

Drowning in the News, 2019-2026: Seasonality, Geography and Tone of Global Drowning Coverage, and How It Compares with Research and Invention

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If you or someone you know is struggling, contact local emergency services or a crisis line. This paper measures news coverage. It names no person and describes no individual case.

Abstract

We measure how drowning was covered in a global news index from January 2019 to July 2026, using 74,191 de-duplicated drowning articles, and set that coverage beside 2,500 research papers and 916 patent families on drowning. Six results stand out:

1. **Seasonality.** On average 37.76% of each year's drowning coverage appears in June, July and August. July alone holds 14.67%.
2. **Attention, not occurrence.** Drowning took a 42.9% smaller share of news in 2020 than in 2019. Its share peaked in July 2019, at 12.35 articles per 10,000, and the 2025 share was 27.9% below 2019.
3. **Geography.** India's share of located drowning news is 2.15 times its share of all news. The United States, the largest source of located articles (37.67%), is under-represented at 0.78. Oceania (2.04) is the most over-represented continent. Within India, Madhya Pradesh (1.86), Goa (1.82) and Odisha (1.81) lead; within the United States, Hawaii (2.93), Arizona (2.22) and South Carolina (2.19). Drowning's share of Indian news fell to 0.65 times its 2023 level by 2025.
4. **Tone and urgency.** 85.8% of drowning articles are negative in tone (all news: 33.6%), and 87.3% are rated critical priority (all news: 42.6%).
5. **Prevention in the news.** Children's and adults' swimming lessons and lifeguard training are rare themes, but each is between 273.88 and 375.13 times as frequent in drowning news as in all news. Child mortality is a theme of 12.5% of themed drowning articles.
6. **Research and invention.** Drowning papers grew from 0.25 to 0.43 per 10,000 papers between 2015 and 2025 (1.74-fold). Patent families grew 2.17-fold from 2015 to 2024, and 82.9% of office filings were at China's office.

Findings stated for citation

- **F1.** Between 2019 and 2025, an average of 37.76% of each year's drowning news appeared in June–August, against 25% for an even spread.
- **F2.** Drowning took a 42.9% smaller share of news in 2020 than in 2019 (3.79 vs 6.64 per 10,000 articles).

- **F3.** July 2019 was the peak month for drowning news, at 12.35 articles per 10,000; the 2025 share was 27.9% below 2019.
- **F4.** India's share of located drowning news (28.43%) was 2.15 times its share of all news. The United States' (37.67%) was 0.78 times.
- **F5.** Oceania (2.04), Asia (1.42) and South America (1.26) were over-represented by continent; North America (0.83) and Europe (0.71) were under-represented.
- **F6.** In each of the ten countries with the most labelled drowning articles, drowning news was more negative than that country's news overall; the gap was widest in India (94.8% against 41.2%).
- **F7.** 85.8% of drowning articles were negative in tone, 2.55 times the all-news share.
- **F8.** 87.3% of drowning articles were rated critical priority by the index's model, 2.05 times the all-news share.
- **F9.** Adult swimming lessons (375.13) and lifeguard training (370.67) were the most topic-specific themes.
- **F10.** Child mortality and infant loss appeared in 12.5% of themed drowning articles (lift 120.91).
- **F11.** Drowning papers rose 1.74-fold as a share of all papers between 2015 and 2025.
- **F12.** 82.9% of office filings of drowning patent families (2015–2024) were at China's office.
- **F13.** Within India, Madhya Pradesh (1.86), Goa (1.82), Odisha (1.81) and Assam (1.81) had the most over-represented drowning coverage; West Bengal (0.43) had the least.
- **F14.** Within the United States, Hawaii (2.93), Arizona (2.22), South Carolina (2.19) and Florida (2.15) had the most over-represented drowning coverage; New Jersey (0.12) had the least.
- **F15.** Drowning's share of national news fell from 2023 to 2025 in India (0.65 times) and the United States (0.75 times) and rose in Brazil (1.95 times).

1. Introduction

Drowning is a leading cause of injury death worldwide, and children and young people carry much of the burden [1, 2]. Most drowning deaths are preventable through supervision, barriers, swimming skills and rescue training [3, 4]. News is often the first public record of a drowning, and coverage shapes which risks the public and policy-makers treat as urgent. Yet coverage is rarely measured as data in its own right. Health statistics record deaths. Bibliometric studies record research. Few sources record attention, meaning how much of the news drowning 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. All results are coverage measures. They do not estimate drowning mortality, and a high or low coverage share in a place says nothing direct about the number of deaths there. The companion dataset publishes an article-level sample (18,464 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, a machine-assigned 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 drowning when its opening text contains *drowned*, *drowning* or *drownings* as whole words. The verb form *drowns* was tested and dropped, because most of its matches were figurative. Three families of matches are excluded:

- figurative uses ("drowned out", "drowning in debt", "drowned in celebration", "drowning their sorrows");
- compound adjectives ("self-esteem-drowning") and the phrase "not drowning, waving";
- game, fiction and puzzle items (a video-game creature called "the drowned", horoscopes and crosswords).

Together these removed 3,675 of 77,866 raw matches (4.72%). One reviewer read 40 randomly drawn matched openings. 35 used drowning in its literal sense (precision 87.5%), and in 30 (75%) a drowning or drowning prevention was the main subject. The five false positives were figurative phrases, machine-translation artefacts (a sunset rendered as "the sun drowned") and a fiction blurb.

