The Prevalence and Possible Policy Implications of the use of National and Human Security Frames in Climate-Change-Related Reports, in South Africa's Print Newspapers

by

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Declaration of originality

I, Yajna Sewmohan, student number 15316913, declare that the dissertation, which I hereby submit for the degree MA Environment & Society at the University of Pretoria, is my own work and has not previously been submitted by myself for a degree at this or any other tertiary institution.

Ethics Statement

The author, whose name appears on the title page of this dissertation, has obtained, for the research described in this work, the applicable research ethics approval. The author hereby declares that she has observed the ethical standards required in terms of the University of Pretoria's Code of ethics for researchers and the Policy guidelines for responsible research.

Synopsis

Given the need for urgent climate action, newspapers have – and might increasingly come to – frame climate change (CC) as a security threat. By strategically securitising CC in published articles, newspapers could help catapult the issue to the top of policy agendas and mobilise resources to address it. Such an assertion rests on the assumption that newspapers can influence public opinion/behaviour directly and the public policy-making process indirectly.

Informed by the foregoing statements, this research project investigated the prevalence of a securitisation frame in CC-related articles published by South African newspapers. Given that different conceptualisations of 'security' exist, two sub-securitisation frames – those of human and national security – were proposed, and their prevalence investigated. Both investigations were informed by frame and content analyses.

A review of existing literature concerning the policy responses that securitising CC evokes was also conducted. The review revealed that although framing CC as a threat to national security had the potential to mobilise political attention and resources towards addressing CC, it could also result in the adoption of policies that would frustrate a transition to a more sustainable pathway. In contrast, it was found that framing CC as a human security threat could mobilise political attention and resources *and* facilitate the adoption of policies that support sustainable development.

Coupled with the results of the analyses conducted, the findings of the literature review allowed inferences to be made about the nature of possible CC-related policies that may be supported and adopted in South Africa. Considering (1) that the frame(s) employed by an article can only have an effect if the public reads the article and (2) that members of the public tend only to select and read an article employing a frame that resonates with them, it was crucial for the inferences to be qualified by an investigation into the frame preferences of South African newsreaders. As such, a survey was designed to investigate the security frame(s) corresponding to the CC-related articles that South Africans (N=20) preferred to read. Not only did the results of the survey better inform the inferences made regarding the policy implications of South African newspapers' framing of CC, but they also better informed the creation of recommendations to help print newspapers become (more) effective climate change communicators.

Keywords: climate change; print newspapers; frame analysis; framing; securitisation; human security; national security; South Africa.

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Chapter 1: Introduction

"The continuing framing of climate change as an environmental issue is part of the problem why [sic] it gets short shrift in terms of policy attention."
—*Mehra (2010)*

"… securitisation of climate change is necessary, timely, and irreversible."
—*Parsons (2010: 90)*

". . . a 'securitised' climate debate might be able to marshal sufficiently compelling arguments to encourage the politicians to do something about reducing emissions and investing (carefully) in adaptation…if securitisation speeds their [adaptation and mitigation policies'] implementation, it will serve a useful purpose."
—*Brown et al. (2007: 1154)*

1.1. Broad overview and general direction

In recent years, greater primacy has been accorded to climate change in not only political discourse and policy-making circles (e.g., Trombetta, 2008; Oels, 2012; Rodrigues De Brito, 2012), but also popular, academic and mass media discourses (Boykoff & Roberts, 2007; Vogler, 2014; Schäfer & O'Neill, 2017). Vogler (2014) opines that, as climate change comes increasingly to occupy the collective consciousness, more frequent and varied attempts may be made to securitise climate change. Indeed, seeing that security issues are considered issues of high politics, and that governments tend to "prioritise security matters" (Baylis & Wirtz, 2016: 2), the securitisation of climate change would be a strategic move which various actors may, increasingly, come to adopt in a bid to influence political opinion and public discourse (Brzoska, 2009: 143), "provoke action" (Peters and Mayhew, 2016: 213), "propel climate change to the top of policy agendas" (Oels, 2012: 195), and "mobilise political attention and resources" (Vogler, 2014: 354) to address this pressing issue.

Although implied in the paragraph above, it must be clearly stated that the securitisation of climate change – successful or otherwise – is not a new phenomenon. Empirical evidence reveals that, particularly after the Cold War, there was a shift in focus from military threats to national security, to non-military ones (e.g., Trombetta, 2008; Rodrigues De Brito, 2012). As such, climate change was constructed as a new national security threat. For instance, guided by the Stern Review[1], the UK used its 2007 presidency of the United Nations Security Council

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[1] The Stern Review included the findings of UK government-commissioned, scientific studies on the climate-security nexus. After (1) examining the effects of climate change, (2) assessing the economic cost posed by climate

(UNSC) to table a discussion about the security implications of climate change (Oels, 2012). Likewise, in 2007, Germany used its European Union (EU) presidency to frame climate change as an (inter)national security issue and to mobilise coherent action to tackle it (ibid.). For its part, the United States Department of Defence (DoD) framed climate change as a threat multiplier and, ultimately, a national security threat. This is evidenced by its statement: "while climate change alone does not cause conflict, it may act as an accelerant of instability or conflict, placing a burden to respond on civilian institutions and militaries around the world" (US DoD, 2010: 85).

While the above examples support the claim that climate change has been framed as a national security threat, the United Nations Human Development Report (UNHDR) (1994) indicates that climate change has also been framed as a threat to another conceptualisation of security— that of human security. To explicate, the report underscores the urgent need to respond to "the threat of global poverty travelling across international borders in the form of drugs, HIV/AIDS, climate change, illegal migration and terrorism" (UNDP, 1994: 24), so that all persons everywhere can enjoy a basic level of security. In this instance, one could speak of the UNDP's construction of climate change (or, more precisely, its various effects – both direct and indirect) as a threat to human security.

In addition to the UN HDR of 1994, the Intergovernmental Panel on Climate Change's (IPCC's) Fifth Assessment Report (AR5) also constructs climate change as a threat to human security. Its twelfth chapter exemplifies this. Written by Adger *et al.* (2014) and titled '*Human Security'*, the chapter states that there is robust evidence to suggest that "human security will be progressively threatened" (ibid., 758) as anthropogenic climate change continues its advance. This is an explicit representation of climate change as a threat to human security. Together, this example and that of the UN HDR support Oels' (2012) observation that, from 1985 onwards, climate change has been constructed invariably as a threat to national security and human security. More generally, it helps illustrate that climate change has been couched in securitisation language for quite some time.

To briefly recapitulate, moves to securitise climate change are not new – such moves have been made in the past. Given the present need for urgent climate action, renewed attempts

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change and (3) reviewing the risks of climate change inaction, it concluded that "the benefits of strong and early action far outweigh the economic costs [or threats] of not acting" (HM Treasury, 2006: vi).

to securitise climate change are deemed "necessary, timely, and irreversible" (Parsons, 2010: 90). Therefore, in the contemporary context, one could expect to see securitisation moves being made increasingly by various actors hoping to mobilise (1) resources and (2) catalyse public advocacy for green policies, for instance, to tackle this urgent issue. The role that the mass media[2] can and has been playing in this regard should not be underestimated (Vultee, 2011).

The mass media is not a neutral purveyor of information; it sets the public agenda by not so much "telling people what to think but…telling its readers what to think *about*" (Cohen, 2016: 13 – *emphasis in original*). Moreover, by framing stories in specific ways – i.e., "by select[ing] some aspect of a perceived reality and mak[ing] them more salient in a communication text" (Entman, 1993: 52) – the mass media can manipulate *how* the public understands and interprets an issue or event. In other words, through the use of specific frames, the mass media can significantly influence how members of the public "locate, perceive, identify and label" certain issues/events (Goffman, 1986: 21). As a result, the mass media can significantly influence the behaviour and actions of the public in relation to such issues and events.

Considering the above, it can be said that mass media could – intentionally or otherwise – frame an issue (e.g., climate change) or an event (e.g., natural disasters) as a security threat and, in so doing, influence public action and opinion. Seeing that public participation and public opinion are central to the public policy-making process[3], the mass media – by framing something as a security issue – could, therefore, have a bearing on the type of policies supported in policy-making circles and, ultimately, the type of policies adopted to tackle the issue. That being said, this inference rests on a tacit assumption that some would consider theoretically problematic and, thus, erroneous. Indeed, those familiar with traditional securitisation theory – and the existing definitions of a securitisation frame informed by it – may be quick to question the assumption that securitising an issue (i.e., framing an issue as a security threat) could influence the policies created to tackle it. The reasons for this are that:

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[2] For the purpose of this dissertation, the term 'mass media' shall be defined, following Boykoff (2008a), as the "publishers, editors, journalists and other agents within the communications industry" (ibid., 11), who partake in the production, reproduction, transformation, and eventual dissemination of information pertaining to CC, "through outlets such as newspapers, magazines, television, radio and the Internet" (id.).

[3] This is meant to be true of democratic governance and participatory democracies (Houston & Liebenberg, 2001; Gumede, 2008).

a) a securitisation frame has been defined as one that "highlights the existential threat of an issue…and diminishes the arguments for handling it as a matter of political routine" (Vultee, 2011: 79).

b) the effect of employing a securitisation frame is that it convinces a significant target audience that something is an existential threat, warranting emergency action and even immediate and exceptional measures to tackle it (ibid.).

To elaborate, Vultee's definition of a securitisation frame and assertion about the frame's supposed effect, summarised in a) and b) respectively, was constructed with reference to securitisation theory as initially introduced by the Copenhagen School. According to this school of thought, an issue is successfully securitised only when it is elevated outside the realm of everyday politics (i.e., taken out of the "normal bounds of political procedure" (Buzan, Wæver and de Wilde, 1998: 25)); ascribed exceptional status; and tackled using exceptional measures. In a nutshell, traditional securitisation theory assumes that a successfully securitised issue would not be left to be tackled through standard political means. Hence, a successfully securitised issue would not be debated and deliberated upon in policy-making circles.

In assuming that securitising an issue (i.e., framing it as a security threat) could influence the policy-making process and, thus, the policies designed to tackle it, one is also assuming that a securitised issue would be addressed within policy-making circles, i.e., within the "normal bounds of political procedure" (ibid.). In light of the discussion above, it is evident that the latter assumption is incongruent with the core tenets of the Copenhagen School and of traditional securitisation theory. For this reason, then, the former assumption would seem erroneous to those familiar with the perspective of traditional securitisation theory. Nevertheless, the assumption can be defended.

Critics of traditional securitisation theory (e.g., Trombetta, 2008; 2011) argue that an issue is successfully securitised when various securitisation moves lead to the adoption of policies and actions "that probably would not otherwise have been undertaken" (Trombetta, 2011: 136). A successfully securitised issue, then, is not necessarily one that is dealt with outside the normal bounds of political procedure. Instead, it is one that is dealt with *within* policy-making circles, but that solicits a different response from policymakers than it did prior to being securitised. With *this* understanding of a securitised issue, it can be assumed that framing something as a security threat could influence the policy-making process and lead to the adoption – through standard political procedures – of various policies to tackle the issue. However, if this is the

case, then the existing definition of a securitisation frame, as provided by Vultee (2011), would have to be re(de)fined. This redefinition would have to occur before – and so that – one can investigate the prevalence of an overarching securitisation frame in the mass media and the type of policy responses that it could evoke.

In conjunction with an overarching securitisation frame, it is viable to propose and investigate the prevalence of different security frames (e.g., a national security frame and a human security frame). The reason is that, in the sub-field of International Security Studies (ISS)[4], there are different conceptualisations of security, including – but by no means limited to – human, national, regional, and international security. The definition of these frames would differ – just as the definitions of these conceptualisations do – in terms of:

(a) who/what the referent object is (the thing that needs to be safeguarded);
(b) who/what would be responsible for providing security (i.e., who/what would be the security agent);
(c) what are the best means of providing security and;
(d) what constitutes a threat to security (Baldwin, 1997; Buzan & Hansen, 2009; McDonald, 2013).

The definition of a national security frame, for instance, would be informed by conceptualisations of national security (something that traditional security studies was concerned with). In these conceptualisations, the referent object of security is the nation-state itself (Baylis, 2014). Anything that compromises the nation-state, along with its values and interests, is deemed a threat. The military is the means through which the nation-state can neutralise such threats. Consequently, the military is thought of as the primary security agent (Baylis, 2014; Esterhuyse, 2015).

In contrast, conceptualisations of human security take the referent object to be individuals, human beings. What constitutes a security threat, then, is anything that threatens people's lives or, rather, the "survival, livelihood and dignity of…people" (UN General Assembly, 2012). Since human security – as conceptualised in the United Nations Human Development Report of 1994 – has at least seven "essential dimensions"[5] (UNDP, 1994: 24), a threat to human security could also be defined as that which threatens one or more of these seven dimensions

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[4] ISS is considered a sub-field of International Relations (Buzan & Hansen; Baylis & Wirtz, 2016).

[5] Namely, economic, health, personal, political, food, environmental and community security.

in some way (ibid.). Given the array of threats that fall under these seven dimensions and the fact that they are "interdependent" (ibid., 22), the means through which threats to human security can be dealt with are multiple and varied. They include values-change, global cooperation, education, poverty reduction, peace-building, crisis management, conflict resolution and building resilient social-ecological systems (Brzoska, 2009; McDonald, 2013; Biggs, Schlüter & Schoon, 2015). Moreover, given the broad array of threats and the combination of options available to respond to them, a broad spectrum of actors, including individual communities, states, inter-governmental organisations (IGOs) and non-governmental organisations (NGOs), are considered security agents (McDonald, 2013). Altogether then, a human security frame would be defined in contrast to a national security frame and with regards to the features of human security, as conceptualised in the existing literature.

