



GDI

Global
Disinformation
Index

Disinformation Risk Assessment: The Online News Market in Canada

Table of contents

Executive summary	4
The Canadian media market: Key features and scope	6
Disinformation risk ratings	8
Conclusion	16
Appendix: Methodology	18
Endnotes	21

Lead Authors: Javier Ruiz Soler, Mathieu Lavigne, Colette Brin* and Aengus Bridgman.

Researchers: Christopher Ross, Cedrik Verreault, Mijanou Bourque Bouliane and Amy Harris.

Design: www.designbythink.co.za

The **Global Disinformation Index** is a not-for-profit that operates on the three principles of neutrality, independence and transparency. Our vision is a world free from disinformation and its harms. Our mission is to catalyse industry and government to defund disinformation. We provide disinformation risk ratings of the world's news media sites.

For more information, visit www.disinformationindex.org

The **Centre for Media, Technology, and Democracy** is dedicated to understanding the relationship between media, technology and democracy, with a focus on technology governance, the health of our information ecosystems, and changes to the practice and business of journalism. The **Digital Democracies Institute at Simon Fraser University** integrates research in the humanities, social sciences, computer and data sciences to understand and address online polarization, abusive language, discriminatory algorithms and mis/disinformation. **Le Centre d'études sur les médias (Centre for Media Studies)**, a nonprofit organization founded in 1992, is both a research facility and a liaison between communications companies and the government and academic communities.

**Colette Brin is Chair of the Independent Advisory Board on Eligibility for Journalism Tax Measures created by the Government of Canada. The Advisory Board and its work were in no way involved in the production of this report, and the findings of this study have no bearing on the Board's assessments or decisions.*



September 2021. Published under a Creative Commons License (CC BY-NC-SA 4.0)

Executive summary

Since the news business has expanded to the online world, transformations in news production and distribution have exposed the industry to new disinformation risks.

News websites have financial incentives to spread disinformation, in order to increase their online traffic and, ultimately, their advertising revenue. Meanwhile, the dissemination of disinformation has disruptive and impactful consequences. The COVID-19 pandemic offers a recent example. By disrupting society's shared sense of accepted facts, these narratives undermine public health, safety and government responses.

To combat ad-funded disinformation, the Global Disinformation Index (GDI) deploys its assessment framework to rate news domains' risk of disinforming their readers. These independent, trusted and neutral ratings are used by advertisers, ad tech companies and platforms, to redirect their online ad spending in line with their brand safety and disinformation risk mitigation strategies.

GDI defines disinformation as 'adversarial narratives that create real world harm', and the GDI risk rating provides information about a range of indicators related to the risk that a given news website will disinform its readers by spreading these adversarial narratives. These indicators are grouped under the index's Content and Operations pillars, which respectively measure the quality and reliability of a site's content and its operational and editorial integrity.¹ A site's overall risk rating is based on that site's aggregated score across all the indicators, and ranges from zero (maximum risk level) to 100 (minimum risk level).

The GDI risk rating methodology is not an attempt to identify and label disinformation sites or trustworthy news sites. Rather, GDI's approach is based on the idea that a combined set of indicators can reflect a site's overall risk of carrying disinformation. The ratings should be seen as offering initial insights into the Canadian media market and its overall levels of disinformation risk, along with the strengths and challenges the market faces in mitigating disinformation risks.

The following report presents the findings pertaining to disinformation risks for the media market in Canada, based on a study of 35 news domains (23 in English and 12 in French). These findings are the result of the research led by GDI in collaboration with the Digital Democracies Institute at Simon Fraser University, the Centre for Media, Technology & Democracy at McGill University, and Centre d'études sur les Médias at Laval University, in a period from April through July 2021. All sites included in the report were informed of their individual scores and risk ratings, to allow for engagement and feedback.

The need for a trustworthy, independent rating of disinformation risk is pressing. This risk-rating framework for Canada will provide crucial information to policy-makers, news websites and the ad tech industry, enabling key decision-makers to stem the tide of money that incentivises and sustains disinformation.

Key findings: Canada

In reviewing the media landscape for Canada, GDI's assessment found that:

Nearly two-thirds of the news sites in our sample present minimum to low levels of disinformation risk.

- Six sites were rated as having a 'minimum' disinformation risk. The minimum-risk sites distinguish themselves mostly through a high(er) level of transparency on their operational policies.
- Fifteen sites were rated as presenting a 'low' risk of disinformation. These sites also score well overall for publishing neutral and non-sensational content, but were much less likely to disclose information on some of the operational policies that are deemed critical for managing disinformation risk in the newsroom.
- The sites that obtained low- and minimum-risk ratings are generally those with the highest level of web traffic.

Only a limited number of Canadian sites present high or maximum levels of disinformation risk.

- Three sites present a high disinformation risk rating, while one site has a maximum-risk rating. The remaining ten sites received a medium-risk rating.
- Some of these sites (especially those in the high- and maximum-risk categories) publish biased and sensational content, thus creating an opportunity to manipulate their audience.
- Sites may also be placed in the medium- or high-risk categories when they predominantly focus on issues or events not covered by other media outlets. Broadly speaking, information not validated by other outlets can carry a greater risk of disinforming the public.

Most Canadian news sites lack transparent operational policies which can help mitigate the risks of disinformation.

- The results show, overall, better performance on the Content pillar than on the Operations pillar.
- Most sites provide little to no information about their attribution policies and how they ensure the accuracy of the stories they publish.
- A majority of sites also do not disclose needed information about their editorial practices and how they regulate online incivility in user-generated comments.
- Adding or clarifying some of the editorial rules and guidelines would benefit the overall score, and move some sites into the minimum or low disinformation risk categories. They are also considered essential ingredients for building public trust.

Our results suggest that French-language sites might generally represent a lower risk of disinformation.

- Of twelve sites in French analysed, ten fall in the 'minimum' (2) or 'low' (8) risk categories (83 percent), as compared to 11 out of 23 English-language sites analysed (48 percent).
- These results might partly be explained by the process of selecting sites for this study. The French-English difference would potentially be smaller if we had taken only the most frequently visited French and English sites (rather than also considering ownership diversity and ideological and geographical representativity), given that, in Canada, the outlets visited most are usually the most trusted, which pose a lower risk of disinformation.