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 place's share of drowning articles divided by its share of all located articles. Place tags derived from ordinary words ("Congress", "Earth", "Winter", "Cloud", "Mobile", "Hurricane"; 714 words in all) 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 *drowned*, *drowning*, *drownings* or *near-drowning* in the title. Repository deposits and the geological and figurative senses ("drowned reef", "carbonate platform drowning", "drowning in data") are excluded. Patent families (2006–2024) use *drowning*, *anti-drowning*, *drowning prevention* or *drowning detection* in the title, are counted once per filing office, and exclude "drowning out" noise.

Safe reporting. The dataset carries no article text. This paper names no person, gives no detail of any individual case and frames every result as a measure of coverage.

3. Results

3.1 How much and when

The index holds 74,191 drowning articles from January 2019 to July 2026. Raw counts rose from 7,843 in 2019 to 12,934 in 2025, but the share of all news did not: 6.64 per 10,000 in 2019, 5.69 in 2024 and 4.79 in 2025 (Table 1). The low point was 2020, at 3.79 per 10,000. That is 42.9% below 2019. The highest monthly share was July 2019, at 12.35 per 10,000 (Figure 1). The largest monthly count was August 2025, with 2,150 articles.

Year	Drowning articles	All articles in index	Per 10,000
2019	7,843	11,807,177	6.64
2020	6,153	16,230,014	3.79
2021	7,270	17,281,220	4.21
2022	8,910	19,115,515	4.66
2023	11,254	20,484,506	5.49
2024	13,263	23,311,896	5.69
2025	12,934	26,990,006	4.79

Table 1. Drowning articles per year and as a share of the index. 2026 (January-July) is partial and omitted.

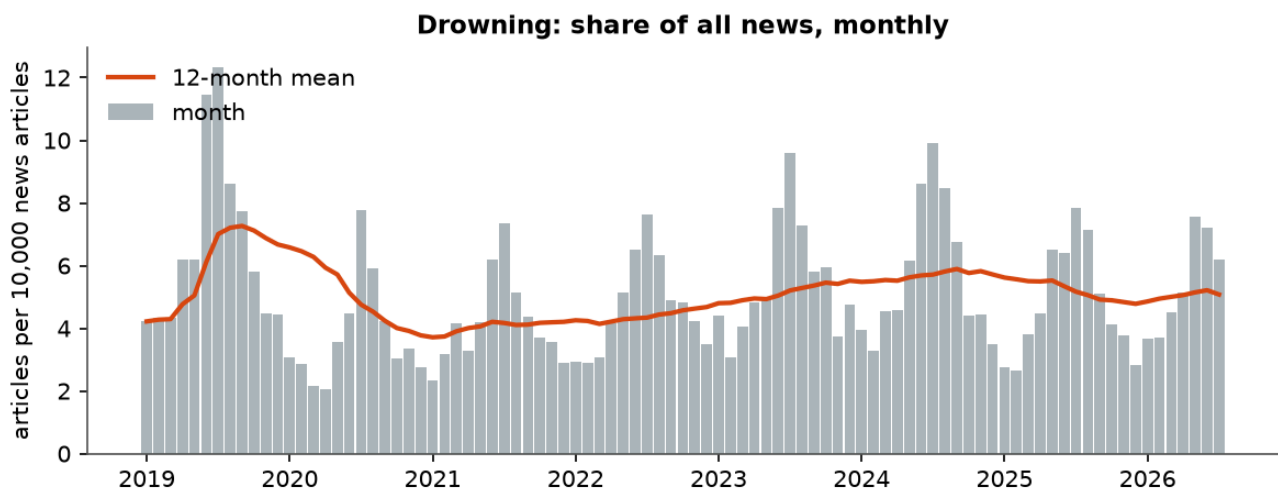


Figure 1. Drowning coverage as articles per 10,000 news articles, monthly, January 2019 – July 2026. Bars are months; the line is the 12-month mean.

Coverage is strongly seasonal (Figure 2). June (11.23%), July (14.67%) and August (11.86%) together hold 37.76% of a typical year's drowning articles. February is the quietest month (5.06%). The peak months coincide with the Northern Hemisphere summer and the South Asian monsoon. Outlets from both regions are heavily represented in the index; the timing alone does not show why coverage peaks.