Informed by different conceptualisations of security, the definitions for specific security frames (i.e., human and national security frames) can be used as coding definitions for their respective frames. Subsequently, mass media discourse, e.g., newspaper articles, can be coded for such frames. As already alluded to, the final goal of such an exercise would not be to determine the relative prevalence of each frame. Instead, the end goal would be to discuss the possible policy implications of the findings. More specifically, based on what the literature and past studies say about the policies that a specific frame calls forth, the end goals would be to, firstly, gain insight into the policies that may arise given the prevalent use of (a) specific frame(s) and, secondly, recommend frames that could be employed in future climate-change-related media[6]. In this regard, it should be noted that Oels (2012) – based on her study of the securitisation of climate change in EU policy-making circles – concludes that "once security is redefined as human security…[it] propels sustainable development policies to the top of the policy agenda" (ibid., 190). Coupled with the facts that,

(a) policies geared towards sustainable development help tackle the underlying drivers of climate change and vulnerability (Díaz *et al.*, 2019) and could thus,

(b) bolster efforts to realise Agenda 2030 and the Sustainable Development Goals (SDGs),

Oels' conclusion provides a compelling reason to assume that framing climate change as a threat to human security is more desirable than framing it as a threat to national security. This

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[6] Henceforth the terms 'climate-change-related' and 'climate-related' will be used interchangeably.

assumption is further supported by the results of theoretical and empirical studies suggesting that framing climate change as a threat to national security can give rise to "perverse political responses" (McDonald, 2013: 49) that actually create further insecurity for persons and frustrate the achievement of SDGs. For example, it has been demonstrated that framing climate change as a national security threat can catalyse the creation and implementation of policies that permit "the use of force" (Brown *et al.*, 2007: 1153) to secure scarce resources. The establishment of tighter border controls to manage or deter climate refugees is also considered a perverse policy response that stems from the act of securitising climate change (Bates-Eamer, 2019) and framing climate change as a national security threat (Oels, 2012).

Overall, it seems viable to assume that employing a human security frame calls forth more constructive policies to tackle climate change than employing a national security frame does. Informed by this assumption, one can – once they have a preliminary understanding of the frames employed in climate-related media – begin to recommend securitisation frames that should be employed in the future to help raise awareness of climate change and generate public support for constructive policies geared towards mitigation and adaptation.

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Hitherto, the discussion has given a broad overview of the themes and literature that this research project is concerned with. Moreover, the discussion has provided an overview of some of the issues and scholarly works that the research project contended with. Further still, the discussion indirectly outlined the general direction in which a research project concerned with the discussed themes, bodies of literature and issues, *could* proceed. That being said, the specific direction in which a research project concerned with such things *does* proceed will depend on, *inter alia*, geographical context, access to resources, availability of data and various constraining and/or enabling factors. This was certainly true of this specific research project. As such, the remainder of this chapter delineates the specific direction in which this research project proceeded given, amongst others, the South African context within which the researcher is embedded, matters of practicality, as well as time, monetary and spatial constraints. More precisely, it delineates the research objectives that this project concerned itself with, explains why these particular objectives were chosen with reference to context, constraints and existing literature, and discusses both the relevance of these objectives and that of the research project as a whole.

1.2. Aim and objectives of the study

This research project aimed to assess the current prevalence and possible future policy implications of the use of national and human security frames in climate-change-related reports[7] in South Africa's print newspapers. To meet this aim, the following research objectives (ROs) were drawn up:

- To assess the prevalence of a broad securitisation frame, national security frame and human security frame in climate-related articles published by South Africa's print newspapers between 2012 and 2020 (RO1).

- To investigate and evaluate South African readers' preferences for articles that framed climate change as a threat to national security versus ones that framed climate change as a threat to dimensions of human security (including economic, food, health, environmental, personal, community and/or political security) (RO2).

- To gauge the extent to which South African readers show a preference for climate-related articles (employing either a national security or human security frame) over articles concerning other topics (RO3).

- To consider the possible policy implications of the identified trends in the use of various securitisation frames in climate-related articles together with readers' responses to such articles (RO4).

1.3. The rationale for the study

This section unpacks the research objectives presented above. In so doing, it also highlights key imperatives driving the need for the type of research undertaken.

1.3.1. Research objective 1 (RO1)

Taking as its point of departure the claim that:

> Framing climate change as a threat to human security places it at the top of the public policy-making agenda *whilst* producing less dangerous and/or perverse policies than those stemming from policy circles where climate change has been framed as a national security threat/issue (Oels, 2012)[8],

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[7] The terms 'reports' and 'articles' are used interchangeably in this dissertation.
[8] Supporting quotes: "the articulation of climate change as an issue of human security could have different policy implications from the articulation of climate change as an issue of national security" (Oels, 2012: 192). "[H]uman security offers a form of securitization without the counterproductive outcomes that come from securitization by [*sic*] the state" (ibid., 195).

this research project sought *to assess the prevalence of a broad securitisation frame, national security frame and human security frame in climate-related articles published by South Africa's print newspapers between 2012 and 2020 (RO1).* Although there are various conceptualisations of security, and thus various sub-securitisation frames, national and human security were the only two conceptualisations and sub-securitisation frames that the researcher decided to contend with. An explanation of the reasoning behind this decision is provided below.

As shall be discussed more thoroughly in the literature review, concrete definitions for a securitisation frame and various security frames are scarce[9]. Moreover, those that do exist are, arguably, somewhat problematic from a theoretical perspective (e.g., Vultee, 2011; Schäfer *et al.*, 2016; Feldman *et al.,* 2017 and Bolsen & Shapiro, 2018). Therefore, preliminary ones had to be created and defined with reference to works that comprise the extensive body of existing literature in the field of ISS[10]. Only once the frames were defined, was the coder (who, in this case, was just the primary researcher) able to identify these frames in newspaper articles and thus code the articles accordingly. On the whole, then, the significant amount of time that defining various security frames takes, and a cognisance of the time required for one person to analyse and code numerous newspaper articles, led to the decision to only investigate the prevalence of national and human security frames.

Another aspect of RO1 that requires explanation is the decision to investigate the use of security frames in newspaper articles—and print newspaper articles at that. Such a decision most certainly needs to be substantiated in light of statistics revealing that over the past ten years the circulation of print newspapers in South Africa has fallen by 49% (Roper *et al.*, 2019). A second factor that could call into question the decision to analyse print newspaper articles are the results of the tenth edition of Reuters' *Digital News Report* (DNR) survey. The survey results indicate that the number of persons who use print media as their primary news source decreased by 5 percentage points from 37% in 2020 to 32% in 2021[11] (Newman *et al.*, 2021).

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[9] This is to the best of the researcher's knowledge. The researcher stands to be corrected.

[10] The exact manner in which this task was approached is described and defended in Chapter 2: *Concerning Methods and Methodology*.

[11] This downward trend was already projected in a report – *South African entertainment and media outlook: 2012-2016* – by PwC in 2012. The report stated that print media circulation will fall by over 6% year-on-year from 2012 to 2015 (PwC, 2012: 183). From 2015/16 onwards, it was projected that print media circulation will decline at an annual rate of around 5.6% (ibid.).

This is owed, in part, to the fact that the internet has become more easily and readily accessible to South Africans who have, thusly, turned to online news sources (see Fig. 1.1), which they access using smartphones predominantly (see Fig. 1.2).

SOURCES OF NEWS 2019-21

Legend: Online (incl. social media), TV, Social media, Print

90% / 91% (Online)
72% / 75% (Social media)
68% / 74% (TV)
40% / 32% (Print)
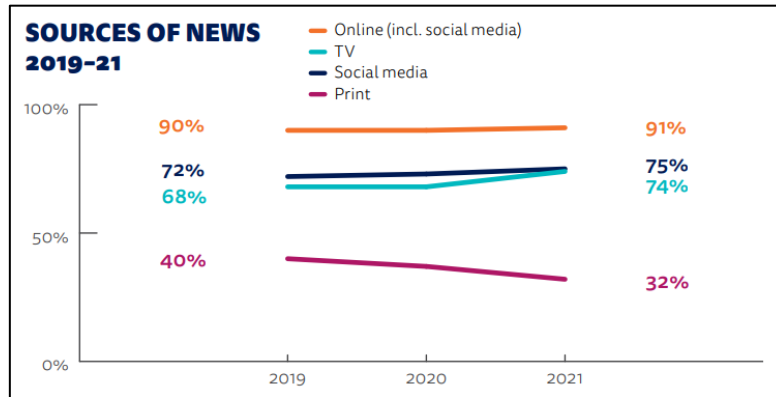
Figure 1.1: Results of a survey conducted to elucidate what sources of news South Africans predominantly consult. *Source*: Newman *et al.* (2021: 158).

DEVICES FOR NEWS 2019-21

76% / 83%
58% / 55%
19% / 18%
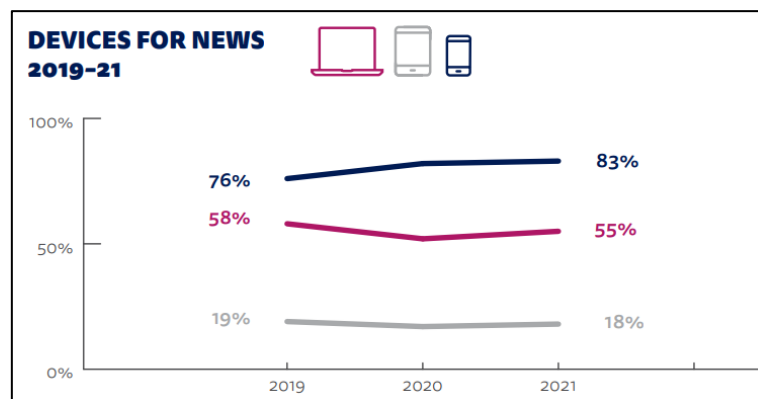
Figure 1.2: Results of a survey conducted to elucidate what devices South Africans use to access digital news. *Source*: Newman *et al.* (2021: 158).

Despite the results discussed and depicted above, print newspapers were chosen as the primary subjects of this study. This is because, by and large, print media remains a legitimate source of news for a large segment of the South African population. Indeed, with an internet penetration rate of 58% (ibid., 157), many do not necessarily have access to online news sites and must access news through alternative sources, assuming they access the news at all. In this regard, it should also be highlighted that the results discussed above are a summary of the data obtained from an *online* survey completed by English-speaking, online newsreaders. Therefore, the results are not nationally representative and, instead, as the authors of the study themselves warn, tend to represent South Africans who are "more affluent, younger, have higher levels of formal education, and are more likely to live in cities" (ibid., 158).

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In sum, print newspaper articles were chosen as they are more accessible to a larger segment of society. If this project were to analyse the frames used in online articles, which are not as readily accessible as print newspaper articles, the assumed connection between (1) the newspapers' framing of climate change, (2) public opinion and (3) the public policy-making process would become rather tenuous. This final point will become more apparent when the final aspect of RQ1 that needs explanation is addressed. Before addressing this aspect, though, it is worth interjecting to state that, upon conducting some preliminary searches for climate-related articles on online news sites, it was found that some articles were paywalled. Moreover, to the best of the researcher's knowledge, there are no databases for articles from online news sites in South Africa—only databases containing articles from print newspapers exist and are readily accessible. Thus, monetary and resource constraints also contributed to the decision to analyse print newspapers.

The final aspect of RO1 that needs explanation is the decision to analyse the framing of climate change in newspapers instead of political discourse, policy documents or public policy-making circles. This explanation is needed as, admittedly, Oels' instantiation, which provided the impetus for this research project, is concerned with the way climate change is framed in policy-making circles rather than in the media or its constitutive elements, e.g., newspaper outlets.

There is strong support for the decision to study how climate change is framed in newspaper articles as opposed to political discourse, policy documents or policy-making circles. For one, Schäfer *et al.* (2016) warn that to analyse how climate change is framed in policy-making circles alone is to overlook the "[p]otential effects of securitised climate change coverage [on the] actions of political institutions [i.e., policy-making circles] themselves" (ibid., 15). In other words, to analyse how climate change is framed in policy-making circles alone is to overlook the links between the public, the media and the policy-making process. To expand, although not thought to be directly involved in the policy-making process (Reddy, 2006), a rather extensive body of literature suggests that the media can influence the process and/or those involved in it and, therefore, the outcome of the process, i.e., the content and nature of policies themselves. For example, studies by Linsky *et al*. (1986) and Kingdon (2011) showcase that the media can significantly influence the policy-making agenda through investigative journalism and the coverage of non-mainstream stories/studies/cases.

For her part, Reddy (2006) accentuates that the media does not simply relay neutral information to the public. Instead, it can, through the (un)conscious use of frames, influence (a) the public and public opinion, and thereby (b) the actions of political parties as well as policymakers (ibid.). The argument that "public opinion cannot be divorced from the political discourse and media frames that surround it" (Entman, 2004: 142) supports Reddy's (2006) assertions. Studies conducted in the US, regarding the use of frames in climate change reports and their effect on public opinion, further reinforce Reddy's assertions. For instance, Aklin and Urpelainen (2013) concluded that public support for policies on clean energy was significantly influenced by the employment of frames that portrayed climate change as a threat to economic security. Moreover, Myers *et al*. (2012) found that the public was more receptive to climate change mitigation policies following the framing of climate change as a public health threat.

Together with insights from other scholarly studies and bodies of work[12], the examples above suggest that the deployment of particular frames by the media can influence the public's opinion about climate change. In so doing, they can catalyse pro-environmental behaviour (e.g., sustainable consumption patterns) (Boykoff & Roberts, 2007) and climate action (including advocacy and support for ambitious and constructive climate policies during the policy-making process (Schäfer *et al*., 2016)). Therefore, it can be assumed that the media – via the frames it employs in climate-related articles – holds some sway over the climate change discourse that features in public policy-making processes and policy-making circles.

To summarise, the researcher chose to investigate the prevalence of security frames in climate-related articles rather than in policy-making circles because the frames employed in the former can significantly influence the latter. Simply put, climate change discourse and the way climate change is framed in policy-making circles is already very likely the result of the effects of the media's framing of climate change (Schäfer *et al.*, 2016). That final statement concludes the explanation of the specifics of RO1. Having unpacked RO1, its relevance can now be discussed.

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[12] For instance, Carvalho (2010) contends that "[t]he media are important agents in the production, reproduction and transformation of the meanings of social issues" (ibid., 173) such as climate change. Moreover, there is a general consensus amongst researchers that members of the public attain a considerable degree of knowledge about climate change from the media (e.g., Stamm *et al*., 2000; Leiserowitz *et al*., 2015) and deem the media to be an authoritative and trustworthy voice on the issue (e.g., Schäfer & Schlichting, 2014).