The Canadian media market: Key features and scope

Canada has two linguistically distinct media markets, with both English- and French-language news consumers generally trusting and relying upon a small set of large media organisations, including Canada's public broadcaster.²

The media market has been impacted by the same economic trends changing media globally: a decline in subscription readers loyal to a particular media organisation alongside a massive decline in advertising revenue from television, radio and especially print media, and the rise of Google, Facebook and social-media driven news. A particularly striking feature of the (English-language) Canadian media market is that, despite attempts by regulators to encourage the production and consumption of Canadian content, plus an overall preference for domestic news content, international media coming primarily from the United States are consumed widely and can inform domestic debates.³

Canadians use the internet extensively to find and consume news, with approximately 80 percent of Canadians getting their news online.⁴ Search and consumption patterns vary, however, with Canadians split between those who visit their preferred news sites, those who use search engines to find information about specific topics, and those who rely on social media. Social media is likely to soon pass television as the preferred source for news, while news feeds curated by algorithms are playing an increasingly large role in channelling audiences to content.⁵ These platforms are also heavily populated by international news headlines and outlets which can drive Canadians to non-Canadian news outlets, leading to a more porous media market.

Traditional news media (especially print, and to a lesser extent TV and radio) have experienced rapidly declining revenue for many years as advertising revenue flows to where Canadians are spending more of their time.⁶ Over the past decade, digital advertising has grown enormously in Canada, and it now represents over half of all media spending; it is also expected to continue to grow.⁷ News media organisations have not wholly captured these new revenue streams, however, as Google and Facebook receive approximately 80 percent of online advertising.⁸ These shifts, coupled with declining print subscriptions, have led to a widespread revenue crisis that has resulted in a rapid reduction in the number of Canadian journalists, community newspapers and broadcasters, and ultimately production of local and national news.⁹ Media ownership is highly concentrated in a few large companies on both the regional and the national levels. However, some emergent media organisations that target niche audiences have been launched in recent years, most of them digital only (e.g. National Observer, Canadaland, Blacklock's Reporter, the Sprawl).

Still, Canadians have a high degree of trust in a core set of large media organisations to provide objective and factual information. Global News, CTV News, regional and local papers, and CBC are among the most trusted in English-speaking Canada, while Radio-Canada, La Presse, TVA and Le Devoir are highly trusted in French-speaking Canada.¹⁰ Canadians are generally able to identify hyperpartisan or disreputable news outlets¹¹ and, despite increasingly relying on social media to source their news, are typically distrusting of the information they provide, and report high levels of false and misleading information observed on social media platforms.¹²

Canadians have been increasingly sounding the alarm regarding disinformation, with concerns sparked especially by the widely observed false and misleading information circulating during the 2016 Brexit referendum and United States election. In response to these events and extensively documented global disinformation operations, numerous efforts to combat the spread of disinformation within Canada have been implemented. Most notably, the Canadian government established a Critical Election Incident Public Protocol in 2019 as a mechanism to detect and alert the Canadian public of severe cases of election interference (it was not activated). The Canadian Security Intelligence Service regularly publishes reports on foreign interference¹³ and Canadian Heritage established the Digital Citizen Contribution Program to support research and civil society campaigns to counter disinformation. In addition, several Canadian news organisations, including the CBC and Radio-Canada, Global News, the National Observer and a Toronto Star-BuzzFeed News collaboration, have introduced new journalistic initiatives focused on disinformation in recent years. Civil society groups such as MediaSmarts, the Canadian Journalism Foundation and CIVIX also maintain digital literacy campaigns designed to help members of the public recognise false or misleading information online. Despite these efforts, Canadians are definitely not immune to misinformation. Some Canadian media organisations continue to play a prominent role in the spread of disinformation, as observed during the COVID-19 pandemic and demonstrated by the results presented in the next section.

Disinformation risk ratings

For this study, the Canadian media market was defined based on an initial list of 64 English- and French-language news sites, which included well-known national outlets, regional newspapers, and a range of alternative sites.¹⁴

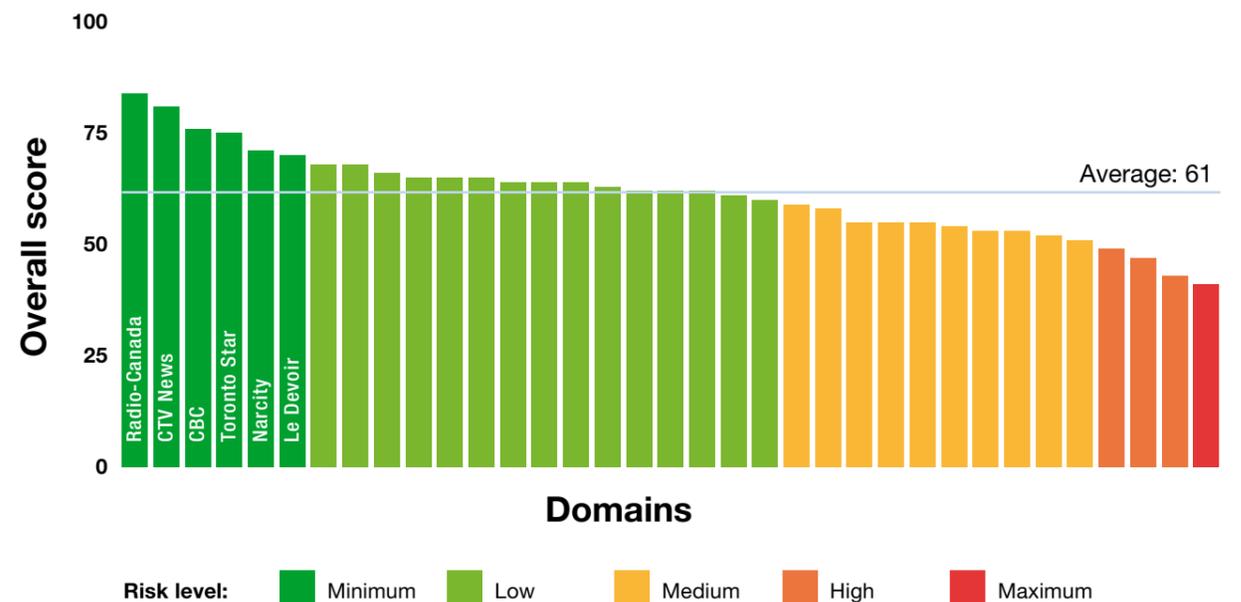
Market overview

The list was then refined based on each site's reach and relevance. GDI defined reach and relevance based on a site's Alexa rankings and its Facebook and Twitter followers. Relevance was further assessed by the authors in terms of (1) regional representation; (2) diversity of audiences and perspectives (including both left-wing and right-wing websites); (3) ownership (including as many media companies as possible in the sample); and (4) relevance among decision-makers. Based on these criteria, the report authors narrowed the initial 64 news sites to a sample of 35 Canadian news websites in English (23) and French (12). The number of English and French websites reflects the population of the two official language groups and the size of both media markets in Canada.¹⁵