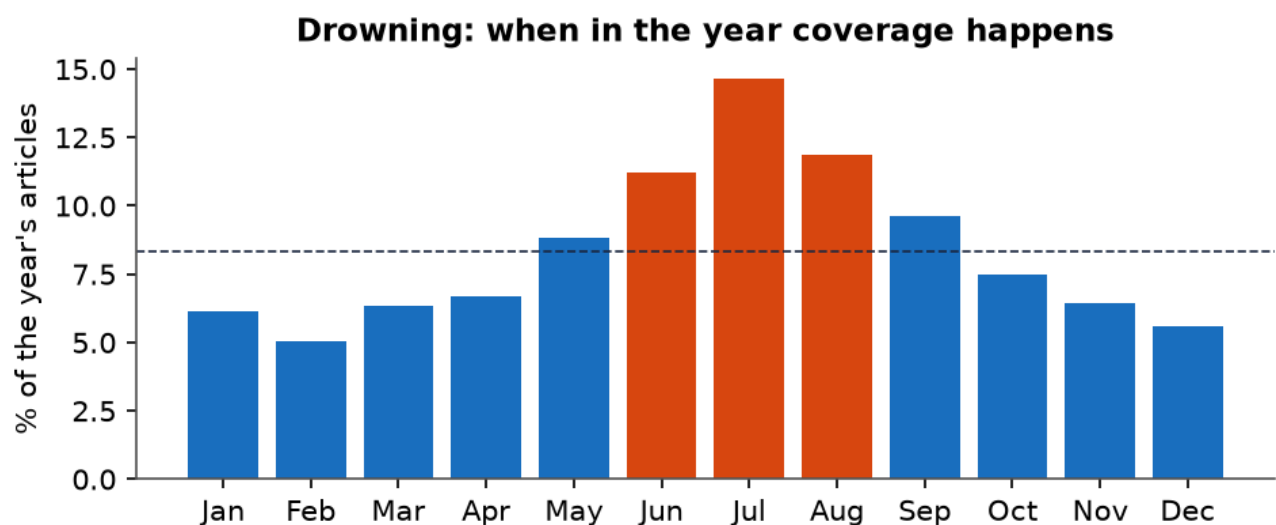


Figure 2. Share of each year's drowning articles published in each month, averaged over 2019–2025. Dashed line = an even spread.

3.2 Where

Between January 2023 and July 2026, 20,450 of 44,012 drowning articles carried a primary country. The United States holds the largest raw share (37.67%), but its lift is 0.78: drowning takes a smaller share of American news than of news overall. India's share (28.43%) comes with a lift of 2.15. Australia (1.88), New Zealand (1.85) and Brazil (1.82) are also over-represented, while China (0.23), Canada (0.49) and Germany (0.51) are under-represented (Table 2, Figure 3). Greece (10.61) and Costa Rica (30.6) show the highest lifts in the table, but both rest on artefacts: close to half of the sampled Greek rows are copies of one re-indexed article about a 2023 shipwreck, and the Costa Rican rows are mostly coverage of a single death in 2025. Neither is treated as a pattern.

Country	Located drowning articles	Share %	Lift vs all news
United States	7,703	37.67	0.78
India	5,814	28.43	2.15
Australia	824	4.03	1.88
United Kingdom	822	4.02	0.69
Brazil	321	1.57	1.82
France	289	1.41	0.72
Greece*	272	1.33	10.61
New Zealand	245	1.2	1.85
Canada	217	1.06	0.49
Nigeria	203	0.99	0.72
Italy	195	0.95	0.99
Spain	190	0.93	0.95
Singapore	149	0.73	0.82
Costa Rica*	131	0.64	30.6
China	124	0.61	0.23
Germany	123	0.6	0.51

Table 2. Leading countries in located drowning news, January 2023 – July 2026, with lift against all located news.

*Lift driven by an artefact (a recurring re-indexed article, or one widely reported case); not interpreted.

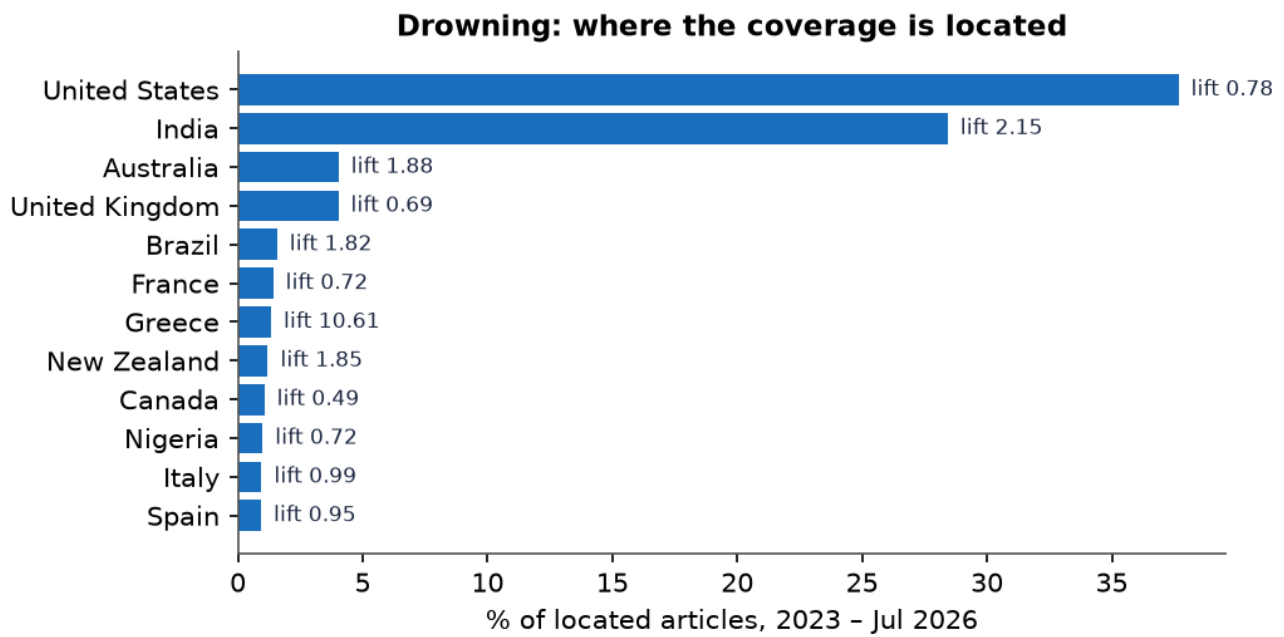


Figure 3. Leading countries by share of located drowning articles, 2023 – Jul 2026, labelled with lift against all located news.