As stated previously, climate change has been increasingly framed as a security threat by various actors – the media included – looking to catapult climate change to the top of policy agendas, mobilise effective climate action and elicit timely and effective policy responses. In these respects, research that (1) discusses the possible policy implications of framing climate change as a threat to national and human security, respectively, and (2) investigates the prevalence of such framing in news media, is both relevant and timely. And yet, as noted by Schäfer *et al.* (2016), research that analyses the extent to and manner in which the media discusses the possible security threats of climate change is scarce[13]. Moreover, in studies where the securitisation of climate change in the media is mentioned, it is done fleetingly and with reference to Europe specifically (e.g., Weingart *et al*. 2000). As such, Schäfer *et al*. (2016) sought to investigate, in the first instance, the extent to which securitisation language is mobilised in climate change reporting in nine non-Western countries (South Africa included). In the second instance, they analysed the prevalence of different security frames, e.g., national and human security frames.

Schäfer *et al*.'s analysis of publications from the *Sunday Times* revealed that there was a reduction in the use of securitisation language by South African newspapers' reporting on climate change between 2006 and 2010[14] (ibid.). Moreover, their analysis revealed that, in instances where climate change was framed as a security issue, it was more frequently done in terms of national security rather than human security (ibid.). It was also found that whilst the use of national and human security frames was declining, the use of water, food and energy security frames in climate change reporting was increasing. Arguably, these three frames would fall under the broader frame of human security. Unfortunately, Schäfer *et al*.'s coding definitions for various frames were based on whether or not a specific word was used. For instance, an article was considered to have framed climate change in terms of national or human security if it explicitly used the words 'national security' or 'human security' (ibid.). As such, it can be tentatively posited that the use of narrow coding definitions for different frames puts Schäfer *et al*.'s conclusions into question. To be sure, if a human security frame was instead defined in terms of the features of human security – i.e., as that which centres around the well-

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[13] Supporting quote: "As most of the relevant literature consists of theoretical accounts of such a 'securitization', and as most empirical studies on the matter focus on Western countries and/or supranational political bodies, it has been unclear whether this securitization can be found beyond institutionalized politics, in the broader public, and whether it extends beyond Western countries" (Schäfer *et al.*, 2016: 14).

[14] Schäfer *et al.* (2016) used the climate change publication habits of the *Sunday Times* as a proxy for the climate change publication habits of South African newspapers in general.

being of (groups of) individuals, as opposed to the nation-state, and is concerned with, *inter alia*, food, health and economic security (UNHDR, 1994; UN, 2017) – it is arguable that Schäfer *et al.* (2016) would have seen that at least some of the articles that framed climate change in terms of water, food and energy security were, ultimately, framing climate change in terms of human security. If this is the case, then the seeming lack of the use of a human security frame when it comes to climate change reporting in South Africa can be called into question.

Consequently, this research project attempted to create expanded definitions of various security frames. Moreover, RO1 of the project – which was met after creating expanded definitions of various security frames – served to further explore some of Schäfer *et al.*'s findings. RO1 also served to explore the prevalence of security frames in climate change reports published by South African newspapers in the contemporary context. Such explorations are vital given that the use of a national security frame in climate change reporting could lead to the adoption of perverse or ineffective climate change policies (Oels, 2012), which could move South Africa further away from a more sustainable pathway. Additionally, such policies could frustrate South Africa's vision in the National Development Plan (NDP): that by 2030 the transition "to an environmentally sustainable, climate-change resilient, low carbon economy and just society will be well underway" (National Planning Commission, 2012: 199). As such, if, despite employing expanded frame definitions, it is found – as per Schäfer *et al.*'s conclusions – that a national security frame is more prevalent in climate-related reports, then some recommendations may need to be made in terms of the media's reporting and framing of climate change, so as to combat the possible creation and adoption of counter-productive policies.

1.3.2. Research objectives 2 & 3 (RO2 & RO3)

Recent studies reveal that altering the frame used in climate-related articles can impact public opinion and behaviour. For example, Severson & Coleman (2015) found that the media's use of moral frames that did not make recourse to religious concepts/works was more effective at mobilising public support for climate change policies than moral frames rooted in religion. More relevant to the topic of this research inquiry, Aklin and Urpelainen (2013) found that framing climate change in terms of national or economic security mobilised support from conservatives for policies geared towards using renewable energy resources.

In a critique of studies such as those outlined directly above, Feldman & Hart (2018) astutely point out that these studies assumed (sometimes only implicitly) that the public will be exposed to climate-related articles in the first place. However, this is far from guaranteed. Elaborating further, Feldman and Hart state that "frames found to be effective in experimental studies may offer limited value if individuals do not pay attention to them in the real world" (ibid., 504). The scholars further state that persons usually pay more attention to the frame that resonates with them and are, subsequently, more likely to be affected by those frames. In this regard, the authors conclude that there is reason to believe that "issue framing…can guide news selection" (ibid., 506). This observation serves as a reminder that even if a particular security frame is more prevalent than others, its effect on the public and, thus, the public policy-making process is by no means certain.

Informed by Feldman and Hart's (2018) critiques, the researcher decided to:

- Investigate and evaluate South African readers' preferences for articles that framed climate change as a threat to national security versus ones that framed climate change as a threat to dimensions of human security (including economic, food, health, environmental, personal, community and/or political security) (RO2).

- Gauge the extent to which South African readers show a preference for climate-related articles (employing either a national security or human security frame) over articles concerning other topics (RO3).

The primary purpose of RO2 and RO3 was to help clarify the extent to which it may be assumed that a particular frame, if found to be the most prevalent, could significantly affect public support, action or policy preference. For example, if the findings under RO1 reveal that a national security frame was most frequently used in South African newspapers when discussing climate change, findings in terms of RO2 and RO3 would help the researcher gain better insight into the extent to which it could be assumed that this frame would actually have a significant effect on public support, action, or policy preference when it comes to the issue of climate change. Hence, RO2 and RO3 are relevant and important as they could augment findings in terms of RO1 and help qualify any conclusions drawn about the policy implications of using a specific security frame in South African newspapers.

1.3.3 Research objective 4 (RO4)

In concluding their study of, *inter alia*, the prevalence of different security frames in climate-related articles published across nine countries, Schafer *et al.* (2016) recommended that future studies go beyond their analysis by considering "the broader political consequences

of the described securitisation of climate change coverage" (ibid., 15). They opine that such considerations are vital given that the securitisation of climate change in the media:

> "could justify security experts preparing for the coming threats and engaging in long-term military planning to adapt to and intervene in security-related disasters and violent conflicts…possibly turning talk of 'climate wars' into a self-fulfilling prophecy. On the other hand, it could lead to increased political participation and growing demand for political action (see Kvaloy *et al.*, 2012) to mitigate climate change or at least adapt to it." (id.).

These observations bring to mind two of Oels' (2012) instantiations, the first being that "human security offers a form of securitisation without the counter-productive outcomes that come from securitisation by [*sic*] the state" (ibid., 195). The second instantiation that Schäfer *et al.*'s (2016) observations bring to mind is that framing climate change as a threat to human security places it at the top of the public policy-making agenda *whilst* producing less dangerous and/or perverse policies than those stemming from policy circles where climate change has been framed as a national security threat/issue (Oels, 2012).

Schäfer *et al.*'s (2016) observations, therefore, seem to suggest, in accordance with Oels (2012), that the employment of different security frames in climate-related articles call forth different policy responses. This is assuming, of course, that:

1. The public is a key actor in the public policy-making process;
2. Public opinion shapes the actions of other actors in the policy-making process, e.g., politicians and political parties;
3. The media can have a significant influence on the public and public opinion apropos the frames it uses; and thus,
4. How the media frames specific issues (e.g., climate change) can affect the public policy-making process and resulting policy/policies.

Given Schäfer *et al.*'s (2016) observations, research that both (1) investigates the prevalence of various securitisation frames in climate-related articles using frame and content analyses, and, then, (2) considers the possible policy implications of the use of such frames would be important and valuable. Such research is also timely and relevant considering that climate change has been increasingly framed as a security threat by various actors – the media included – seeking to catapult climate change to the top of policy agendas, mobilise effective climate action and elicit effective policy responses.

Bearing the above in mind, the researcher thought it crucial to consider the possible policy implications of the identified trends in the use of various securitisation frames in climate-

related articles *together with readers' responses to such articles* (RO4). This latter aspect of RO4 is critical seeing that the frame(s) employed by an article can only have their assumed effect on policy-making if the public reads the article in the first place. The findings pertaining to readers' preference/response to differently framed climate-related articles could, therefore, better inform the inferences made in terms of the policy implications of South African newspapers' framing of climate change. Moreover, they could help better inform the creation of recommendations to help print newspapers become (more) effective climate communicators and combat the possible creation and adoption of counter-productive policies.

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The discussion thus far detailed the aim, rationale and research objectives of this research project. Table 1.1 below summarises the project's overarching aim, various objectives, and targets, along with the chapters of this report that concern them. The content of the different chapters of this report is then specified in the final section (section 1.4.) of this chapter.

Table 1.1:   Summary of research aim, objectives, and targets, along with the chapter(s) that speak to them.

Research Aim			
To assess the prevalence and possible policy implications of the use of national and human security frames in climate-change-related reports in South Africa's print newspapers			
	Research Objectives	**Research Tasks/Targets**	**Related Chapter(s)**
RO1	To assess the prevalence of a broad securitisation frame, national security frame and human security frame in climate-related articles published by South Africa's print newspapers between 2012 and 2020.	**T1:** to explore the number of climate-related articles (i.e., those articles that either mention or are directly concerned with climate change) published by South African print newspapers between 2012 and 2020.	Ch. 5
		T2: to explore the temporal development of the publication of climate-related articles in South African newspapers.	Ch. 5
		T3: to investigate the prevalence of various security frames in climate-related articles published by South African print newspapers between 2012 and 2020.	Ch. 5
		T4: to explore the temporal development of the use of various security frames in climate-related articles published by South African print newspapers between 2012 and 2020.	Ch. 5
RO2	To investigate and evaluate South African readers' preferences for articles that framed climate change as a threat to national security versus ones that framed climate change as a threat to dimensions of human security (including economic, food, health, environmental, personal, community and/or political security).	**T5:** to investigate if members of the public are likely to select an article that discussed climate change using a human security frame over one using a national security frame. **T6:** to document which, if any, human security sub-frame (i.e., personal, political, community, food, health, economic, environmental security frames) members of the public are inclined to select. **T7:** to investigate if there is some consistency in individual persons' choice of frame.	Ch. 2 & 5

RO3	To gauge the extent to which South African readers show a preference for climate-related articles (employing either a national security or human security frame) over articles concerning other topics.	**T8:** to investigate the extent to which members of the public select a climate-related article that employs a securitisation frame when confronted with articles considering other matters of interest. **T9:** to investigate the specific security frame corresponding to the climate-related article that members of the public most often select, if at all, when confronted with articles considering other matters of interest.	Ch. 2 & 5
RO4	To consider the possible policy implications of the identified trends in the use of various securitisation frames in climate-related articles together with readers' responses to such articles.	**T10:** to investigate the policy implications of securitising climate change with reference to theory and previous studies. **T11:** to combine findings from the literature review with the results of the frame and content analyses (RO1) and survey (RO2 & 3), to make inferences about the possible future policy implications of South African newspapers' securitisation of climate change and to make recommendations to help print newspapers become (more) effective climate change communicators.	Ch. 4 Ch. 5
Pre-requisites for meeting research aim, objectives and target
	Pre-requisite 1	Consult theory in the field of ISS and review existing frame definitions to help inform the creation of coding definitions for a securitisation, human security and national security frame.	Ch. 3 & 4
	Pre-requisite 2	Obtain, code and conduct frame and content analyses on climate-related articles (articles that either mention or are directly concerned with climate change) published by South African print newspapers between 2012 and 2020.	Ch. 2 & 5
	Pre-requisite 3	Create and send out a survey designed to investigate the frame preferences of members of the public. Analyse the data collected from the survey.	Ch. 2 & 5

1.4. Chapter outline

This introductory chapter has provided a brief overview of the themes and issues that this research project concerned itself with. Moreover, it proceeded to (1) outline the specific research objectives that guided the research process and (2) explain the relevance of the research project as a whole, i.e., explain why it is crucial for research, concerned with the themes and issues mentioned, to be carried out in the first place. The next chapter, Chapter 2, underscores how the researcher attempted to meet the four research objectives introduced in this chapter. Additionally, it provides a rationale for the methods that the researcher used in order to meet the respective objectives.

The third chapter discusses the conceptual framework upon which this research project was built. It begins by providing a very condensed discussion of the evolution of the field of ISS and its core concept and concern: 'security'. The works of Buzan (1983; 1984; 1991), Buzan *et al.* (1998) and Buzan & Hansen (2009) are drawn heavily upon in this regard. Informed by this condensed discussion, the chapter then proceeds by preliminarily re(de)fining an overarching securitisation frame. Subsequently, both human and national security frames are proposed as sub-securitisation frames, and each sub-frame preliminarily re(de)fined. The final definitions of these two sub-frames are, however, not detailed in Chapter 3. Instead, they are derived in the latter half of Chapter 4, following a critical review of the manner in which such frames have been defined in the existing literature.

In general, Chapter 4 provides an overview of the existing literature that was relevant to this research project. Given the various streams of literature that were contended with, the chapter is broken into three major sections – the first of which discusses literature pertaining to climate communication. More specifically, the first section focuses on works concerned with (1) the media's role in promoting pro-environmental behaviour and policies and (2) the media's influence on the public policy-making process. Framing theory in the context of climate communication is also discussed. The second section briefly presents various scholars' instantiations about the (possible) policy implications of framing climate change as a threat to national and human security, respectively. The final section provides a basic critical review of some of the scholarly works that have defined a securitisation frame in general or a national and human security frame, in particular. It is in this section that an argument is made for the refinement of the existing definitions of such frames.