Table 1. Media sites assessed in Canada (in alphabetical order)

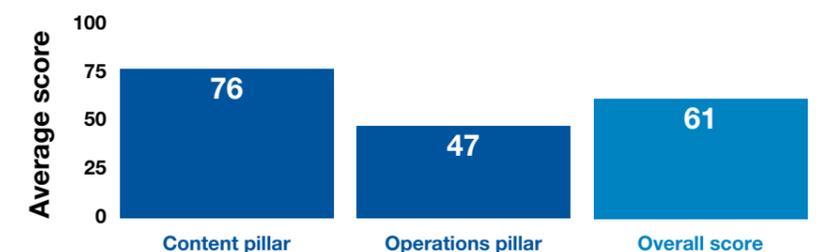
News outlet	Domain	Language	News outlet	Domain	Language
98.5 FM	985fm.ca	French	National Observer	nationalobserver.com	English
Acadie Nouvelle	acadienouvelle.com	French	National Post	nationalpost.com	English
L'Actualité	lactualite.com	French	NNSL Media	nnsi.com	English
APTN News	aptnnews.ca	English	The Post Millennial	thepostmillennial.com	English
Calgary Herald	calgaryherald.com	English	La Presse	lapresse.ca	French
CBC	cbc.ca	English	Québec Nouvelles	quebecnouvelles.info	French
CP24	cp24.com	English	Rabble	rabble.ca/news	English
CTV News	ctvnews.ca	English	Radio-Canada	radio-canada.ca	French
Daily Hive	dailyhive.com	English	Rebel News	rebelnews.com	English
Le Devoir	ledevoir.com	French	SaltWire	saltwire.com	English
Le Droit	ledroit.com	French	Le Soleil	lesoleil.com	French
Global News	globalnews.ca	English	The Star	thestar.com	English
The Globe and Mail	theglobeandmail.com	English	True North	tnc.news	English
The Hill Times	hilltimes.com	English	TVA Nouvelles	tvanouvelles.ca	French
Le Journal de Montréal	journaldemontreal.com	French	The Yee	theyee.ca	English
Macleans	macleans.ca	English	Vancouver Sun	vancouver.sun.com	English
Mondialisation.ca	mondialisation.ca	French	Winnipeg Free Press	winnipegfreepress.com	English
Narcity	narcity.com	English			

Figure 1. Disinformation risk ratings by site



The findings for Canada show overall good results when it comes to disinformation risks (see Figure 1). The majority of the sites, almost two-thirds, show limited disinformation risks, while four sites face significant challenges. Ten sites were assessed with a medium risk rating. Canadian media sites do relatively well on the Content pillar, which measures the reliability of a site's content (average score of 76), but a majority of them receive low scores on the Operations pillar, which measures its operational and editorial integrity (the average score is 47). This suggests that these domains could improve their overall scores by adopting the recommended operational checks and balances or, if they already are running their newsroom with these good practices, by codifying and publishing these procedures for the public to access (see Figure 2).

Figure 2. Overall market scores, by pillar



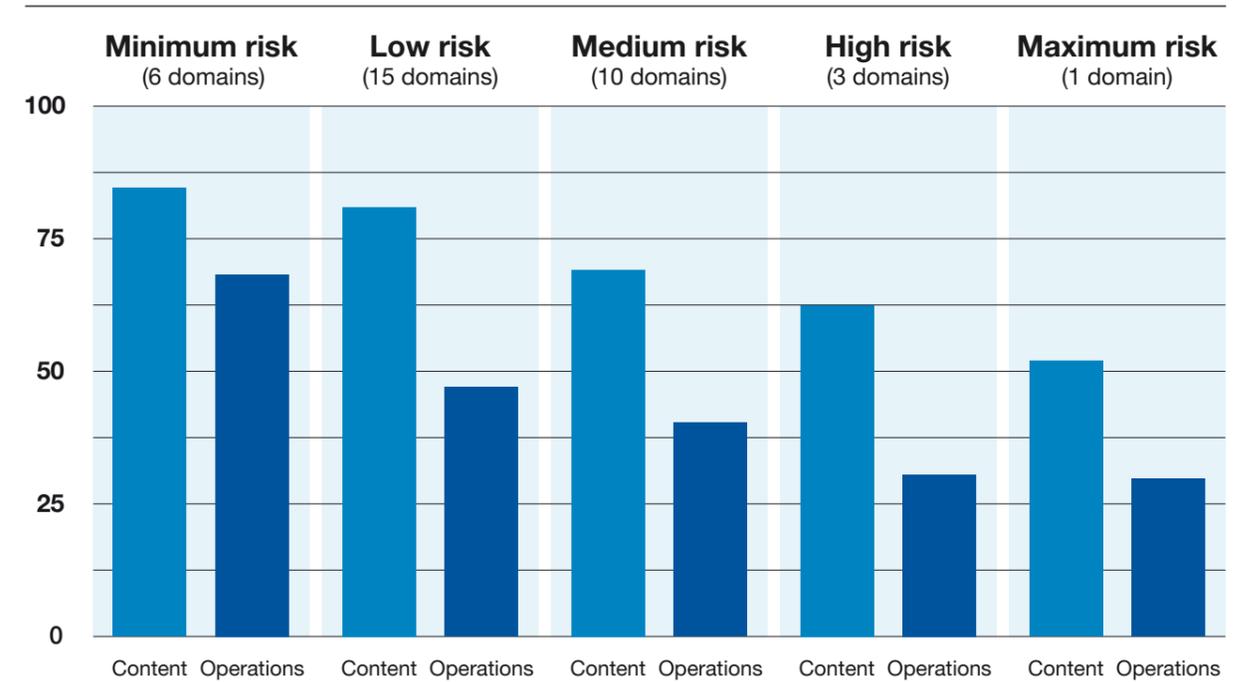
In Canada, six sites received a **minimum-risk** rating: Radio-Canada, CTV News, CBC, Toronto Star, Narcity and Le Devoir.¹⁶ These sites—which include a mix of public broadcasters, private television, daily newspapers and one digital-only media outlet—generally perform well on both the Content and Operations pillar. They tend to have robust operational policies clearly outlined on their websites and to present recent, neutral and non-sensationalised content that does not negatively target specific groups or individuals.