3.3 Geo intelligence: continents, states and shifting attention

The world map (Figure 4) shows the pattern at a glance. Drowning is over-represented in the news of India, Oceania and Brazil, and under-represented in North America, most of Western Europe and China. By continent, Oceania (2.04), Asia (1.42) and South America (1.26) are over-represented, Africa sits at parity (1.0), and North America (0.83) and Europe (0.71) are under-represented (Figure 7, left).

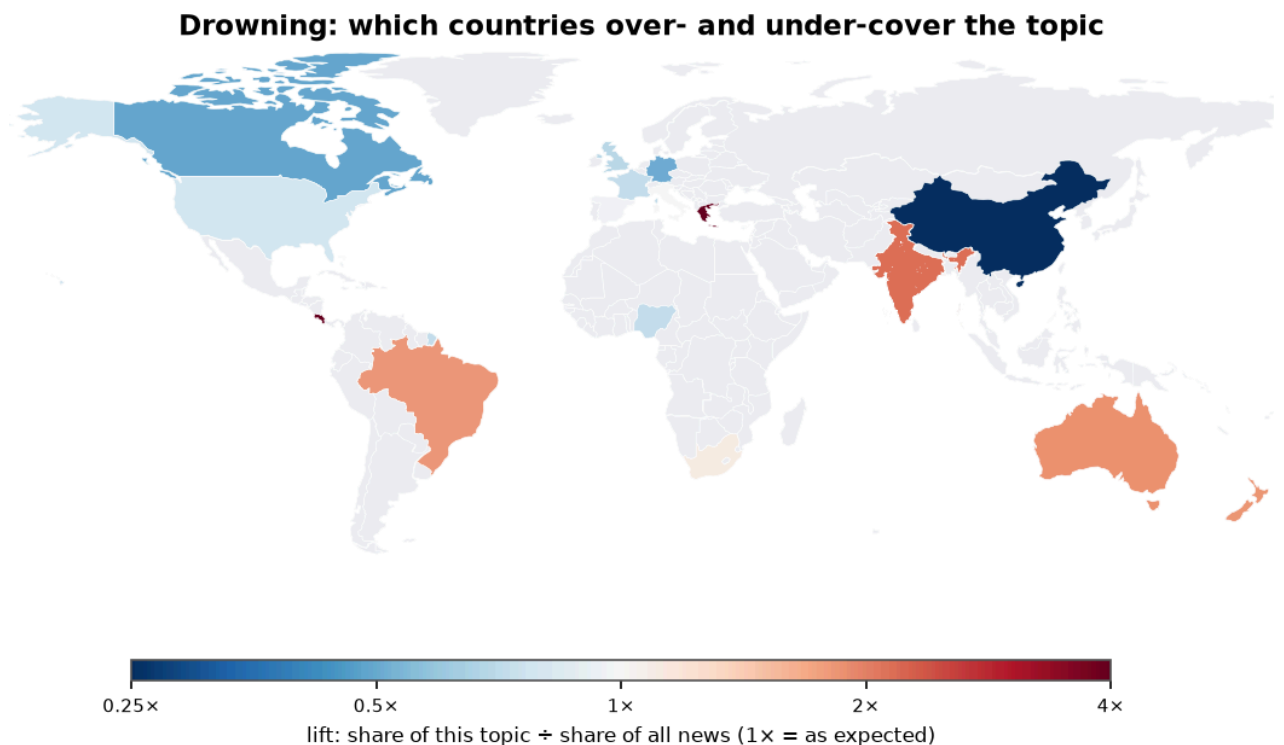


Figure 4. Lift of each country's share of located drowning articles, January 2023 – July 2026 (red = over-represented, blue = under-represented, grey = too few articles). India is drawn with its official outline.

Within countries, lifts are closer to 1 than for many disaster topics, because drowning happens wherever people meet water (Table 3). In India, 5,694 drowning articles carried a

state. Measured against each state's share of Indian news, Madhya Pradesh (1.86), Goa (1.82), Odisha (1.81), Assam (1.81) and Bihar (1.45) are the most over-represented. West Bengal (0.43), Jammu and Kashmir (0.55), Karnataka (0.73) and Maharashtra (0.74) are under-represented (Figure 5). Uttar Pradesh has the most articles (833) at a lift of 1.15. In the United States, 6,909 articles carried a state. Hawaii (2.93), Arizona (2.22), South Carolina (2.19) and Florida (2.15) lead by lift. New Hampshire (2.53) and Washington (2.39) rank second and third in the table, but their sampled rows rest on place-name artefacts: most New Hampshire rows come from town names shared with surnames or places abroad (Atkinson, Derry, Hampstead), and most Washington rows carry a "Seattle" city tag that also appears on articles about India, Tanzania and Kyrgyzstan. Neither is interpreted. New Jersey (0.12), Pennsylvania (0.42) and New York (0.68) are far below their weight in American news (Figure 6). States with fewer than 50 articles are left out of this comparison.