The actual refinement of an existing securitisation frame (that of Vultee, 2011) and a national and human security frame (e.g., Schäfer *et al.,* 2016; Feldman *et al.,* 2017 and Bolsen & Shapiro, 2018) features in the final section of Chapter 4. This refinement is informed by the discussions of Chapter 3. The final definitions are then presented at the end of Chapter 4, along with the coding sheet that was used to code the newspaper articles, and so carry out the necessary frame and content analyses that informed this research project.

The fifth chapter of this research report consists of three main sections. Each section presents the targets related to one of the four research objectives as well as (where applicable) specific trends or results that the researcher expected to see in the data. The data is then presented, and the extent to which the expected trends were observed (if at all) explored. Additionally, the reasons for the trends' emergence or lack thereof are expounded upon. Other identified trends or peculiarities are also underscored.

Finally, Chapter 6 begins with a reflection on the assumptions, method and results of the research and the overarching conclusions reached. The chapter concludes with a summary of the key insights that can be taken from the research and the presentation of a list, informed by discussions in previous chapters, of possible future research avenues.

In summary, the structure of this research report is as follows:

- Chapter 1: Introduction
- Chapter 2: Concerning Methods & Methodology
- Chapter 3: Understanding 'Security' – A Conceptual Framework
- Chapter 4: Literature Review
- Chapter 5: Results of Framing and Content Analyses and Survey
- Chapter 6: Conclusion(s), Reflection(s) and the Way Forward

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Chapter 2: Concerning Method and Methodology

"All research questions, methodologies, conceptual frameworks, and fieldwork parameters are context specific."

—*Saldaña (2013: 2)*

2.1 Introduction

In the article *Qualitative news frame analysis: a methodology,* Linström and Marais (2012) highlight seven steps that can be followed to conduct news frame analysis – which they refer to, following Wimmer and Dominick (2006), as a form of "qualitative content analysis" (Linström & Marais, 2012: 25). The seven steps involve:

1. Choosing a specific medium (e.g., newspapers, radio, television).
2. Determining a time frame.
3. Drawing a sample.
4. Identifying the unit of analysis; in other words, specifying whether individual words, phrases, sentences or entire articles will be analysed.
   - Linström and Marais emphasise that when it comes to news frame analysis, "the unit of analysis…often is individual news articles" (ibid., 29).
5. Selecting the "frame typology" (ibid.), i.e., selecting the news frames to be analysed.
   - If a deductive approach to frame analysis is applied, the news frames would be "standard news frames identified in previous framing analyses" (ibid.). In other words, the news frames would be those that feature in an existing body of literature.
   - On the other hand, if an inductive approach is adopted, the researcher would, firstly, analyse the articles individually and code them using open coding[15]. Secondly, the researcher would go back to all the coded articles and begin to note down common words, phrases, ideas *etc.,* which they would group thematically and in so doing – in the third instance – be able to identify and define emerging frames.
6. Providing definitions of the selected news frames (this step only seems applicable if a deductive approach is applied).
   - Definitions are usually provided in the form of a codebook.
7. Identifying the news frames, i.e., analysing individual articles and completing a code sheet for each.
   - If a deductive approach is applied, a predetermined codebook is used to guide the coding process and identification of news frames.

As is evident from the steps detailed above, coding and analysis (step 7) can only occur once various parameters are defined and, so, an extensive "groundwork…laid" (ibid., 30).

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[15] Open coding, also known as initial coding, is an open-ended approach that involves "breaking down qualitative data into discrete parts, closely examining them, and comparing them for similarities and differences" (Saldaña, 2013: 100).

Although adopting different terminology from that of Linström and Marais (2012), in the chapter *Content Analysis: Methods for Assessing Climate Change Communication and Media Portrayals*, Metag (2016) details a similar method for conducting frame analysis. Moreover, Metag (2016) corroborates Linström and Marais' (2012) instantiations in terms of the particular parameters that must, indefinitely, be defined early on in a project to enable the actual analysis to commence. Indeed, Metag (2016) states that researchers usually determine the sampling and coding units after creating a broad research question/hypothesis (see Fig. 2.1). Sampling units are the inclusion criteria and refer to:

- the media type (what Linström and Marais (2012) call the medium);
- the country in which the study is conducted;
- the specific media outlets whose reports shall be analysed (i.e., which newspapers' / radio stations' / news channels' reports are to be analysed) and;
- the period for which the analysis will be carried out.

Coding units refer to *what* will be coded and analysed. Coding units could be statements, images, phrases, or whole articles. In this regard, what Metag (2016) refers to as a coding unit, resembles that which Linström and Marais (2012) call the unit of analysis.
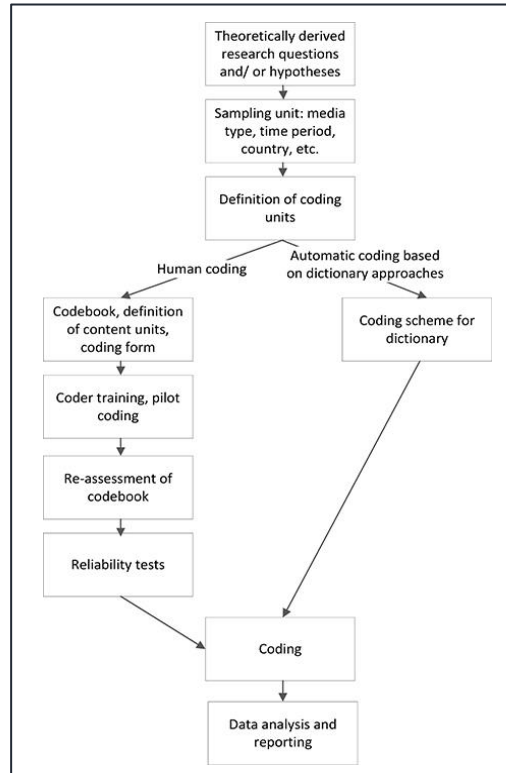
Figure 2.1:   Typical steps involved in qualitative content analyses. Note that determining specific sampling and coding units are necessary steps. *Source*: Metag (2016: 4).

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Once the sample and coding units have been decided upon, Metag (2016) states that data can be collected. Whereas Linström and Marais (2012) specify this as the third step in their seven-step model, Metag (2016) only states that data collection needs to occur prior to the creation of a codebook and, obviously, prior to performing any coding and analyses. Moreover, whilst Linström and Marais (2012) hardly elaborate on this step, Metag (2016) – guided by a review of the literature concerned with climate change communication and frame analysis – proceeds by underscoring that "most studies retrieve their material from (online) databases" (ibid., 5); the most popular databases being LexisNexis, ProQuest, and Factiva.

A possible reason why Linström and Marais (2012) do not expound upon the third step in their model may be that they assume the data will be retrieved directly, in either physical or digital form, from the archives of the newspaper outlets being analysed[16]. Metag (2016), on the other hand, highlights that data is available through other avenues. There are, thus, various options available to researchers looking for data and choices that need to be made. Indeed, these additional avenues mean that a researcher must investigate and decide how and from where data can best be collected.

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Using the language introduced in the discussion above, the researcher wishes to point out that the frame typology (securitisation, human security and national security frames) and coding unit/unit of analysis of this study (individual newspaper articles) have already been determined in Chapter 1, along with the following sampling units:

- the country that the research and analyses would be carried out in, and apply to (South Africa)
- the type of media to be analysed (print newspapers)

That being said, two additional sampling units are yet to be adequately specified: (a) the time period for which the analysis was conducted and (b) the particular newspapers analysed. Additionally, details concerning how and from where the data sample (newspaper articles) was retrieved are yet to be outlined. Seeing that, according to both Linström and Marais (2012) and Metag (2016), the specification of these various parameters usually comprises one of the initial steps involved in conducting frame/content analysis, it is necessary to specify them before proceeding any further. Consequently, the following section does just that. After specifying the

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[16] Or, perhaps, the archives of a national library.

parameters a to c, the chapter proceeds by discussing the methods and methodologies followed to meet three of the four objectives (RO1-RO3) presented in Chapter 1.

2.2 Additional parameters

2.2.1 Time period

The frame and content analyses that may help meet RO1 were conducted on articles dating back to 2012. Initially, the researcher had decided to conduct the analyses on articles dating back to 1998. The reason for this decision was that 1998 was the year in which the National Environmental Management Act (NEMA, 1998) – South Africa's first form of environmental legislation after apartheid – came into effect. Unfortunately, 3 November 2011 was the earliest date that articles from at least two of the three chosen newspaper outlets were available from two readily accessible, electronic databases, namely SA Media and PressReader. Preferring to analyse all the articles published by an outlet in a specific calendar year – so that some comparisons between years can be made – the researcher decided to look at articles dating back to 1 January 2012. This preference also led the researcher to choose 31 December 2020 as the cut-off date for considering news articles that were more recently published. To explain, given that data analysis and this report had to be completed in the latter half of 2021, it would have been impossible to analyse all the articles published in 2021 whilst keeping within the time frame allowed for a project of this nature.

2.2.2 Newspapers (newspaper outlets)

Following Carvalho's (2007) claim that articles sourced and analysed from two or more newspapers are likely to represent different ideological/political positions, the decision was taken to source and analyse articles from more than one newspaper. According to Metag (2016), researchers choose the newspaper outlets whose articles they will perform content analysis on by making recourse to "readership and viewing figures" (ibid., 6). The reason for this is that such figures "indicate the reach of a media outlet" (ibid.). Deciding to follow this method, the researcher consulted the Publisher Research Council's (PRC) biennial Print Audience Measurement Survey (PAMS) (2019). The PAMS helped the researcher identify which English-medium, South African newspapers are distributed nationally (see Table 2.1) and have the highest readership figures (see Fig. 2.2).

Table 2.1: Information pertaining to South African newspapers that are published in English and distributed nationally. *Sources*: PAMS (PRC, 2019); Arena Holdings (2021); Independent Media (2021a; 2021b); Karjieker, 2021; Media24 (2021); Naspers (2021) and Sekunjalo Group (2021).

National Newspaper	Format	Average Issue Readership (000s) (PAMS 2019)	Frequency of Publication	Publisher	Owner
Business Day	Broadsheet	120	Weekdays	Tiso Blackstar Group	Arena Holdings (Pty) Ltd.
City Press	Broadsheet	1552	Weekly (Sundays)	Media24 Holdings (Pty) Ltd	Naspers Ltd.
Daily Sun	Tabloid	2974	Daily	Media24 Holdings (Pty) Ltd	Naspers Ltd.
Mail & Guardian	Compact newspaper	465	Weekly (Fridays)	M&G Media (Pty) Ltd	M&G Media (Pty) Ltd
Sowetan	Tabloid	629	Daily	Tiso Blackstar Group	Arena Holdings (Pty) Ltd.
Sunday Independent	Broadsheet	151	Weekly (Sundays)	Independent Media	Sekunjalo Investment Holdings
The Star	Broadsheet	249	Daily	Independent Media	Sekunjalo Investment Holdings
The Sunday Sun	Tabloid	1999	Weekly (Sundays)	Media24 Holdings (Pty) Ltd	Naspers Ltd.
The Sunday Times	Broadsheet	2742	Weekly (Sundays)	Tiso Blackstar Group	Arena Holdings (Pty) Ltd.
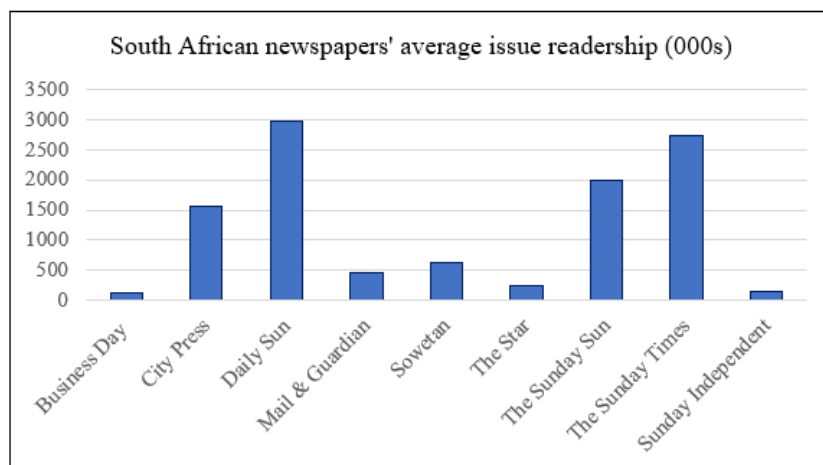
Figure 2.2: Average Issue Readership (AIR) of South African newspapers that are published in English and distributed nationally. *Source*: PAMS (PRC, 2019).

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Based on the data above, *City Press*, the *Sunday Times* and the *Daily Sun* were chosen as the only South African print newspapers from whence a sample of articles were sourced and analysed. Although not all of these newspapers have the highest readership figures, they were selected because they also met at least two of the four criteria outlined by Schmidt *et al*. (2013) to identify leading newspaper outlets whose articles frame analysis can be conducted on. The four criteria are that the newspaper must (1) be published daily, (2) include national and international coverage, (3) have a wide circulation, and (4) be characterised by high journalistic standards.

There are three further reasons why the three newspapers specified above were selected. Firstly, combined, their readership is more representative of the South African population (PRC, 2019). Secondly, the researcher sought to include a more or less reputable tabloid newspaper (the *Daily Sun*), seeing that this has hardly been done in existing literature (Metag, 2016)[17]. Finally, the researcher's choice of newspapers was shaped by the availability and accessibility of data (i.e., individual newspaper articles published between 2012 and 2020). This final point is further elaborated upon below.

2.2.3 Retrieving data

Initially, the researcher wanted to obtain data directly from the archives of the newspaper outlets selected. However, before reaching a firm decision, the researcher resolved to send emails to various newspapers (not just the three initially chosen) to check if it was possible to gain access to their archives (see Appendix 1). Only a response from the Mail & Guardian was received. The respondent stated that their digital archive was not complete and that the hard copies of news articles stored in their offices were not accessible. The reason for this was that the offices were closed, and everyone was still working remotely due to the COVID-19 pandemic. Although the Mail & Guardian respondent recommended that the researcher visit the National Library in Pretoria or Gauteng City/Public Library in Johannesburg, as they house copies of South African newspapers, the researcher could not pursue these avenues due to COVID-19 travel restrictions. Even when restrictions were lifted, the researcher preferred to be cautious and search for other avenues before travelling to the said

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[17] Studies concerned with the coverage of climate change by print media sources predominantly analyse "elite press coverage" (Metag, 2016: 5). Only a few exceptions (e.g., Boykoff, 2008b) analyse the content of tabloids.

libraries. Consequently, the researcher turned to the electronic databases, freely accessible through the University of Pretoria's Library's subscription services.