There are 15 sites in Canada that were rated as **low-risk** sites. Like the minimum-risk sites, these websites tend to perform relatively well on the content indicators, with content that is neutral, non-sensational and does not negatively target specific groups or individuals. However, these sites generally lack transparency on key operational policies, including their editorial principles and practices, their attribution policies, and their policies to ensure the accuracy of the information on their website.

The ten **medium-risk** rating sites comprise very different types of domains, including some left- and right-leaning partisan sources. Although significantly less consumed than large mainstream media outlets, the readership of some of these partisan outlets appears to be increasing, which might increase the risk of disinformation given their generally lower scores in terms of the publication of biased and/or sensational content. Sites in the medium-risk category also tend to present content that is not covered by other media (common coverage) and usually fail to publish key editorial and operational policies, including information on their funding and ownership.¹⁷

The four remaining sites received a **high- or maximum-risk** rating. Three sites received a high-risk rating, while one site was in the maximum-risk category. Two of these sites score poorly on the credibility of their content: they often publish articles that are sensational and/or biased, and that may negatively target groups and individuals. The two other sites receive slightly below-average scores for their content in large part because they publish content that is not covered by other news sites, which makes them ill-suited as a single stop for news. All the sites receiving high- or maximum-risk rankings fail to meet universal standards for (or lack transparency about) their editorial and operational policies (see Figure 3).

Figure 3. Average pillar scores by risk rating level



A greater proportion of French sites (10 out of 12) than English sites (11 out of 23) were classified in the ‘minimum’ or ‘low’ risk categories. The observed difference is likely exacerbated by the site selection process. While ownership diversity and ideological and geographical representativity were important selection criteria, the difference would potentially be smaller if we only had taken the most consumed French and English sites, given that, in Canada, the most consumed outlets are usually the most trusted and those posing a lower risk of disinformation.

Pillar overview

Content pillar

This pillar focuses on the reliability of the content provided on the site. Our analysis for the Content pillar is based on an assessment of ten anonymised articles for each domain. These articles are drawn from (1) the most frequently shared pieces of content during the data collection period; and (2) articles on topics that have been identified as likely to carry disinformation. All article scores are based on a scale of zero (worst) to 100 (best), as assessed by the country reviewers.

For the Canadian media market as a whole, we find relatively low indications of disinformation risk in the Content review, although there is room for improvement since very few websites performed consistently well on all indicators. The stories on most Canadian news sites constitute neutral, fact-based reporting and do not negatively target specific groups or individuals. Most articles also include byline information, with 86 percent of the sites getting scores of 75 or higher on the *byline information* indicator. However, many articles did not include fact-based leads which allow audiences to better navigate the news and identify disinformation.¹⁸

Across the sample, at least 80 percent of news sites score above 80 for the neutral tone of their article and for not targeting specific groups and individuals, while more than two-thirds (69 and 77 percent, respectively) score above 80 for avoiding sensational language and visual presentation. Nevertheless, a few sites, mostly those that present strongly ideological content, score poorly on one or many of these indicators. These sites are also those most likely to publish misleading headlines, in that they do not reflect the content of the article.

The scores for many Canadian news sites are driven down by their lower ratings in terms of recent and common coverage. Specifically, only half of all domains score 70 or higher for publishing recent and up-to-date content, while more than a third tend to publish content that has not been published elsewhere (i.e., they score 50 or below on the common coverage indicator). According to the current GDI methodology, the low common coverage indicator seems to capture two phenomena in Canada: (1) a focus on local politics or specific content mandate (e.g., indigenous issues)¹⁹; and (2) the publication of content that is not corroborated by other sources, possibly in an endeavour to polarise opinions on some issues or to discredit certain individuals, organisations, or decisions.

Figure 4. Average Content pillar scores by indicator

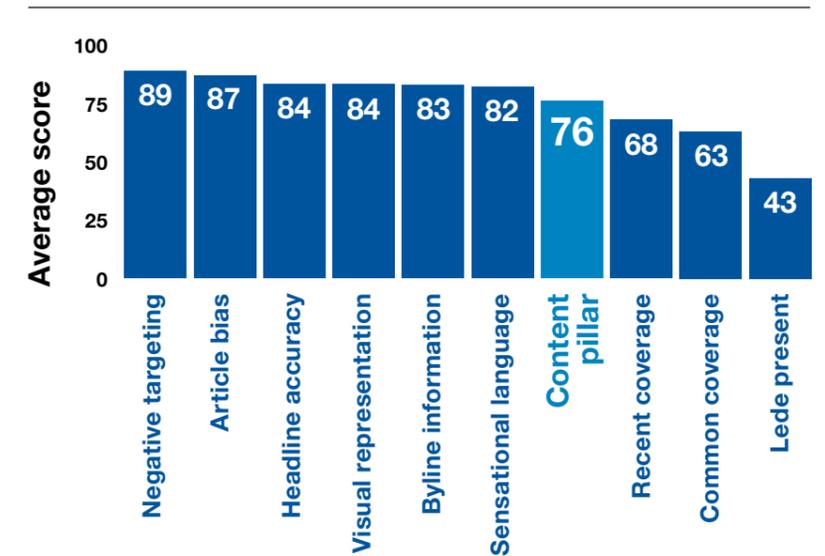
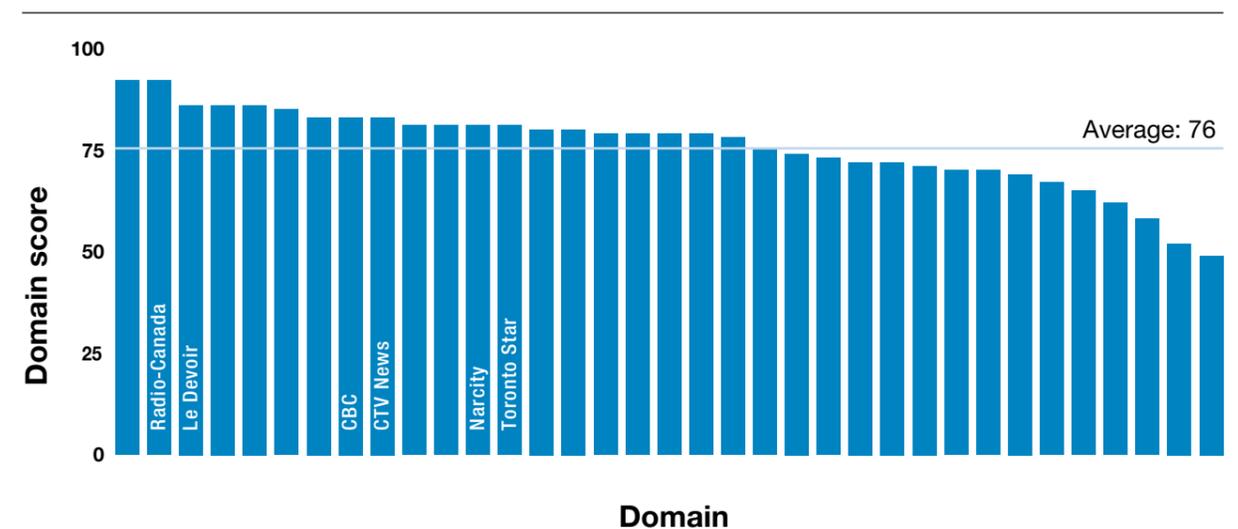