India: state	Articles	Lift	United States: state	Articles	Lift
Madhya Pradesh	312	1.86	Hawaii	61	2.93
Goa	57	1.82	New Hampshire*	50	2.53
Odisha	213	1.81	Washington*	432	2.39
Assam	169	1.81	Arizona	92	2.22
Bihar	396	1.45	South Carolina	99	2.19
Andhra Pradesh	173	1.33	Florida	801	2.15
Chhattisgarh	97	1.26	Georgia	241	1.87
Himachal Pradesh	97	1.26	Wisconsin	153	1.66
<i>Lowest: Karnataka</i>	231	0.73	<i>Lowest: New York</i>	550	0.68
Jammu and Kashmir	74	0.55	Pennsylvania	174	0.42
West Bengal	86	0.43	New Jersey	158	0.12

Table 3. States with the highest and lowest lift in drowning coverage, January 2023 – July 2026 (at least 50 articles). Lift = the state's share of the country's located drowning articles ÷ its share of all located news from that country. *Lift driven by place-name artefacts (shared town names, a spurious city tag); not interpreted.

Drowning: states of India by lift

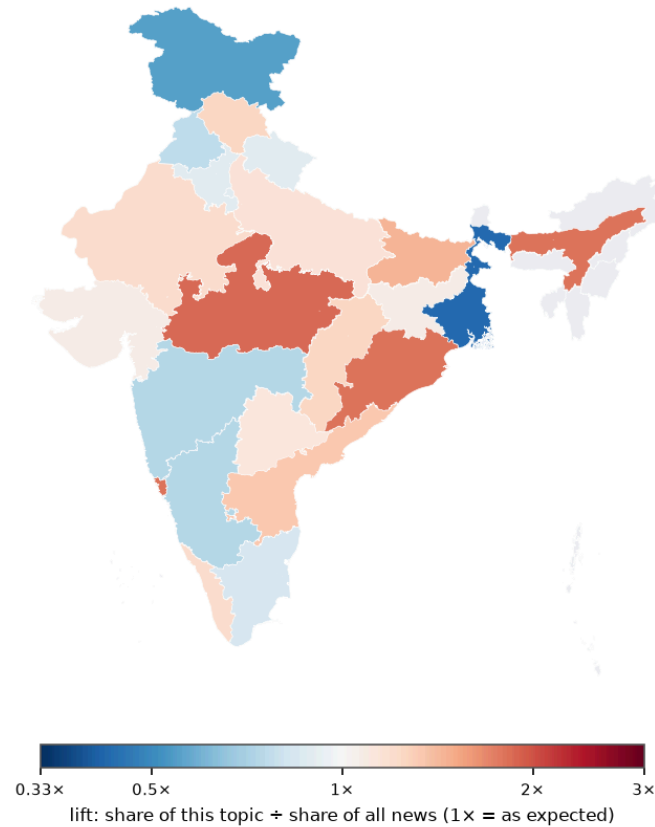


Figure 5. Lift of each Indian state's share of located drowning articles against its share of all located Indian news, January 2023 – July 2026. Official outline; Ladakh is drawn within Jammu and Kashmir in the boundary file used.