After some research and investigation, SA Media and PressReader were chosen as the two electronic databases from whence data (digitised print newspaper articles) was to be retrieved. These were the only electronic databases that (1) were readily accessible to the researcher *and* that (2) explicitly granted the researcher permission to use the data they have available for the purposes of this research project. To elaborate on (2), in order to obtain ethical clearance for the research project, the researcher had to, *inter alia*, clarify whether any special permissions had to be granted before data from the initially identified databases (LexisNexis, SA Media, PressReader) could be downloaded and analysed. In order to do this, the researcher – acting on advice from specialists at the University of Pretoria's Library – decided to contact the database vendors directly.

Having obtained the email addresses of the owners of various databases, the researcher sent emails – with a 'Letter of Intent and Request' attached – to the owners of the following databases: SA Media, PressReader and NewsBank. In this regard, it should be noted that:

- Although the initial research proposal – guided by the method highlighted by Metag (2016) – stated that the researcher would use LexisNexis, the researcher did not contact the owners of this database. This was because South African newspaper articles were no longer directly accessible through this particular database, using the library's current subscription. The final research agenda, then, excluded LexisNexis.
- NewsBank was identified as an additional database that could be used, seeing that it has archived material from the *Sunday Times* (one of the three newspapers that the researcher intended to study).
- Three official 'Letters of Intent and Request' were sent to each of the three databases (see Appendix 2).
- A summary of the correspondence between the researcher and each of the databases is provided below.

The correspondence between the researcher and the databases indicates that only PressReader and SA Media granted the researcher permission to use their respective databases and the content (news articles) contained therein. NewsBank did not grant the researcher permission to use their database as the researcher intended to use Atlas.ti[9] to help code the content retrieved from the database. NewsBank characterised this as a form of data mining – something that, in terms of their policy, is not allowed to occur outside of a controlled environment that they must set up for clients. This option is not free, nor is it available to users

of the current version of the University of Pretoria's Library's subscription to NewsBank's services. Hence, this avenue was not pursued further.

Although SA Media granted the researcher permission to use their database, they made it clear that the researcher will not be able to access articles published by certain newspapers. These newspapers included *Business Day*; *Daily Dispatch*; *Financial Mail*; *Herald Times*; *Rand Daily Mail*; *Saturday Dispatch*; *Sowetan*; *Sunday Times*; *Sunday World*; *The Herald*; *The Times* and *Weekend Post*. The reason for this was that SA Media was still negotiating new terms of use with these newspapers and were requested by these newspapers to take down/block access to their digitised content (newspaper articles) up until new agreements had been reached and put in place. In the end, then, the relevant persons at SA Media could only grant the researcher permission to access articles published by *City Press* and the *Daily Sun*.

To recapitulate the discussion thus far:

- The researcher was granted permission by the owners of PressReader and SA Media to use their respective databases and the content contained therein for the specific purposes of the research project.
- Through SA Media, the researcher could access articles from *City Press* (2012-2020) and the *Daily Sun* (2015-2020).
- Through PressReader, the researcher could access articles published by the *Sunday Times* (2012-2020).
- The researcher used both PressReader and SA Media for the purposes of this research project.

Having now completed the necessary step of delineating the three additional parameters that were not specified in Chapter 1, it is possible to conclude this section. The following section, as previously stated, specifies the methods and methodology used to meet three of the four objectives (RO1-RO3) outlined in Chapter 1.

Before moving on to the next section, it is worth taking a brief moment to acknowledge something that has become apparent from the discussion thus far. This is that, true to the quote at the beginning of this chapter, this research project's parameters, method, and methodology were all a product of the constraining and enabling factors of the spatio-temporal *milieu* within which the research was carried out (Saldaña, 2013).

2.3 Methods and methodology

2.3.1 RO1

- **RO1:** To assess the prevalence of a broad securitisation frame, national security frame and human security frame in climate-related articles published by South Africa's print newspapers between 2012 and 2020.

2.3.1.1 Data collection

In their analysis of the extent to which securitisation language is mobilised in climate change reporting in nine non-Western countries (including South Africa), Schäfer *et al.* (2016) adopted the overall approach taken by Schmidt *et al.* (2013) to obtain a sample of relevant articles from selected newspapers. Initially, this overall approach was to be adopted to obtain the sample of articles to be used in this research project. The reason for this was that the approach reduces the possibility of excluding relevant articles. To expand, rather than inputting words like 'climate change' and 'global warming' into the search field of an electronic database (e.g., Boykoff, 2008; Schäfer & Schlichting, 2014; Broadbent *et al*., 2016), Schmidt *et al.* (2013) used a more extensive search string that would turn out articles which, although not explicitly mentioning climate change or global warming, were concerned with the topic.

To elaborate further still, Schmidt *et al.* assumed an article was concerned with climate change when:

    a)   The word 'climate' appeared close to words associated with change, such as "change, development, warming, cooling" (ibid., 1239).

    b)   Words associated with or synonymous with climate change had been used, e.g., "greenhouse effect or global warming" (id.).

    c)   Temperature changes were mentioned in conjunction with the globe or earth, for instance (id.).

Consequently, they developed a relatively comprehensive search string to operationalise the parameters a to c directly above. The string looks as follows (note that the string has been separated into three different bullet points only to show which parts of the string correspond to which parameter (a-c) mentioned above):

- **Corresponding with a):** "(climat* W/5 (chang* OR catastroph* OR disaster* OR transform* OR adjust* OR trend* OR warm* OR heat* OR cool* OR variab*)) OR (greenhouse* W/3 effect*) OR…" (id.).

- **Corresponding with b):** "((global* OR earth* OR world* OR international* OR hemisphere*) W/5 (warm* OR heat* OR cool* OR chill*)) OR…" (id.).

- **Corresponding with c):** "((temperature* W/5 (global* OR earth* OR world* OR international* OR hemisphere*) W/8 (increas* OR rising* OR rise* OR decreas*))." (id.).

Unfortunately, the two electronic databases that the researcher had explicit permission to access did not allow for such a complicated yet comprehensive search string to be used. As such, the researcher, although cognisant of the drawbacks of such an approach, decided to use the phrases "climate change" and "global warming" to search for articles accessible through SA Media and PressReader, and so obtain (download) a sample of articles relevant to this research project.

2.3.1.2 Data cleaning, processing, and analysis

Once the climate-related articles were downloaded, the researcher combed through them manually to ensure relevance. The relevant articles were then copied to a project board in Atlas.ti[9]. With the aid of Atlas.ti[9], the researcher sorted the articles into two broad pools, depending on whether they just mentioned climate change or were directly concerned with climate change. Looking at both pools independently, the researcher looked for the use of securitisation language to identify instances where an overarching securitisation frame was used. In this regard, the search string that Schäfer *et al.* (2016) created to identify securitisation language was somewhat useful. The search string looked as follows:

- "armed, (armies OR army), attacks, clash*, (conflict OR conflicts), confrontation, danger*, (fear OR feared OR fears), fighting, frightening, militar*, (risk OR risks), security, soldier*, tension, threat*, (violence OR violent), (war OR wars)" (Schäfer *et al.,* 2016: 91).

The above search string, however, does not contain all relevant securitisation words and language. Indeed, by looking for synonyms of the words in the search string, the researcher could expand the search string. A further expansion of the string was facilitated by investigating which words were most frequently employed in the climate-related articles used to create the survey that informed this research project's findings. The final search string that was operationalised looked as follows:

- "armed, (armies OR army), attacks, clash*, (conflict OR conflicts), confrontation, danger*, (fear OR feared OR fears), fighting, frightening, militar*, (risk OR risks), security, soldier*, tension, threat*, (violence OR violent), (war OR wars)" (Schäfer *et al.,* 2016: 91). **Annihilation, apocalypse, Armageddon, battle*, calamity, cataclysm, catastrophe, chaos, crisis, destroy*, destruction, disaster*, disastrous, dread, struggle, suffer*, surviv*, victim* (added by the researcher).**

This complex search string could not be directly typed into the search field of Atlas.ti[9]. To operationalise the string, then, the researcher added all the words and their inflexions to a

GoList. The researcher then used the functions available in Atlas.ti[9] to search relevant articles for all the words on the GoList. The researcher also manually searched all articles just to be sure that all the articles that used a securitisation frame were, in fact, captured. The articles that the manual and automatic search turned up were assigned a code 'sec_fr'. In this way, all the articles with this code could be grouped together and analysed further.

The researcher wishes to interject here to make something clear. On a *theoretical level*, the researcher still needs to (re)define a securitisation frame. As discussed in Chapter 1, this is done in Chapters 3 and 4. The researcher would argue, however, that the list of keywords associated with securitisation language and, thus, a securitisation frame, as developed by Schäfer *et al.* (2016), mostly suffices at a *practical level*. As such, the researcher decided to utilise this list of keywords and their corresponding search string (albeit not unaltered) to identify the use of a securitisation frame in articles concerning climate change/global warming. These points shall be raised again in Chapter 4—where the researcher presents arguments as to why the keywords and search string developed by Schäfer *et al.* (2016) are more or less adequate at a *practical level*. However, it was necessary to touch upon this here so that one understands why the researcher keeps talking about the need to re(de)fine, *inter alia*, a broad securitisation frame, but primarily uses an existing definition of a securitisation frame to carryout frame and content analyses.

Returning to the discussion of method at hand, once all articles that employed a securitisation frame were identified, they were coded and analysed further to identify the use of the proposed sub-securitisation frames (see Chapter 1), namely, national security and human security frames. Recall that, although Schäfer *et al.* (2016) also sought to identify such "dimensions of securitisation" (ibid., 13), their approach in this regard was not used due to – what the researcher deemed to be – certain limitations. To repeat what was discussed in Chapter 1, once Schäfer *et al.* had a pool of articles that used securitisation language, they searched for explicit mentions of 'national security' or 'human security' in those articles. This was done to determine the extent to which these two frames or "dimensions of securitisation" (ibid., 13) were prevalent in print newspaper articles. The issue with this method is that it is actually quite limited in its ability to reveal the extent to which national/human security frames have been used in climate-related articles. It does not consider climate-related articles that may be concerned with national security or (dimensions of) human security, but which do not explicitly mention phrases like national security, human security or human security's associated

concepts, e.g., environmental security and food security. On account of this, the approach adopted by Schäfer *et al.* to identify security dimensions, or frames, was not used.

Instead of Schäfer *et al.*'s approach, a "directed content analysis" approach[18] (Hsieh & Shannon, 2005: 1281) was used to assess the prevalence of human and national security frames in climate-change-related articles. This approach involved:

a) Identifying certain variables or concepts as coding categories (in this study, the identified coding categories are national security and human security);

b) Using existing theory, literature reviews, and pre-existing, generic frames to broadly define each category;

c) Coding the data (which, in this study, would be the sample of articles) using the predetermined coding definitions, such that they can be placed in one or more of the coding categories identified.

In adopting this approach, the researcher had to develop basic and preliminary coding definitions for the coding categories of human security and national security, respectively. This endeavour was informed by a literature review (Chapter 4) and a theoretical discussion of national and human security (Chapter 3). Once the preliminary coding definitions were created, a coding sheet was drawn up and referenced as each article from the obtained sample was combed through and manually coded for multiple frames using Atlas.ti[9]. Subsequently, the articles were placed, where applicable, into either or both categories (human security and/or national security) defined. At the end of this practice, the researcher had an indication of – and was able to report on – the prevalence of national and human security frames in climate-related articles in South Africa's print newspapers. Moreover, seeing that the sample included articles published over nine years (2012-2020), the researcher was able to make cursory statements about the temporal development of the use of each frame and about how noteworthy events (e.g., the 2015 Paris Agreement and the COVID-19 pandemic) might have influenced their usage.

Having discussed the methods followed to meet RO1, this section can be drawn to a close. Before doing so, however, it is necessary to make two final remarks in relation to what has been presented in this section. Firstly, because the coding of articles was done manually, but with the aid of computer-assisted qualitative data analysis software (CAQDAS), i.e., Atlas.ti[9], the researcher's overall approach to frame and content analysis can be described as

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[18] Also referred to as a "deductive approach" (Linström & Marais, 2012: 30; Saldaña, 2013: 65) and a "manual holistic approach" (Schäfer & O'Neill, 2017: 10).