Figure 5. Content pillar scores by site



Operations pillar

This pillar assesses the operational and editorial integrity of a news site. All scores are based on a scale of zero (worst) to 100 (best), as scored by the country reviewers according to the information available on the site. The Operations pillar looks at whether relevant policies are in place and made transparent to the public. It is not able to measure how well the policies are being implemented.

Many sites in our sample scored poorly on this pillar, with few providing details about their attribution policies, their policies to ensure the accuracy of the stories they publish, and their editorial policies and practices (4 sites scored higher than or equal to 60 on the *attribution* indicator, and 5 on the *ensuring accuracy* indicator). That does not necessarily mean that there is a lack of attribution of sources, that the sites are not guided by truth-oriented norms, or that the sites do not abide by strong journalistic norms, but rather that their practices and guidelines are not disclosed publicly — which means they cannot be factored into the risk rating. More transparency on these matters would increase public accountability and trust, since attribution policies are essential for the accountability of stories, and journalistic independence, fact-checking and corrections help establish the credibility of the sites by reducing the risk that readers will be exposed to false information.

Many sites also lack transparency regarding their funding (and, to a lesser extent, ownership), with more than half getting a score below 60 on this indicator. Lastly, comments can be important vectors of disinformation²⁰ and many Canadian news sites do not have comprehensive comment policies targeting disinformation, hate speech, defamation, violation of privacy, or harassment (around half of the sites scored below 50 on this indicator).

All 35 sites in our sample have the potential to score perfectly on all the indicators of the Operations pillar if they adopt and disclose such operational policies and information. The indicators for the Operations pillar are taken from the standards which have been set by journalists as part of the Journalism Trust Initiative (JTI).²¹ As the JTI points out, adopting these standards raises credibility in the eyes of the public, compels traditional media to reassess their practices in the digital age, and encourages new media outlets to be more transparent about their business models.²²

Figure 6. Average Operations pillar scores by indicator

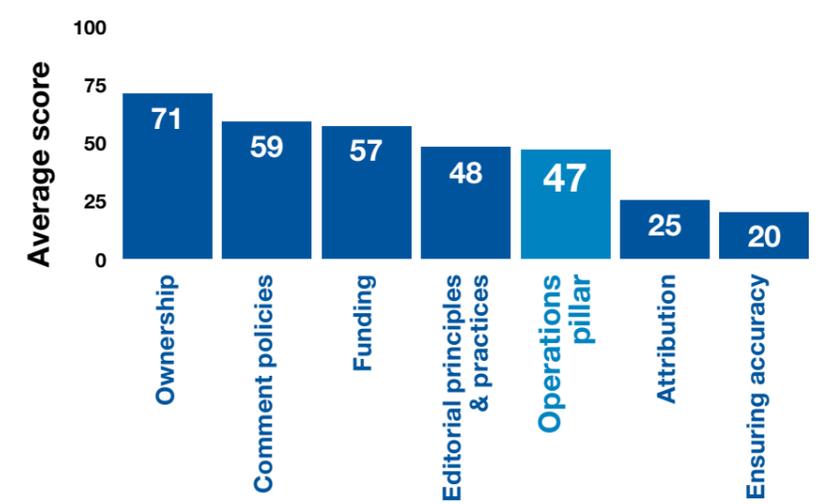
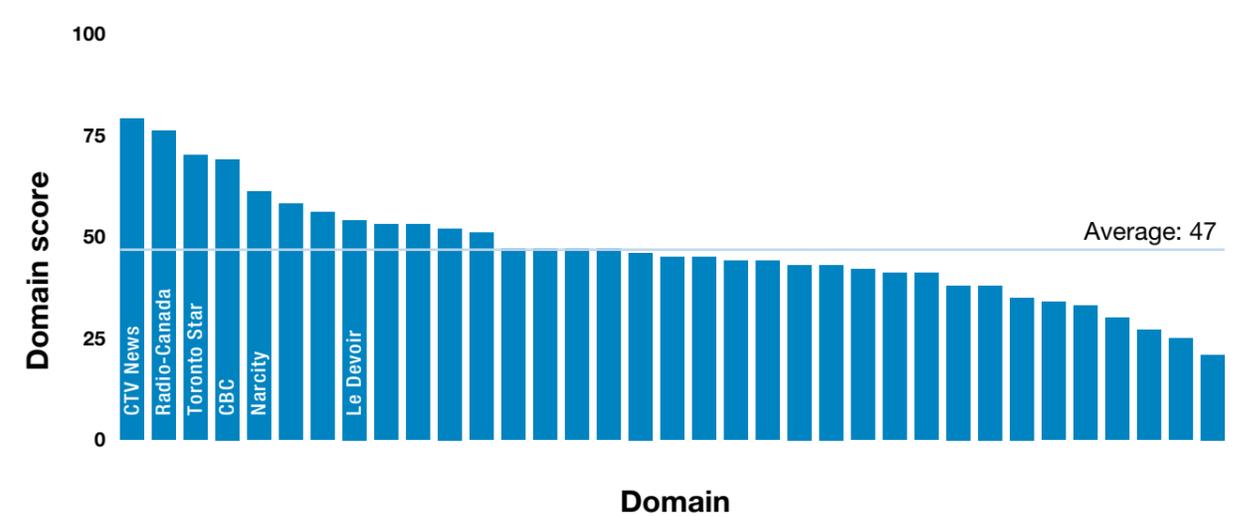


Figure 7. Operations pillar scores by site



Conclusion

Our assessment of the disinformation risk of news sites in Canada finds a fairly positive range of results.