Drowning: states of United States by lift

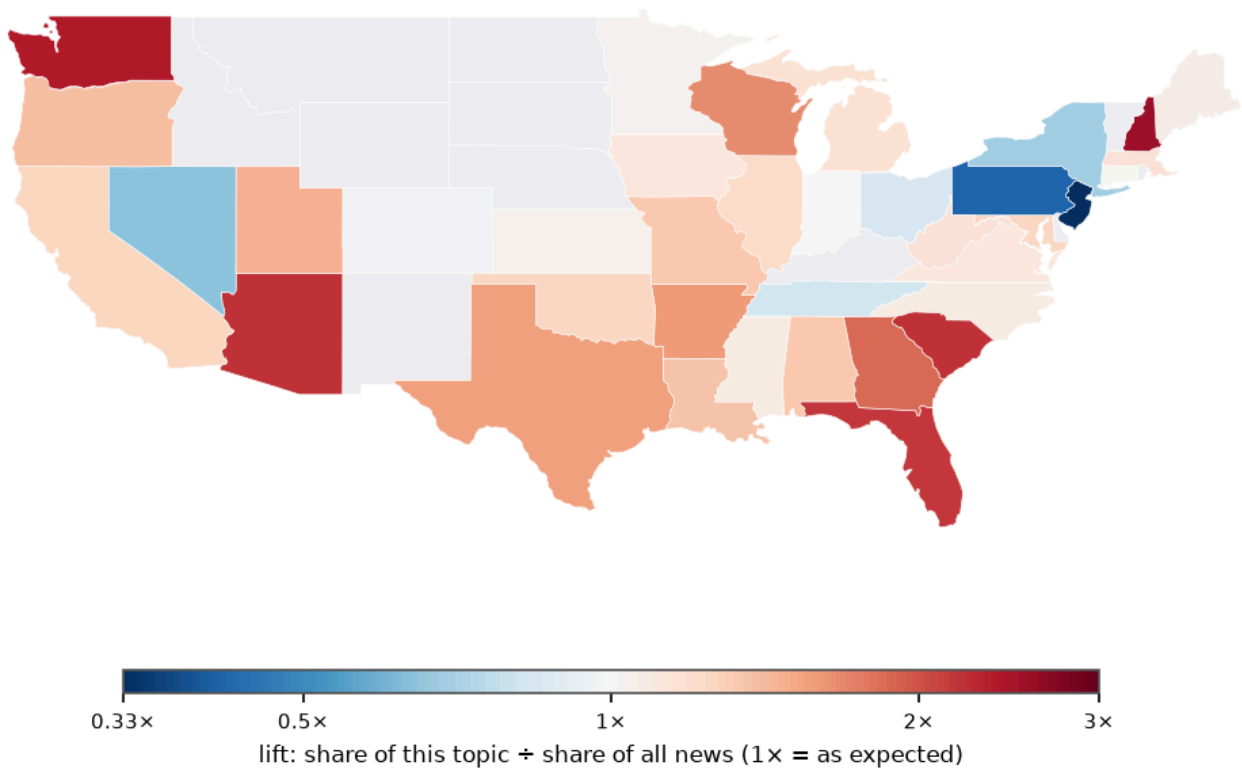


Figure 6. Lift of each US state's share of located drowning articles against its share of all located US news, January 2023 – July 2026.

Attention also moves between countries from year to year (Figure 7, right). Measured as drowning articles per 10,000 of each country's located news, India fell from 13.53 in 2023 to 8.83 in 2025 (0.65 times) and the United States from 4.78 to 3.59 (0.75 times). Australia (0.89) and the United Kingdom (0.92) changed little, and New Zealand was flat (10.25 and 10.28). Brazil rose from 7.9 to 15.43 (1.95 times). Greece's 2023 peak and Costa Rica's 2025 jump are not read as shifts in attention, for the artefacts described in Section 3.2.

Drowning coverage is more negative than the country's own news in every one of the ten countries with the most labelled drowning articles (Table 4). The gap is widest in India (94.8% against 41.2%, 53.6 points) and Canada (79.3% against 27.1%, 52.2 points), followed by Brazil (88.1% against 38.3%) and Australia (88.1% against 38.4%). It is narrowest in France (87.5% against 47.6%) and New Zealand (84.9% against 45.7%), where the country's news overall is already more negative. The United States carries the least negative drowning coverage among large sources (81.1% against 33.1%). Greece is listed but not compared, for the artefact described above.

Country	Labelled articles	Negative % (drowning)	Negative % (all news of the country)
United States	7,665	81.1	33.1
India	5,793	94.8	41.2
Australia	821	88.1	38.4
United Kingdom	820	83.4	36.9
Brazil	319	88.1	38.3
France	288	87.5	47.6
Greece*	272	96.0	31.2
New Zealand	245	84.9	45.7
Canada	217	79.3	27.1
Nigeria	201	88.1	44.4

Table 4. Negative share of drowning articles by country against the same country's news overall, January 2023 – July 2026, for the ten countries with the most labelled articles. *Dominated by one recurring article; not compared.

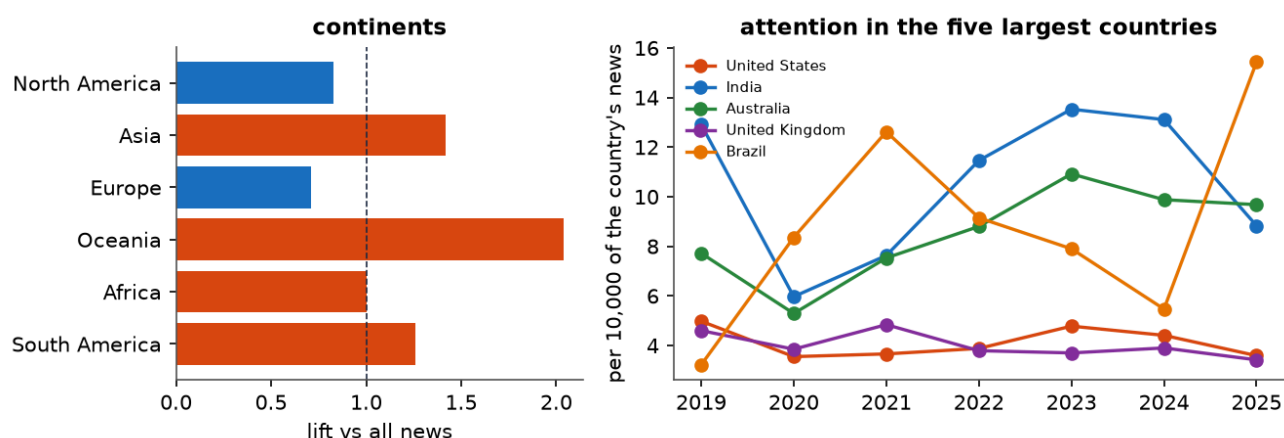


Figure 7. Left: lift by continent, January 2023 – July 2026. Right: drowning articles per 10,000 of each country's located news, 2019-2025, for the five countries with the most articles.

3.4 Tone, urgency and themes

Drowning coverage is far more negative and more urgent than news in general (Figure 8). Among articles with a tone label, 85.8% are negative, against 33.6% across the index (2.55 times). The machine-assigned priority rating puts 87.3% of drowning articles at critical level (7 or higher), against 42.6% of all news (2.05 times).