"semi-automatic" (Schäfer & O'Neill, 2017: 10), rather than automated or manual (see Metag, 2016 and Schäfer & O'Neill, 2017). Secondly, a summary of the steps that were followed to meet RO1 can be found in Fig. 2.3.
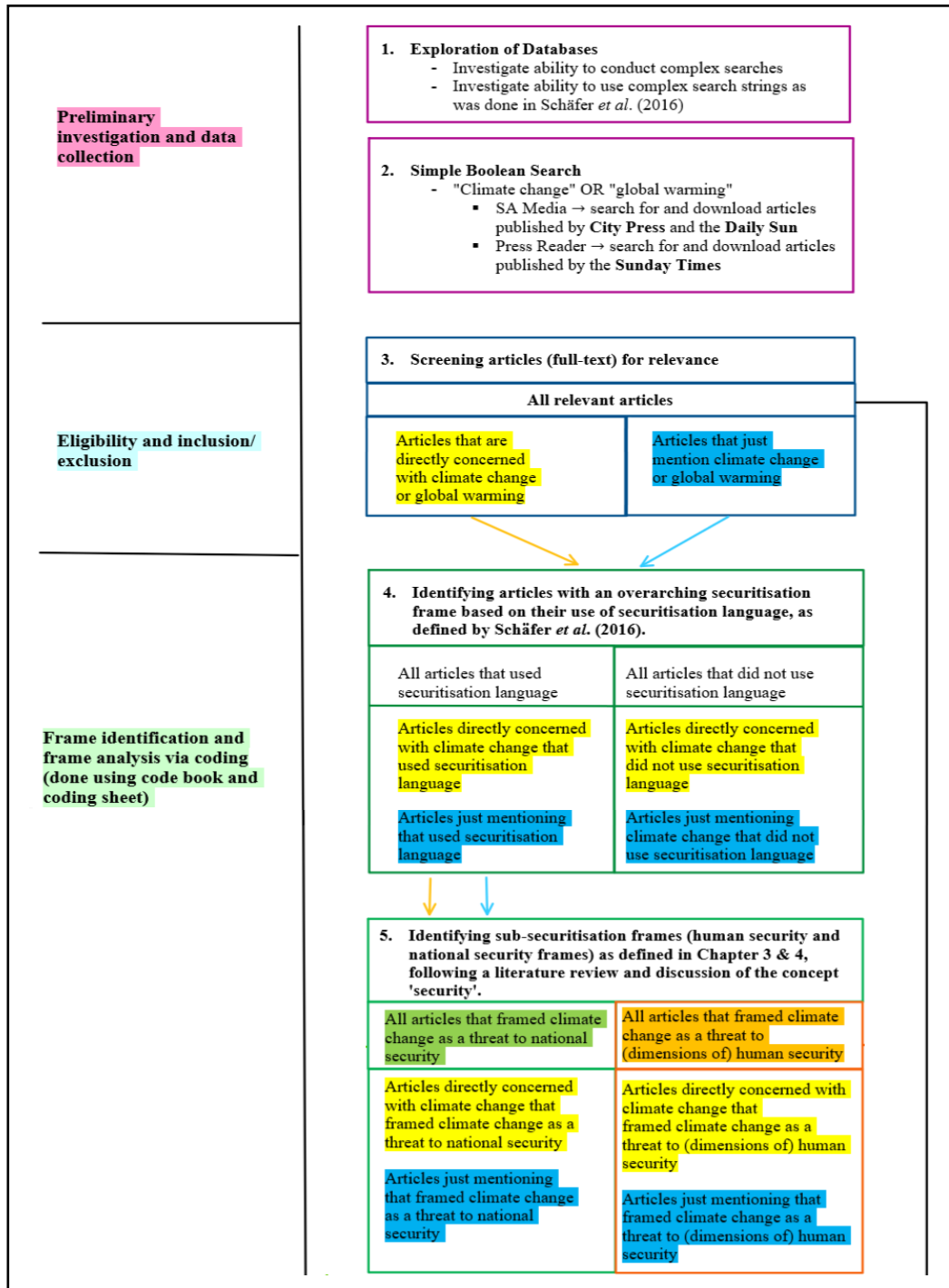
Figure 2.3:   Summary of the steps used to conduct the frame and content analyses that informed this research project's conclusions. *Adapted from*: Metag (2016) and Biesbroek *et al.* (2018).

2.3.2 RO2 and RO3

- **RO2:** To investigate and evaluate South African readers' preferences for articles that framed climate change as a threat to national security versus ones that framed climate change as a threat to human security (including economic, food, health, environmental, personal, community and/or political security).
- **RO3:** To gauge the extent to which South African readers show a preference for climate-related articles (employing either a national security or human security frame) over articles concerning other topics.

2.3.2.1 Data collection

In order to find out if the use of seven different frames[19] to discuss climate change will affect the time an individual spends reading a climate-related news article, Feldman and Hart (2018) conducted two news browsing experiments. Qualtrics survey software was used in both experiments. Participants for both studies were recruited from "a national paid opt-in online survey panel of U.S. adults through Qualtrics Panels (Study 1 N=630, Study 2 N=1,544)" (ibid., 511). There was no overlap in participants of experiments 1 and 2.

Feldman and Hart's first experiment presented participants of various political persuasions with the heading and lead paragraph of articles concerning climate change, each of which employed a different frame. The participants were then asked to select and read their preferred article about climate change. Once a participant chose an article, the time spent reading it was recorded. After an article was read, the participant could go back to the initial list of articles and select another one. All participants were only given seven minutes to select and read articles. Thus, it was assumed that the ones chosen would be the ones that most resonated with each of them.

The results of the above-described experiment revealed that the climate change article that used a public health frame was the one that participants spent most time reading. To quote Feldman and Hart (2018), "the health frame resulted in significantly greater reading times than the economic, morality, and security frames" (ibid., 514). To explain this finding, Feldman and Hart argued – with reference to studies conducted by Maibach *et al.* (2010) and Myers *et al.* (2012) – that persons more readily engage with articles highlighting the health effects of climate change because these effects are more immediate and personal than the global environmental effects highlighted in articles that employ an environmental frame. Overall,

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[19] I.e., an economic, environmental, national security, morality, public health and conflict frame.

based on the hitherto-discussed results of experiment 1, the researchers stated that their results "offer modest support for the idea that framing climate change in a way that highlights its human health risks, can stimulate exposure to climate change news relative to news framed in other ways" (ibid., 520). They thus asserted that employing a health frame in climate-related articles may influence public engagement with the issue of climate change (id.).

In addition to an overall preference for climate-related articles employing a health frame, the researchers discovered that both liberal-Democrats and moderate-Independents "spent significantly more time" (Feldman & Hart, 2018: 515) reading articles that employed a human health frame, than those that employed a morality, economic, and national security frame. Moreover, liberal-Democrats, specifically, were found to have "spent significantly more time" (id.) reading articles that employed a conflict frame than a morality, economic, and national security frame. On the other hand, conservative-Republicans showed no significant difference in the time spent reading differently framed climate-related articles. Despite these findings *within* groups of a particular political persuasion, an analysis of the data *between* groups suggested that "the overall effects did not differ statistically between ideological groups" (id.). Hence, the researchers also cautiously concluded that partisanship or political leanings are not significant factors influencing article and frame choice.

For their second experiment, Feldman and Hart (2018) followed the same procedure used in experiment 1. Except, this time, participants were presented with one climate change news story and several "distractor stories" (ibid., 510) concerning other issues (e.g., sports, politics and popular culture). This experiment was specifically designed to simulate a more realistic scenario where persons are faced with climate-related news in conjunction with news concerning other issues and topics.

The results of Feldman and Hart's second experiment revealed that framing effects were weaker than those in experiment 1. When a participant selected a climate-related article from various distractor articles, the time spent reading it did not vary significantly with the frame employed. Feldman and Hart (2018) supposed that this was because, when news content is varied, the topic of the articles (e.g., climate change, entertainment, business, and economy) becomes "more salient than the frame used" (ibid., 519). On account of this, frame effects are dampened in realistic scenarios where persons encounter various news articles concerning various topics. Basing their concluding remarks on such observations, the researchers state that

their results point to the "limits of framing effects" (id.) and argue that "framing may not be the panacea hoped for by some climate change communication scholars and practitioners" (id.).

While Feldman and Hart's second experiment indicated that the frame of a climate-change article did not affect the time participants spent reading it, the researchers found that the participants' political orientation did. To explain, the data that Feldman and Hart (2018) obtained and analysed suggested that, when they chose to read a climate-related article, "liberal-Democrats spent significantly more time" (ibid., 517) reading those articles that employed a health and national security frame than moderate-Independents. Furthermore, "liberal-Democrats spent significantly more time" (ibid., 516) reading those articles that employed a health and national security frame than conservative-Republicans did. Still further, when analysing liberal-Democrats' reading behaviour, the researchers found that they were more prone to reading a climate-related article that employed a national security frame than one that employed a conflict frame. Interestingly, the researchers established the exact opposite pattern in experiment 1. Seeing that the researchers used the same articles' headlines and lead paragraphs in experiment 1 and 2, they concluded that the difference in their findings between the two experiments "suggests that for some types of climate stories, the context of other available news may prime or depress interest in these stories" (ibid., 518).

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Guided by Feldman and Hart's method, two quick experiments were conducted – using free Qualtrics Survey Software – to meet RO2 and RO3. The first experiment required participants (N=20) to read the heading, sub-heading and lead paragraph of various articles about climate change and choose the heading, sub-heading and lead corresponding to the article they would most want to read in full. The headings, sub-headings and lead paragraphs that the participants were presented with were obtained from one article that framed climate change as a threat to national security and seven other articles that framed climate change as a threat to each of the seven dimensions of human security.

Once participants selected their preferred heading, sub-heading, and lead, they were asked a couple of questions regarding their article choice. After this, the above-described process was repeated a second time with a new set of headings, sub-headings and lead paragraphs. This was done to test whether participants would choose an article with the same frame as the one they

chose in the first round. In other words, it was done to test whether they would consistently select articles that adopted a particular frame.

Initially, the researcher intended to source the articles to be used in the two rounds of the first experiment from the pool of articles that were obtained and analysed to meet RO1. Given that the Ethics Committee wanted to see the final survey before permitting the researcher to commence with the research project as a whole[20], this was not possible. Instead, the final survey (see Appendix 3)[21] was compiled using the heading, sub-heading and lead paragraph of articles which the researcher extracted from print newspaper articles whilst doing preliminary searches for articles that fully met the criteria below:

- The article was published by a South African newspaper that is printed in English and distributed nationally.
- The article is accessible through PressReader or SA Media.
- The article used a national security frame or (one or more of the seven aspects of) a human security frame when reporting on climate change.

With regards to the third criterion, it should be noted that researcher used an essential piece of literature on human security – the United Nation's Human Development Report (HDR) of 1994 – to help define and distinguish the seven aspects of human security and create a coding criterion for each. These criteria were used to identify climate-related articles that used specific human security frames. The researcher unpacks precisely how the coding criteria were created after a discussion of the content of the HDR. This discussion features in Chapters 3 and 4.

In the second experiment, the same participants from experiment 1 were presented with various headings and sub-headings relating to various topics. Of these, only one heading (and its corresponding sub-heading) was from an article related to climate change. The other headings and sub-headings were from actual articles concerned with health, national politics, foreign affairs, lifestyle (art/entertainment/pop-culture/beauty), economic or business issues and, lastly, social issues. The researcher sourced the heading and sub-heading of these

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[20] See Appendix 11 for proof that the research project was approved by the Research Ethics Committee and that ethical clearance was obtained before the research was carried.

[21] The actual survey can be viewed and interacted with using the following preview link: https://pretoria.eu.qualtrics.com/jfe/preview/SV_cGcbctjpj6QOUoC?Q_CHL=preview&Q_SurveyVersionID=current.

distractor articles from the same newspaper issues that the articles pertaining to climate change were sourced from.

Once participants skimmed through the list of (sub-)headings, they were asked to select the one heading (and sub-heading) corresponding to the article they would have been most interested in reading. When the participant did this, they were taken to a new page containing another list of articles; the climate-related article in this new list used a different frame from the one encountered on the previous page. This process was repeated, with the heading and sub-heading of a different climate-related article (that used a different security frame) being presented amongst a new list of distractor stories each time (see Appendix 3). The time a participant took on each page was also recorded. This provided an indication of whether the participant did indeed skim through the list of (sub-)headings and select the one that immediately appealed to them – as would be done if one were reading an actual newspaper (Feldman & Hart, 2018) – or whether they read through the list thoroughly and perhaps looked for and selected the article concerned with climate change since they knew the study was concerned with this topic.

At this point, two additional details in terms of the survey and survey participants must be given. Firstly, since most of the readers of the three newspapers analysed in this research project are aged 25 – 49 years (PRC, 2019), the participants in both experiments were from this age group. Secondly, the participants (N=20) were recruited through WhatsApp and Facebook and through a "snowball sampling technique" (Kirchherr & Charles, 2018). To elaborate, with regards to Facebook, the researcher created a post asking friends and colleagues to consider partaking in a survey for research purposes (Appendix 4). The post contained a link to a formal invite containing an information sheet (Appendix 5) that described the research project, outlined its aims and objectives, highlighted the need for primary data and explained why it is relevant to the research project. Apart from the aforementioned pieces of vital information, the information sheet also specified that the survey would be available for two months (from 30 April 2021 – 30 June 2021), after which the survey link would be disabled. The link and QR code that could be used to access the Qualtrics Survey was placed in the invite and information sheet. At the very end of the information sheet, readers were asked to share its content with any persons in their network who may be willing to participate in the survey.

When it came to WhatsApp, the researcher used the status function to invite friends and colleagues to partake in the survey (see Appendix 6). Due to character limits, substantial information about the survey and project could not be provided directly. As such, the researcher

included links to the survey and an information sheet in her status (see Appendix 6). The information sheet was the same as the one that the Facebook post provided a link to.

It should now be added that the survey was designed such that, once participants clicked on the survey link, they were taken to a welcome page. Here, the participants were required to complete a consent form (see Appendix 7) before accessing the survey. In addition to a consent form, the welcome page was designed to include a copy of the information sheet as a PDF attachment. Initially, the researcher placed the content of the information sheet directly on the welcome page. This required participants to read through the content of the sheet, click 'next', read and fill out the consent form, and click 'next' again. All of these steps had to be followed before they could access the survey. The four persons who agreed to take the survey and provide feedback during a trial phase described this process as tedious and arduous. They thus recommended that the sheet be supplied as an attachment instead. One participant also added that this could help minimise the time and effort a participant has to spend accessing the survey. Noting that participants have short attention spans, the participant also argued that attaching the information sheet might help ensure that the respondents complete the survey and spend the majority of their time and energy responding to the survey rather than trying to access it. It is for these reasons, then, that the information sheet was included as an attachment.

In keeping with standard ethical procedures, the information sheet stated, *inter alia*, that:

- Participants would not incur any costs whilst partaking in this study.
- Participants would not be paid or rewarded in any way.
- There was no foreseeable discomfort or risk associated with the study.
- Participants could skip a question if they felt it was too sensitive.
- Participants could withdraw from the survey session or the study as a whole without any consequences.
- Participants could contact the researcher and/or her supervisor to raise concerns or ask for the results of the study.

Another aspect of the design of the survey worth mentioning pertains to its accessibility. To prevent respondents from completing the survey multiple times, the researcher enabled a function in Qualtrics that only allows any one respondent to complete the survey once. Although respondents were urged to complete the survey in a single sitting, the researcher designed the survey so as to allow respondents who closed the survey window without completing the survey, or whose survey window was left open but inactive for up to 72 hours, to re-access their survey and pick up where they left off. If the respondent tried to access and complete the survey more than 72 hours after starting their survey session, they would be

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required to re-take the survey as their previous response would be automatically deleted after the 72-hour mark.

