spill news. More than a quarter of the matched openings name an oil spill, while the slow pollution of rivers by sewage, farms and industry appears as a steadier stream.

Research, invention and news run on different clocks. Research share grows slowly. Patent filings grew fastest and are concentrated in one office. News follows the big events. The dataset lets researchers link the three, for example to test whether heavily covered spills are followed by research or patent activity in the affected country.

5. Limitations

- **Index availability.** 92.88% of the index was readable at build time, so counts are lower bounds. Shares and lifts are less affected, because the missing part is spread across topics.
- **Coverage after May 2026.** The index thins after May 2026, so 2026 (January–July) is partial and is excluded from year comparisons.
- **Matching.** Matching uses the article opening. Articles that mention water pollution only later are missed, and 12.5% of matches are not about the pollution of water. Oil spills on land are the main false positive.
- **Machine labels.** Location, tone, priority and themes are machine-labelled. The city field is noisy and is not analysed.

- **Place tags from ordinary words.** Place tags derived from ordinary words were treated as unlocated, which removed 15.3% of city-tagged articles; tags from personal names can remain, as Rhode Island's single-story count shows.
- **Outlet mix.** The index over-represents English-language outlets. This shapes the geography, and small national baselines (the Philippines, Japan) make yearly ratios unstable.
- **Research and patent counts.** These match titles only. Office shares reflect filing practice; utility models are numerous in China.

Data availability

The dataset (article sample, monthly and country tables, research and patent tables, all metrics) is released under CC BY-NC 4.0 with this paper. The sample holds 9,056 of 36,422 matched articles to 31 July 2026. Full article text, headlines, publishers, later articles and other topics are served by the Prism News API: <https://github.com/fliarbi/prism-news-api> (base URL <https://radar-api.fliarbi.com/news>). A worked query: `prism-news trends "water pollution" --since 2019-01-01 --until 2026-07-31 --granularity monthly`.

References

1. Dirk Xanthos et al. (2017). International policies to reduce plastic marine pollution from single-use plastics (plastic bags and microbeads): A review. *Marine Pollution Bulletin*. <https://doi.org/10.1016/j.marpolbul.2017.02.048>
2. Camilo Zamora-Ledezma et al. (2021). Heavy metal water pollution: A fresh look about hazards, novel and conventional remediation methods. *Environmental Technology & Innovation*. <https://doi.org/10.1016/j.eti.2021.101504>
3. Zhao Chen et al. (2018). The consequences of spatially differentiated water pollution regulation in China. *Journal of Environmental Economics and Management*. <https://doi.org/10.1016/j.jeem.2018.01.010>
4. Yonglong Lü et al. (2015). Impacts of soil and water pollution on food safety and health risks in China. *Environment International*. <https://doi.org/10.1016/j.envint.2014.12.010>
5. Saroj Sharma et al. (2016). Drinking water contamination and treatment techniques. *Applied Water Science*. <https://doi.org/10.1007/s13201-016-0455-7>
6. Elizabeth B. Kujawinski et al. (2011). Fate of Dispersants Associated with the Deepwater Horizon Oil Spill. *Environmental Science & Technology*. <https://doi.org/10.1021/es103838p>
7. Li Lin et al. (2022). Effects of Water Pollution on Human Health and Disease Heterogeneity: A Review. *Frontiers in Environmental Science*. <https://doi.org/10.3389/fenvs.2022.880246>
8. Michael Greenstone et al. (2014). Environmental Regulations, Air and Water Pollution, and Infant Mortality in India. *American Economic Review*. <https://doi.org/10.1257/aer.104.10.3038>
9. Fliar BI (2026). *Water Pollution in the News 2019–2026: article-level dataset and coverage tables*. Prism News API. <https://github.com/fliarbi/prism-news-api>