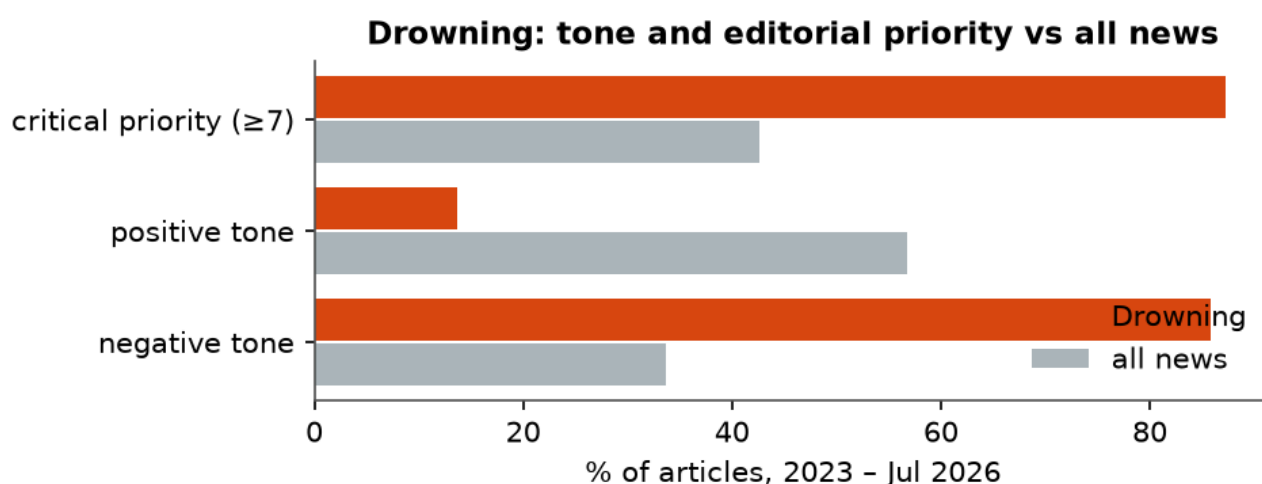


Figure 8. Tone and the share rated critical priority, drowning articles vs all news, 2023 – Jul 2026.

Themes show what drowning stories are about (Table 5). The largest themes are casualty reporting: natural disaster casualties (26.8% of themed articles) and accidental deaths (26.65%). Child mortality and infant loss appears in 12.5%, 120.91 times its rate in all news. The most topic-specific themes are about prevention: adult beginner swimming lessons (375.13), lifeguard training and water rescue (370.67) and children's swimming lessons (273.88). Each carries well under 1% of themed drowning articles, so prevention is a small share of coverage.

Theme	Articles	Share %	Lift
adult beginner swimming lessons	118	0.52	375.13
lifeguard training and water rescue	115	0.5	370.67
children's swimming lessons	122	0.53	273.88
natural disaster casualties	6,113	26.8	262.72
recreational and leisure swimming	142	0.62	257.7
environmental disasters and human toll	2,272	9.96	195.81
child mortality and infant loss	2,851	12.5	120.91
accidental deaths and fatalities	6,079	26.65	118.67
coast guard and maritime rescue operations	102	0.45	67.85

Table 5. Themes most specific to drowning coverage (lift against all themed news), January 2023 – July 2026.

Among public bodies, the Centers for Disease Control and Prevention (229 articles), the International Red Cross and Red Crescent Movement (199), the United States Coast Guard (155) and the American Red Cross (110) are named most often. Social platforms and wire services rank higher, which reflects how drowning news is sourced rather than who responds.

3.5 Research attention and invention

Research on drowning grew faster than the scientific literature. Papers with a drowning term in the title rose from 0.25 per 10,000 papers in 2015 to 0.43 in 2025, a 1.74-fold increase in share, while the total literature in the corpus grew by a factor of 1.0 over the same years. Between 2015 and 2025, 2,500 such papers were published. The most-cited include clinical reviews of drowning [1, 5], global burden estimates [2] and prevention guidance for children [3, 4].

News attention does not track research attention (Figure 9). Research share rose over the decade, with dips in 2017, 2019, 2020 and 2023, while news share fell in 2020 and has moved with the summer season since.