2.3.1.2 Data cleaning, processing, and analysis

Once 20 completed survey responses were received, the researcher imported the raw data from Qualtrics into Excel. The data was cleaned and inputted into an SPSS file. This file was created prior to data collection and was informed by the designed survey[22]. SPSS was then used to analyse the data and create visual representations of the results obtained.

2.4 Concluding remarks

With the culmination of the previous section, this chapter on method and methodology can be drawn to a close. The ensuing chapter discusses the conceptual framework upon which this research project rests. Amongst other things, it provides clarity on the concepts of securitisation, human security and national security, which have hitherto been used without much explanation.

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[22] A clean copy of the SPSS file that was set up can be access via the following link: https://drive.google.com/file/d/1w4PAHGPwsghOvTgtjYCltk_tUNiGTMtu/view?usp=sharing. Alternatively, see Appendix 8 for a screenshot of the predefined variables in SPSS.

Chapter 3: Understanding 'Security' – A Conceptual Framework

"Behind the blaring headlines of the world's many conflicts and emergencies, there lies a silent crisis – a crisis of underdevelopment…[Tackling] it requires a long, *quiet* process of sustainable human development."

—*UNDP (1994: iii – emphasis in original)*

"There is, of course, a link between human security and sustainable human development: progress in one area enhances the chances of progress in the other. But failure in one area also heightens the risk of failure in the other".

—*UNDP (1994: 23)*

3.1. Introduction

The following chapter provides a very condensed account of the evolution of the concept, "security". Such an account includes a discussion of some of the historical and theoretical underpinnings of the concepts of human and national security, respectively. More generally, the account highlights some factors that catalysed calls for the "extension" (Rothschild, 1995: 55) – or what is more often referred to in the literature as the broadening and deepening (e.g., Krause & Williams (1996); Buzan & Hansen (2009)) – of the more traditional, realist conception of security. Focusing on one such 'broadening' call – that made by the Copenhagen School – the discussion pivots to one about securitisation theory. From such a discussion, the reader should gain a general understanding of (1) what it means to securitise something, (2) what is involved in the securitisation process, (3) what is at stake when an issue is securitised and (4) what is the price that is paid for such an act, according to the Copenhagen School.

To provide a more rounded view of traditional securitisation theory, the critiques levelled against the Copenhagen School's conceptualisation of securitisation, by Trombetta (2008; 2011) and Oels (2012), are then explored. Through this exploration, it is argued, following Trombetta (2008; 2011) and Oels (2012), that the successful securitisation of an issue occurs when several securitisation moves lead to the creation and adoption – through standard political procedures – of courses of action and policies "that probably would not otherwise have been undertaken" (Trombetta, 2011: 136). This is in stark contrast to the Copenhagen School's contention that an issue is successfully securitised only when it is elevated outside the realm of everyday politics (i.e., taken out of the "normal bounds of political procedure" (Buzan *et al.*, 1998: 25)); ascribed exceptional status; and tackled using exceptional measures.

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Overall, the aim of the above-mentioned discussion of the critiques levelled against traditional securitisation theory is to justify the focus of this project. Such a justification is necessary since this project purports to deal with the securitisation of climate change in the media and its effects on the public policy-making process, and yet, in its original conceptualisation, the successful securitisation of climate change would mean that it is neither up for debate in everyday policy-making circles, nor left to be tackled by such circles.

Apart from justifying the project's focus on securitisation in conjunction with policy-making, this chapter, through its historical account of the various conceptualisations of 'security', elucidates some of the defining features of securitisation theory as well as the concepts of human and national security. These defining features are drawn upon in Chapter 4 to critically evaluate and re(de)fine existing coding definitions for a (1) securitisation frame, (2) national security frame and (3) human security frame. The resulting coding definitions enabled coding and frame analysis to be conducted on climate-related articles (Pre-requisite 2[23]), thereby allowing insights to be gleaned in terms of the prevalence of various security frames in climate-related articles (RO1[24]). In this respect, it can be stated that this chapter formed the very bedrock of the coding and frame analysis that was conducted in this research project and that informed RO1.

3.2. Brief background: International Security Studies and International Relations

International Relations (IR) as a discipline was formally introduced in 1919 at Aberystwyth, United Kingdom, with the aims of preventing a recurrence of the horrors that characterised World War I (WW1) and bringing about a more peaceful and stable world order (Baylis *et al.*, 2016). International Security Studies (ISS) is considered a sub-field of IR (see Fig. 3.1). The core assumptions of Liberalism and Realism, the dominant theories of Classical (Western) IR, have thus been influential in the field of ISS (ibid.).

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[23] As indicated in Chapter 1, Table 1.1, Pre-requisite 2 is to obtain, code and conduct frame and content analyses on climate-related articles (articles that either mention or are directly concerned with climate change) published by South African print newspapers between 2012 and 2020.

[24] As stated in Chapter 1, Table 1.1, RO1 is to assess the prevalence of a broad securitisation frame, national security frame and human security frame in climate-related articles published by South Africa's print newspapers between 2012 and 2020.

As implied in its name, 'security' is the core concept of ISS. 'Security', like justice and peace, is, however, a contested concept. According to Buzan (1983),

> "such concepts necessarily generate unsolvable debates about their meaning and application because…they 'contain an ideological element which renders empirical evidence irrelevant as a means of resolving the dispute'…" (ibid., 4).

Therefore, there is no consensus about what security is or entails. More precisely, there is no agreement when it comes to answering some of the questions that are at the heart of ISS. These questions include (a) who/what the referent object is (the thing that needs to be safeguarded), (b) who/what would be responsible for providing security, (c) what the best means of providing security are and (d) what actually constitutes a threat to security (Baldwin, 1997). Instead, due to their respective ideological assumptions and implicit theories about the world, different theoretical approaches provide different answers to these questions, thereby giving rise to conceptualisations such as – but by no means limited to – national, human, collective, regional, and economic security (Buzan & Hansen, 2009).

Figure 3.1:   Nested diagram of the relationship between the field of Political Science, International Relations, Security Studies and Strategic Studies. *Source*: Baylis & Wirtz (2016: 13).

3.3. The rise of security *qua* national security

The notion of national security emerged *en force* in the sub-field of ISS following the end of World War II (WWII) (Buzan & Hansen, 2009; Taylor, 2012). This notion of security would come to dominate up until the latter half of the Cold War period. This domination happened to such an extent that national security came to be used interchangeably with

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'security'. Buzan and Hansen (2009) and Taylor (2012) argue that the spirit of the times enabled this. Indeed, with the advent of nuclear weapons and the possibility of mutually assured destruction (MAD), politicians, policymakers, academics, and the general public were all concerned about (physical) external threats and engaged in safeguarding the nation from such threats (ibid.). It was thus only "common-sensical" (Buzan & Hansen, 2009: 12) that, at the time, 'security' was taken to mean safeguarding the nation or, more correctly, the state from external attack[25].

On account of the above-described preoccupation with national security, traditional approaches to security studies – approaches that understood security as national security and threats as external and physical phenomena – were uniquely positioned to explain and guide actions at the time. They were thus, during the period in question, the dominant approaches within ISS (id.).

Having given the historical context in which the concept of national security emerged, it is possible to move on to elucidating key aspects of this concept.

As alluded to above, national security was the concern of traditional approaches to security studies. Although a range of theoretical perspectives, including classical realism, neo-realism and liberalism, informed these traditional approaches, Traditional Security Studies (TSS) as a whole was primarily dominated by the theory and assumptions of Realism (Peoples & Vaughn-Williams, 2015). As such, its primary unit of analysis was the state, i.e., it took the referent object to be the state and its resources/interests (e.g., Morgenthau, 1951). Moreover, due to the underlying realist assumptions that:

> (1) the international system is inherently anarchical – there is no legal authority above states and to which a state can look indefinitely to settle any disputes with one another (Bull, 1977)

> (2) conflict between states is an intrinsic and everlasting feature of the international system,

external threats (threats from other states, that is) constituted (national) security threats. Accordingly, amassing national power was the *general* means for a state to deal with threats to national security (Baylis, 2014; Peoples & Vaughn-Williams, 2015). Given that, from a realist perspective, power was defined in material (militaristic) terms, building military capabilities

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[25] Although there is a difference between the concepts, from henceforth the terms 'nation', 'state' and 'nation-state' shall be used interchangeably.

were the *specific* means through which national interests, sovereignty and territorial integrity could be safeguarded (Baldwin 1997). Thus deterrence – the practice of increasing military capabilities and military posturing to discourage unwanted action, e.g., military aggression, from an external enemy (Baldwin, 1997; Mazarr, 2018) – was a dominant defence and security strategy during this time (Baylis, 2014). This was all the more so, seeing that – by implementing deterrence policies – State A would increase the insecurity of another state who, in turn, would implement similar policies, which would again increase the insecurity of State A. Consequently, opponents were implicated in a "vicious circle of security and power accumulation" (Herz, 1950: 157). This security dilemma meant that, during the period in question, "[t]hose who call[ed] for a policy guided by national security…t[ook] for granted that they will be understood to mean a security policy based on power, and on military power at that" (Wolfers, 1952: 490).

It is worth interposing here to summarise the discussion thus far. It has hitherto been highlighted that the dominant understanding of 'security' from the end of WWII up until the latter half of the Cold War period was national security. Hence, in both theory and practice, the focus was on the state's role in safeguarding its territorial integrity, sovereignty and identity, not to mention protecting – via predominantly military means – what lay within its boundaries (especially resources) from external military threats. Both this focus on national security and the utility of traditional theoretical perspectives to the study of security were called into question towards the second half of the Cold War and, even more so, during the post-Cold War period. It is to these two periods that the discussion now turns.

3.4. The broadening and deepening of traditional notions of (national) security

As the relationship between the United States and the Soviet Union matured and what was termed a bipolar world order came closer to collapsing, scholars and security practitioners started turning their attention away from the traditional notion of national security (Buzan & Hansen, 2009). More precisely, they started questioning its preponderance with military power and physical threats from other states (ibid.). Subsequently, calls were increasingly being made for the "broadening and deepening" (see Krause & Williams, 1996; Buzan & Hansen, 2009; Peoples & Vaughn Williams, 2015) of the more traditional, realist-inspired conception of security. These calls grew louder following the end of the Cold War. To be clear then, the end of the Cold War did not cause the broadening and deepening of the notion of security – this is

a "common myth" and misunderstanding, as Buzan and Hansen (2009: 4) correctly accentuate. In actual fact, the roots of the so-called broadening and deepening debate – which became much more animated following the end of the Cold War (1989) – can be traced back to several factors associated with the period before 1989.

3.4.1 Broadening

According to Buzan and Hansen (2009), great power politics; institutionalisation; key events; the internal dynamics of academic debates; and the emergence of new technologies and, thus, new "threats, vulnerabilities and (in)stabilities" (ibid., 53), were the factors that fuelled broadening and deepening debates[26]. For instance, the 1973 oil crisis, and the resulting recession, gave rise, particularly in the US, to concerns about threats to the economic power and interests of a nation. As such, literature concerning economic security emerged in the mid-1970s (id.). This body of literature, however, did not stray too far away from the traditional perspective of (national) security (id.). Whilst this body of literature acknowledged that the notion of security needs to be broadened to include economic threats, as opposed to just military threats, the referent object of security was still taken to be the state.

In addition to those calling for the traditional notion of security to be broadened to include economic threats, were those arguing for environmental threats to be acknowledged and included as another national security threat. Arguably, this thinking and the resulting body of literature was inspired, firstly, by the environmental movements that snowballed into existence in the mid-1960s, following the publication of texts like Rachel Carson's *Silent Spring* (1962)[27]. Sustainable development discourse (to be discussed in more detail below) can be seen as a second factor that inspired literature concerned with the environment-security nexus. Research in academic circles can be considered a third factor. To expand, scholars including Myers (1989; 1995) criticised the hitherto prevailing conceptualisation of national security, stating that its narrow focus on diffusing military threats made it blind to climate-change-induced threats, not to mention inadept at addressing them. Myers defended his position by linking climate change to conflict and mass migration. For example, Myers highlighted that "environmental refugees" (ibid., 18-19) – those whose way of life and livelihood have been

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[26] See Buzan & Hansen (2009) for a detailed account.

[27] In this seminal text in the field of environmentalism, Carson (1962) reflected on the dangers of pesticide use and illustrated the dark future awaiting humankind, and the natural world they are so reliant upon, if pesticide use continued unabated.

destroyed by climate change and environmental degradation – could threaten the stability of a nation and neighbouring ones.

Myers' work forms part of a still-influential approach concerning the "environment-security nexus", which studies the causal connections between environmental change and climate change on the one hand and conflict on the other (Rodrigues De Brito, 2012: 121). This approach was popularised by Homer-Dixon (1991; 1994), who demonstrated, with reference to case studies, how climate change, environmental degradation and resource depletion, through their interaction with population growth and social/economic inequality, could fuel violent conflict. Following the publication of Homer-Dixon's work, analytic studies like Myers' (1995) proliferated. Climate change thus became increasingly framed as the "new catalyst of instability" (Feeney, 2015) in a Post-Cold War era. To reiterate, this was the case given that causal links could supposedly be established between climate change and mass migration, hunger, resource depletion (Mabey, 2007; Podesta & Ogden, 2007) and, even, the total collapse of states into anarchy (Kaplan, 1994).

It has to be noted that varying levels of doubt have been expressed in relation to the views discussed thus far. For one, Adger *et al.* (2014) of the IPCC call for further research, "generally supported theories" (ibid., 773) and more hard evidence to support the causal relations between climate change and conflict. They opine that without such evidence, "[c]onfident statements about the effects of future changes in climate on armed conflict are not possible" (id.). Before moving on, it should also be stated, in passing, that the views discussed also face fierce opposition due to the policies they could justify. Such policies shall be discussed in the ensuing chapter.