Almost two-thirds of the sites perform well (low- to minimum-risk ratings), while only four sites received high to maximum risk levels. The remaining ten sites fall in the mid-range (i.e. medium risk).

Canada's media sites typically demonstrate low risk in GDI's framework when it comes to indicators that assess the reliability of content (which does not mean that some sites do not present biased and sensational content). Still, these domains' overall ratings are brought down by operational shortcomings, especially due to lack of disclosure of their policies to ensure the accuracy of the information on their website, on attribution and on other editorial practices. Many sites could also be more transparent about their sources of funding and how they manage online incivility in user-generated comments.

News sites could address these shortcomings by taking concrete actions:

- Adopt and publish journalistic and operational standards like those set by JTI, which make transparent information about overall policies of the site, including a statement of editorial independence;
- Improve and make more visible a site's fact-checking and error-correction practices and policies. It is important that story corrections are clearly seen and understood by readers, rather than being hidden on a web page 'below the fold';
- Ensure that sites publish bylines, including guidelines on the use of bylines. Publishing the identity of the author, and information about how bylines are treated in the guidelines, is an easy way to improve transparency and accountability;

- Ensure that every story includes a fact-based lead that immediately gives the reader a good sense of the overall story;
- For sites that have commenting available to readers, make sure that there are clear policies around moderation, specifically in the areas of disinformation;
- When covering an exclusive story or topic, take extra care in ensuring accuracy, providing background information, and considering a diversity of opinions, voices, and perspectives;
- Encourage sites to clearly publish information about their owners and sources of funding (e.g. subscriptions, advertising revenue, donations) directly on their webpage. This information helps to build trust in the site and dispel concerns over conflicts of interest;
- Ensure that sites publish dates of the news. Publishing news without a clear date of publication may make it difficult for the readership to distinguish between archived, and new and relevant information. A banner such as 'this news was published more than a year ago' would help readers to identify relevance, especially of those items that go viral on social media.

With this report, we aim to shed some light on the situation of the media landscape in Canada to policy-makers, news media personnel and the advertising industry. Despite Canada's media sites demonstrating low risk, especially compared to other countries analysed using GDI's framework,²³ there is room for improvement. The expectation of operational transparency is especially significant for news outlets which are increasingly funded directly by their audiences (via subscriptions and, in some cases, donations) and public funding via direct subsidy, tax credits or other government programmes. Empowering trustworthy media outlets is vital for a healthy and democratic public sphere.

Appendix: Methodology

The Global Disinformation Index evaluates the level of disinformation risk of a country's online media market. The country's online media market is represented by a sample of 30 to 35 news domains that are selected on the basis of their Alexa rankings, their number of social media followers, and the expertise of local researchers. The resulting sample features major national news sites with high levels of online engagement, news sites that reflect the regional, linguistic and cultural composition of the country, and news sites that influence ideas among local decision-makers, groups or actors.

The index is composed of the Content and Operations pillars. The pillars are, in turn, composed of several indicators. The Content pillar includes indicators that assess elements and characteristics of each domain's content to capture its level of credibility, sensationalism and impartiality. The Operations pillar's indicators evaluate the policies and rules that a specific domain establishes and discloses on its website to ensure the reliability and quality of the news being published. These policies concern, for instance, conflicts of interest, accurate reporting and accountability.

Each of GDI's media market risk assessments are conducted in collaboration with a local team of media and disinformation experts who develop the media list for the market sample, contribute to the sampling frame for the content included in the Content pillar review, conduct the data collection for the Content and Operations pillars, vet and interpret the index results, and draft the market report.

Site selection

The market sample for the study is developed based on a mix of quantitative and qualitative criteria. GDI begins by creating a list of the 64 news websites with the most traffic in the media market. This list is provided to the country research team, along with data on the number of Facebook and Twitter followers for each

site, to gauge relevance and reach. The local research team then reduces the list to 35 sites, ensuring that the sample provides adequate geographic, linguistic and political coverage to capture the major media discourses in the market. International news outlets are generally excluded, because their risk ratings are assessed in the market from which they originate.²⁴ News aggregators are also excluded, so that all included sites are assessed on their original content. The final media market sample reflects the complete set of between 30 to 35 sites for which complete data could be collected throughout the review process.

Global Disinformation Index Technical Advisory Group

GDI's risk assessment framework is developed with the advice and support of a technical advisory group (TAG), including:

- Ben Nimmo (Facebook)
- Camille François (Graphika)
- Miguel Martinez (co-founder & chief data scientist, Signal AI)
- Nic Newman (Reuters Institute of Journalism)
- Olaf Steenfadt (Reporters without Borders)
- Cristina Tardáguila (Lupa)
- Amy Mitchell (Pew Research)
- Scott Hale (Meedan and Credibility Coalition)
- Finn Heinrich (OSF), and
- Laura Zommer (Chequeado)

Data collection

The Content indicators are based on the review of a sample of ten articles published by each domain. Five of these articles are randomly selected among a domain's most frequently shared articles on Facebook within a two-week period. The remaining five articles are randomly selected among a group of a domain's articles covering topics that are likely to carry disinformation narratives. The topics, and the associated set of keywords used to identify them, are jointly developed by GDI and the in-country research team. Each country team contributes narrative topics and the keywords used to identify them in the local media discourse to GDI's global topic classifier list, developed by GDI's data science and intelligence teams. Country teams also manually verify the machine translation of the entire topic list in the relevant study languages.