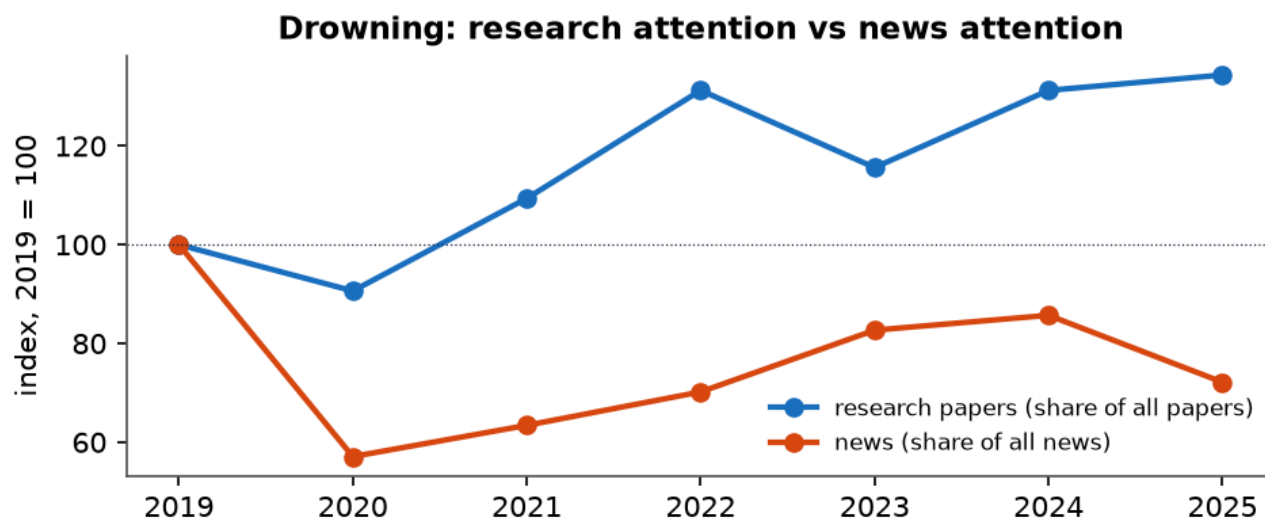


Figure 9. Research papers with drowning in the title (share of all papers) and drowning news (share of all news), each indexed to 2019 = 100.

Patenting is small but growing: 54 drowning-related patent families were published in 2015 and 117 in 2024 (2.17 times), with a step from 61 in 2019 to 142 in 2020. China's office holds 82.9% of office filings (each family counted once per office) from 2015 to 2024, followed by the United States (3.8%) and South Korea (3.2%) (Figure 10). The leading technology classes are alarm systems (G08B, 135 families) and life-saving equipment for water (B63C, 102), followed by image recognition (G06V, 37), which covers camera-based drowning detection.

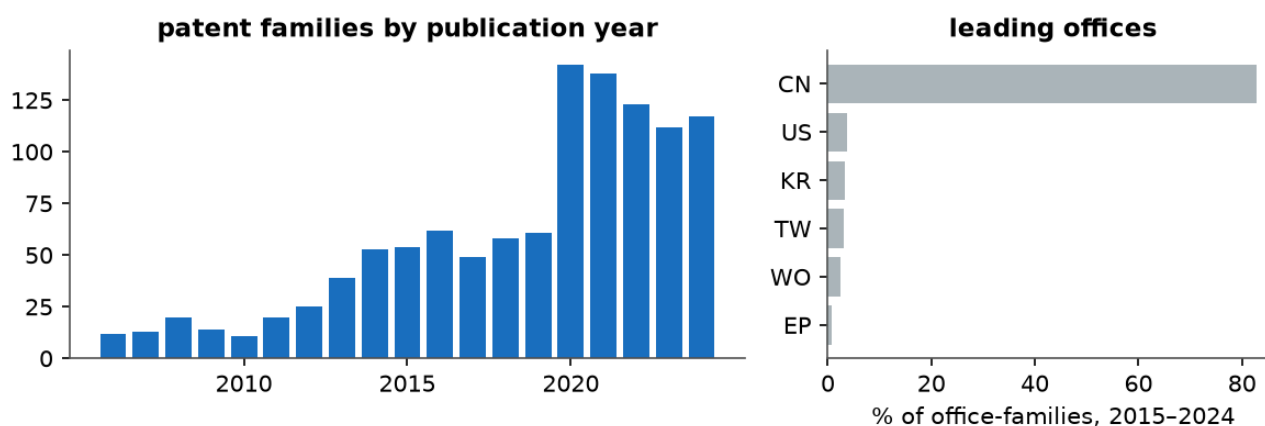


Figure 10. Drowning-related patent families by publication year (left) and the leading filing offices, 2015-2024 (right).

4. Discussion

Three points matter for anyone who uses news as a record of drowning. First, coverage measures attention. The 2020 trough and the summer peak describe when drowning took more or less of the news. Neither is a count of deaths, and neither has a tested cause here. Second, raw shares mislead. The United States leads drowning news in raw terms but is under-represented relative to its weight in the index, while India is over-represented. Within India, coverage lift is lowest in West Bengal (0.43). Lift describes the news, not the risk.

Third, most drowning news reports deaths. Prevention themes, such as swimming lessons and lifeguard training, are highly specific to the topic but form a small share of coverage.

Research, invention and news run on different clocks. Research share grows steadily. Patent filings are few, concentrated in one office, and focus on alarms and detection. News follows the seasons. The dataset lets researchers link the three, for example to test whether coverage peaks are followed by prevention campaigns, or whether coverage lift tracks mortality across states.

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 is partial and is excluded from year comparisons.
- **Matching.** Matching uses the article opening. Articles that mention drowning only later are missed, and 12.5% of matches in the hand check were not about drowning. Floods and shipwrecks that kill by drowning are included when the opening uses the word.
- **Machine labels.** Location, tone, priority and themes are machine-labelled. The city field is noisy and is not analysed.
- **Place-word tags.** Place tags derived from ordinary words ("Congress", "Earth", "Winter") were treated as unlocated, which removed 15.3% of city-tagged articles. Some real places that share a name with an ordinary word are lost with them, and recurring re-indexed articles can still inflate a small country's lift, as for Greece. Some state tags rest on ambiguous town names or a spurious city tag, as for New Hampshire and Washington, which are therefore not interpreted.
- **Outlet mix.** The index over-represents English-language and Northern Hemisphere outlets. This shapes both seasonality and geography.
- **Coverage is not mortality.** No result here estimates drowning deaths or ranks places by risk.
- **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 18,464 of 74,176 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 "drowning" --since 2019-01-01 --until 2026-07-31 --granularity monthly`.

If you or someone you know is struggling, contact local emergency services or a crisis line.

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