The sampled articles are anonymised by stripping them of any information that allows the analysts to identify the publisher or the author of the articles. The anonymised content is reviewed by two country analysts who are trained on the GDI codebook. For each anonymised article, the country analysts answer a set of 13 questions aimed at evaluating the elements and characteristics of the article and its headline, in terms of bias, sensationalism and negative targeting. The analysts subsequently review how the article is presented on the domain and the extent to which the domain provides information on the author's byline and timeline. While performing the Content pillar's reviews, the analysts are required to provide a thorough explanation and gather evidence to support their decisions.

The Operations pillar is based on the information gathered during the manual assessment of each domain performed by the country analysts. The country analysts answer a set of 98 questions designed to evaluate each domain's ownership, management and funding structure, editorial independence, principles and guidelines, attribution policies, error-correction and fact-checking policies, and comments section's rules and policies. The analysts gather evidence to support their assessments as they perform each Operations pillar's review.

Data analysis and indicator construction

The data gathered by the country analysts for the Content pillar are used to compute nine indicators. The Content pillar's indicators included in the final risk rating are: Article Bias, Byline Information, Common Coverage, Headline Accuracy, Lead Present, Negative Targeting, Recent Coverage, Sensational Language and Visual Presentation. For each indicator, values are normalised to a scale of zero to 100. The domain-level score for each indicator in this pillar is the average score obtained across the ten articles. The pillar score for each domain is the average of all the scores for all of the pillar's indicators, and ranges from zero to 100.

For the Operations pillar, the answers of the country analysts are translated into a set of sub-indicators. The six indicators are calculated as the averages of these sub-indicator scores. The resulting Operations pillar's indicators are: Attribution, Comment Policies, Editorial Principles & Practices, Ensuring Accuracy, Funding, and Ownership. For each indicator, values are normalised to a scale of zero to 100. The domain score for the Operations pillar is the average score across indicators.

Table 2. Global Disinformation Index pillars and indicators

Pillar	Indicator	Sub-indicators	Unit of analysis	Definition	Rationale
Content	Headline accuracy	None	Article	Rating for how accurately the story's headline describes the content of the story	Indicative of clickbait
	Byline information			Rating for how much information is provided in the article's byline	Attribution of stories creates accountability for their veracity
	Lede present			Rating for whether the article begins with a fact-based lede	Indicative of fact-based reporting and high journalistic standards
	Common coverage			Rating for whether the same event has been covered by at least one other reliable local media outlet	Indicative of a true and significant event
	Recent coverage			Rating for whether the story covers a news event or development that occurred within 30 days prior to the article's publication date	Indicative of a newsworthy event, rather than one which has been taken out of context
	Negative targeting			Rating for whether the story negatively targets a specific individual or group	Indicative of hate speech, bias or an adversarial narrative
	Article bias			Rating for the degree of bias in the article	Indicative of neutral, fact-based reporting or well-rounded analysis
	Sensational language			Rating for the degree of sensationalism in the article	Indicative of neutral, fact-based reporting or well-rounded analysis
	Visual presentation			Rating for the degree of sensationalism in the visual presentation of the article	Indicative of neutral, fact-based reporting or well-rounded analysis
Operations	Attribution	None	Domain	Rating for the number of policies and practices identified on the site	Assesses policies regarding the attribution of stories, facts and media (either publicly or anonymously); indicative of policies that ensure accurate facts, authentic media and accountability for stories
	Comment policies	Policies		Rating for the number of policies identified on the site	Assesses policies to reduce disinformation in user-generated content
		Moderation		Rating for the mechanisms to enforce comment policies identified on the site	Assesses the mechanism to enforce policies to reduce disinformation in user-generated content
	Editorial principles and practices	Editorial independence		Rating for the number of policies identified on the site	Assesses the degree of editorial independence and the policies in place to mitigate conflicts of interest
		Adherence to narrative		Rating for the degree to which the site is likely to adhere to an ideological affiliation, based on its published editorial positions	Indicative of politicised or ideological editorial decision making
		Content guidelines		Rating for the number of policies identified on the site	Assesses the policies in place to ensure that factual information is reported without bias
	Ensuring accuracy	News vs. analysis		Rating for the number of policies and practices identified on the site	Assesses the policies in place to ensure that readers can distinguish between news and opinion content
		Pre-publication fact-checking		Rating for the number of policies and practices identified on the site	Assesses policies to ensure that only accurate information is reported
	Funding	Post-publication corrections		Rating for the number of policies and practices identified on the site	Assesses policies to ensure that needed corrections are adequately and transparently disseminated
		Diversified incentive structure		Rating for the number of revenue sources identified on the site	Indicative of possible conflicts of interest stemming from over-reliance on one or few sources of revenue
		Accountability to readership		Rating based on whether reader subscriptions or donations are identified as a revenue source	Indicative of accountability for high-quality information over content that drives ad revenue
	Ownership	Transparent funding		Rating based on the degree of transparency the site provide regarding its sources of funding	Indicative of the transparency that is required to monitor the incentives and conflicts of interest that can arise from opaque revenue sources
Owner-operator division		Rating based on the number of distinct executive or board level financial and editorial decision-makers listed on the site	Indicative of a separation between financial and editorial decision making, to avoid conflicts of interest		
Transparent ownership		Rating based on the degree of transparency the site provides regarding its ownership structure	Indicative of the transparency that is required to monitor the incentives and conflicts of interest that can arise from opaque ownership structures		

Risk ratings

The overall index score for each domain is the average of the pillar scores. The domains are then classified on the basis of a five-category risk scale based on the overall index score. The risk categories were defined based on the distribution of risk ratings from 180 sites across six media markets in September 2020.

This cross-country dataset was standardised to fit a normal distribution with a mean of 0 and a standard deviation of 1. The standardised scores and their distance from the mean were used to determine the bands for each risk level, given in Table 3. These bands are then used to categorise the risk levels for sites in each subsequent media market analysis.

Table 3. Disinformation risk levels

Risk level	Lower limit	Upper limit	Standard deviation
Minimum risk	69.12	100	> 1.5
Low risk	59.81	69.11	> 0.5 and ≤ 1.5
Medium risk	50.5	59.8	> -0.5 and ≤ 0.5
High risk	41.2	50.49	≥ -1.5 and ≤ -0.5
Maximum risk	0	41.19	< -1.5

Endnotes

- The GDI assessment framework is outlined in the annex of this report.
- Owen, T., Loewen, P., Ruths, D., Bridgman, A., Gorwa, R., MacLellan, S., Merkley, E., & Zhilin, O. (2020). *Lessons in Resilience: Canada's Digital Media Ecosystem and the 2019 Election*. Public Policy Forum. <https://ppforum.ca/articles/lessons-in-resilience-canadas-digital-media-ecosystem-and-the-2019-election/>
- Bridgman, A., Merkley, E., Zhilin, O., Loewen, P. J., Owen, T., & Ruths, D. (2021). Infodemic pathways: Evaluating the role that traditional and social media play in cross-national information transfer. *Frontiers in Political Science* 3(20): 1-11. <https://doi.org/10.3389/fpos.2021.648646>
- Brin, C. (2021). 'Canada'. In Newman, N., Fletcher, R., Schulz, A., Andi, S., Robertson, C.T., & Kleis Nielsen, R. *Reuters Institute Digital News Report 2021*. Reuters Institute for the Study of Journalism, 118-9. <https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2021/canada>
- Brin, C. (2021). 'Canada'. In Newman, N., Fletcher, R., Schulz, A., Andi, S., Robertson, C.T., & Kleis Nielsen, R. *Reuters Institute Digital News Report 2021*. Reuters Institute for the Study of Journalism, 118-9. <https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2021/canada>
- Owen, T., Loewen, P., Ruths, D., Bridgman, A., Gorwa, R., MacLellan, S., Merkley, E., & Zhilin, O. (2020). *Lessons in Resilience: Canada's Digital Media Ecosystem and the 2019 Election*. Public Policy Forum. <https://ppforum.ca/articles/lessons-in-resilience-canadas-digital-media-ecosystem-and-the-2019-election/>
- Interactive Advertising Bureau of Canada. (2020). *2019 IAB Canada Internet Ad Revenue Survey*. <https://iabcanada.com/research/2019-iab-canada-internet-ad-revenue-survey/>
- Briggs, P. (2021). *Canada Digital Ad Spending 2021: Strong Growth to Return as a Recovery Looms*. eMarketer. <https://www.emarketer.com/content/canada-digital-ad-spending-2021>
- Winseck, D. (2020). *Media and Internet Concentration in Canada, 1984– 2019*. Canadian Media Concentration Research Project. <https://www.cmcrp.org/media-and-internet-concentration-in-canada-1984-2019/>
- Lindgren, A., & Corbett, J. (2021). Local News Map Data: June 1, 2021. Local News Research Project. <http://localnewsresearchproject.ca/category/local-news-map-data>
- Brin, C. (2021). 'Canada'. In Newman, N., Fletcher, R., Schulz, A., Andi, S., Robertson, C.T., & Kleis Nielsen, R. *Reuters Institute Digital News Report 2021*. Reuters Institute for the Study of Journalism, 119. <https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2021/canada>
- Owen, T., Loewen, P., Ruths, D., Bridgman, A., Gorwa, R., MacLellan, S., Merkley, E., & Zhilin, O. (2020). *Lessons in Resilience: Canada's Digital Media Ecosystem and the 2019 Election*. Public Policy Forum. <https://ppforum.ca/articles/lessons-in-resilience-canadas-digital-media-ecosystem-and-the-2019-election/>
- Boulianne, S., Belland, S., Tenove, C., & Friesen, K. (2021) *Misinformation across Social Media Platforms and across Countries*. <https://roam.macewan.ca/islandora/object/gm:2822>
- Canadian Security Intelligence Service. (2021). Foreign Interference Threats to Canada's Democratic Process. Government of Canada. <https://www.canada.ca/en/security-intelligence-service/corporate/publications/foreign-interference-threat-to-canadas-democratic-process.html>
- GDI provided a list of 64 sites based on Alexa's ranking and the researchers selected the relevant websites and integrated the list based on their reach and relevance.

15 English and French are the mother tongues of 57 % and 21 % of the Canadian population, respectively. 22 % of Canadians are Allophones (the third most spoken language is Mandarin, with 1.8 %). The Francophone population is concentrated in Quebec, where French is the mother tongue of around 78 % of the population. See: *Statistics Canada. (2019). Statistics on official languages in Canada.* Statistics Canada.

<https://www.canada.ca/en/canadian-heritage/services/official-languages-bilingualism/publications/statistics.html>

16 The scores reflect the disinformation risks based on the sites' content and transparency about their operational policies. They do not necessarily reflect journalistic quality. Some outlets might have higher scores on the content indicator than those listed here but receive lower overall scores because of their lack of operational transparency.

17 Some of the medium-risk and high-risk sites tend to present accurate, neutral and non-sensational content but receive lower scores because they focus on issues in underserved communities and audiences and/or lack the resources to codify their newsroom policies (because of their small size or newness).

18 Since many people do not read the full stories, the publication of a good fact-based lead can significantly reduce the risks of disinformation.

19 Covering issues or events that are not covered by other outlets certainly has value in a democratic society. The point is not that news sites should run the same stories and limit their coverage to what other media are talking about, which would cause a loss in information, but rather that, objectively, the risk of disinforming the public is greater when only one outlet is discussing an issue. Consequently, when covering an exclusive story or topic, news sites should take extra care in ensuring accuracy and providing background information and context.

20 See, for example Anspach, N.M., & Carlson, T.N. (2018). What to Believe? Social Media Commentary and Belief in Misinformation. *Political Behavior* 42: 697-718. Anderson, A.A., Yeo, S.K., Brossard, D., Scheufele, D.A., & Xenos, M.A.. (2016). Toxic Talk: How Online Incivility Can Undermine Perceptions of Media. *International Journal of Public Opinion Research* 30(1): 156-68.

21 For more information on the JTI, which has adopted an ISO standard for the industry, please see: <https://www.journalismtrustinitiative.org/>.

22 See also: European Committee for Standardization. 2021. Draft CWA by the GEN/WS - Journalism Trust Initiative is made available for public review and commenting. European Committee for Standardization. <ftp://ftp.cencenelec.eu/EN/News/WS/2019/JTI/JTIForPublicComments.pdf>

23 Find reports from other countries in the Research section of the Global Disinformation Index website: <https://disinformationindex.org/research/>

24 In select cases, international news outlets may be included in a study if the domestic market is small, the sites are considered highly relevant, the content on the site is specific to the market assessed, and GDI has not developed a risk rating for that site elsewhere.



www.disinformationindex.org