Apart from research, theoretical debates and developments that unfolded in the field of ISS also bolstered propositions to broaden the traditional conception of security *qua* national security. Indeed, in *People, States and Fear*, Buzan (1983) explicitly challenged the realist assumptions upon which a traditional notion of national security rested. For instance, given the changing global context, he accentuated the need to consider non-military threats to national security. Moreover, Buzan stated that the security of a nation and region was affected not only by military factors (i.e., defensive and offensive capabilities, and the perceived intentions of other states), but also political, economic, societal, and environmental ones (ibid., 75).

Basing their arguments on a similar critique as that of Buzan, Mathew (1995), Moran (1990/91), Roberts (1990) and Weiner (1992/3), stated that issues linked to the environment, migration and human rights, respectively, also constituted threats to national security. They thus helped broaden the notion of security (see Fig. 3.2) such that external attacks from other states, through material/military means, were no longer considered the only threats to security. Their efforts, however, were not without critics. For instance, with conceptual clarity and utility in mind, Deudney (1990) warned that:

> "[i]f we begin to speak about all the forces and events that threaten life, property and well-being (on a large scale) as threats to our national security, we shall soon drain the term of any meaning. All large-scale evils will become threats to national security." (ibid., 465).

Simply put, if security means everything, it means nothing. By broadening the notion of security, the concept loses its potency and is rendered useless as an analytical tool.

To summarise this sub-section, calls to broaden the traditional notion of security sparked debates over the definition of national security – debates that became highly animated after the Cold War and that are still ongoing (Baylis, 2014). The root of these broadening calls, and the resultant debates, can be traced back to significant events along with research and developments in academia.
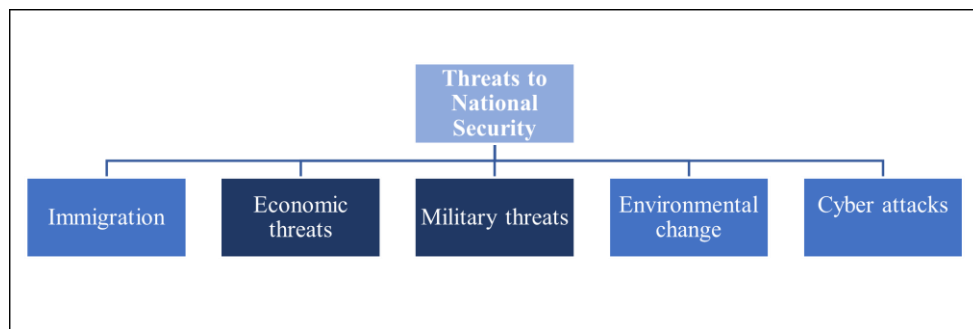
Figure 3.2:   The threats to (national) security following widening debates. *Note:* The darkest shade indicates the threats conceptualised in traditional, realist-inspired security studies.

3.4.2 Deepening

The calls to broaden the security agenda were accompanied by calls to deepen it (Krause & Williams, 1996). Whereas broadening calls were based on a recognition that military threats were just one of many threats to national security, deepening calls were based on the assertion that the individual, region or the international community (see Fig. 3.3) – rather than the state – should be the referent object(s) of security (Buzan & Hansen, 2009). Underpinning

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such assertions was the critique of a central realist assumption, which was that the state was the primary actor on the global stage and primary unit of analysis in the field of IR and sub-field of ISS. The critique of this realist assumption, which lay at the heart of traditional notions of security and approaches to the study of security, was inspired by events in the Post-Cold War era, in particular. For instance, both the primacy of the state and efficacy of traditional perspectives to the study of security was called into question by, amongst others,

(1) the advent of civil wars and intra-state conflicts (whose prevalence surpassed that of "conventional inter-state conflicts") (Acharya, 2001: 9);
(2) rapid globalisation and the economic crises of the 1990s that it is linked to (ibid.);
(3) the social dislocation and rise in global levels of poverty and unemployment caused by the 1990s economic crises (ibid.); and more generally
(4) the prevalence of issues pertaining to terrorism, migration, food insecurity, poverty, slow economic growth, droughts (ibid.).

In a context where the state's security was increasingly threatened by internal conflicts linked to social and economic issues, a notion of security and a theoretical perspective that emphasised external, military threats were ill-equipped to make sense of the new context and guide policy action. Hence emerged concepts such as human (e.g., UNDP, 1994), regional (e.g., Waever *et al.*, 1993) common (e.g., Palme Commission, 1982) and international security (e.g., Tickner, 1992; Rubenstein, 1988). These were championed by new theoretical perspectives in the field of ISS, including but not limited to Post-colonial Security Studies, Peace Research, Feminist Security Studies, Critical Security Studies, Human Security and the Copenhagen School (Buzan & Hansen, 2009). All of these perspectives challenged the state-centric notion of security and are thus referred to as "critical approaches to security studies" (Krause & Williams, 1997: vii). Cognisant of the scope of this research project and given the need to create specific coding definitions to facilitate its frame and content analyses, only the human security perspective and the views of the Copenhagen School are briefly outlined in the following sub-section.
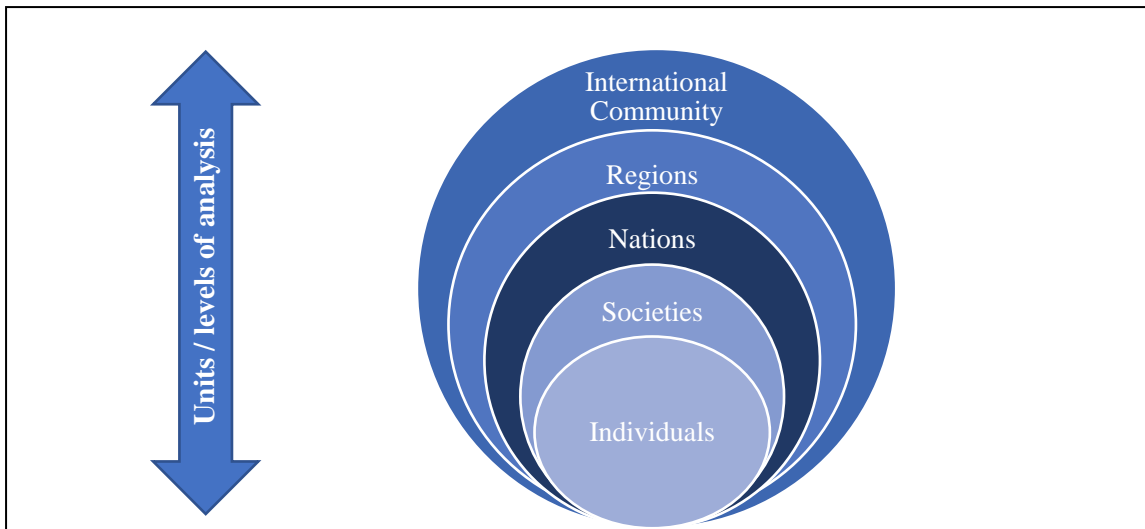
Figure 3.3:   The proposed levels of analysis and referent objects of security, following deepening debates. *Note*: The darkest shade indicates the referent object of security as per traditional, realist-inspired security studies.

3.4.2.1 Human security

The most popular conceptualisation of human security within human security discourse is that forwarded by the UNDP in its 1994 Human Development Report (McDonald, 2010). This particular conceptualisation of human security has its roots in debates surrounding not only security, but also (sustainable) development. Moreover, the conceptualisation's emphasis on the individual or human as the referent object of security was influenced by the Brundtland Commission as well as the work of development economists Amartya Sen and Mahbub al Haq (Acharya, 2001; Fakuda-Parr, 2003). This will all become more apparent following the discussions below.

In the post-war (WWII) period, guided by the assumption that economic growth was the key to rapid recovery and development, the allied nations focused on increasing production and Gross Domestic Product (GDP) (Arndt, 1987). This strategy seemed to pay off. For one, the allied nations began experiencing economic booms and sharp rises in living standards (ibid.). Hence the assumption that (economic) growth and development were synonymous seemed to be validated. However, from the mid-1960s onwards, critiques of policies/narratives that associated development with only (economic) growth emerged and proliferated (Purvis *et al.*, 2019; Joseph & McGregor, 2020). Various factors/events facilitated this flood of critique. For one, academic engagement and critique were influenced by the environmental movements that snowballed into existence during this time (Rome, 2003; Du Pisani, 2006). The fact that the Western world had achieved a degree of growth and prosperity and could now consider the

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shortcomings of the policies that got them there is cited as another factor that facilitated critique (Martinez-Alier, 1995). Critique was also stimulated by the failure of foreign aid and structural adjustment programmes (SAPs)[28] to bring prosperity and improve the well-being of persons in developing nations (Katsoulakos *et al.*, 2016).

One of the most influential critiques that emerged from the flurry of events just described was *Limits to Growth*, by Meadows *et al*. (1972). Very generally, the report expressed the need to cap (economic) growth because natural resources were finite. Following this report, the *language* of sustainability quickly took hold globally (Du Pisani, 2006; Grober, 2012; Purvis *et al.*, 2019). Subsequently, studies concerning sustainability, by those in various fields, emerged to (1) further support the notion that humans, in their blind pursuit of development *qua* economic growth, were severely damaging the natural environment and to (2) support the idea that economic growth should be capped (Joseph & McGregor, 2020). Regarding the latter, it is argued that, influenced heavily by Meadows *et al.*'s (1972) work, early academic discourse around the notion of sustainability, growth and development was radical (Van Der Heijden, 1999; Tulloch & Neilson, 2014). Indeed, having acknowledged that the goal of achieving economic growth was at loggerheads with environmental and social goals, calls were made for structural reforms and the decoupling of economic growth from the notion of development. For instance, Seers (1969) argued that economic growth could not solve society's maladies and, in fact, often gave rise to or exacerbated them. As such, Seers (1969) argued that development was best judged, not by economic growth, i.e., GDP, but rather by the social factors (such as the degree of poverty, unemployment, and inequality) that characterise a nation.

The critique of economic growth and development within Western nations, on social and environmental grounds, was coupled with a critique of economic growth and development projects being carried out in developing nations. For instance, Caldwell (1984), citing the lack of 'progress' recorded in developing nations in terms of growth and prosperity, argued that the popular development narrative supported by developed nations and the Bretton Woods Institutions was detrimental in that it adversely affected biodiversity and ecosystems. Consequently, Caldwell maintained that the narrow focus of these nations and institutions on short-term growth would come at the cost of future generations' ability to enjoy a level of well-being. In Caldwell's work, then, and the work of others during this time, one can see the use

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[28] SAPs were focused on promoting economic growth through the liberalisation of the economies of the Global South (Caldwell, 1984; Joseph & McGregor, 2020).

of sustainability language first introduced by Meadows *et al.* (1972) in *Limits to Growth* (Du Pisani, 2006; Grober, 2012 & Purvis *et al.*, 2019).

Cognisant of the various critiques of an unrestrained pursuit of economic growth in the name of development, the UN Conference on the Human-Environment aimed "to reconcile revenue [economic considerations] with environmental considerations" (UNEP, 1972:13). As such, notions like "environmentally sound development strategy" and "development without destruction" (ibid.) emerged from the conference. Consequently, at this time, there existed at least two (competing) approaches to sustainable development (Goodland *et al.*, 1991). On the one hand, there was the approach that called for the cessation of growth given finite resources and the effects of unrestrained growth on the health of the environment (Goldie *et al.*, 2005). On the other hand, there was the approach that endeavoured to reconcile the environmental and economic spheres. Nevertheless, the 1973 oil crisis and resulting recession lent credence to the idea that there were limits to growth and so seemingly skewed debate in favour of the first approach (IISD, 2012). Despite this, the OECD Environmental Committee's first meeting at the Ministerial Level, in 1974, involved building upon the second approach (Borowy, 2016).

With Gro Harlem Brundtland as Chairman, the OECD committee discussed the need to integrate economic and environmental demands (OECD, 1974). This led to the conclusion that the environment needed to be considered in national decision-making circles regarding economic policy (ibid.). This conclusion was carried forth into the OECD Conference of 1984, where delegates affirmed that "[c]ontinued environmental improvement and sustained economic growth are essential, *compatible and interrelated policy objectives*" (OECD, 1984 in SEDAC 1995 - *own emphasis*). Ultimately, the OECD conference helped entrench the notion that the spheres of the environment and the economy were not mutually exclusive (Kelly, 2005; Borowy, 2016) —this was contrary to what sustainable development discourse of the time, heavily influenced by *Limits of Growth* (1972), proclaimed (Goldie *et al.*, 2005). Thus, the conference marked a turn in sustainable development discourse, which, up until then, was dominated by the assumption that (economic) growth could not be sustained/sustainable because natural resources were finite. The conference proceedings also informed the approach to sustainable development enshrined in the Brundtland Report (Borowy, 2016). This is evidenced by the fact that the text and footnotes of the Brundtland Report refer to Vol. 1, 2 and 3 of the background papers for the Conference (ibid.).

In 1987, *Our Common Future* (i.e., the Brundtland Report) was released by the World Commission on Environment and Development (WCED). In it, the WCED endorsed the concept of sustainable development and defined it as: "development that meets the needs and aspirations of the present without compromising the ability to meet those of the future" (ibid., §II par.49). Still today, this is the most common definition of sustainable development (Joseph & McGregor, 2020). Apart from explicitly mentioning and defining sustainability, the report also highlighted the three spheres so often associated with sustainability in its call for "growth that is forceful and at the same time socially and environmentally sustainable'' (WCED, 1987: iii). Moreover, it drew the link between a broader notion of security and sustainable development in its eleventh chapter, *Peace, Security, Development, and the Environment.* Although focusing on the potential for environmental degradation to cause conflict, and so adversely affect the security of not only a nation, but also of persons within it, the chapter highlighted the fact that a host of other issues – none of which could be addressed using military means – frustrated sustainable development agendas and thereby exacerbated instances of insecurity. The latter point was due to the fact that (in)security and (un)sustainable development were intrinsically linked:

> "A number of factors affect the connection between environmental stress, poverty, and security, such as inadequate development policies, adverse trends in the international economy, inequities in multi-racial and multi-ethnic societies, and pressures of population growth…a comprehensive approach to international and national security must [then] transcend the traditional emphasis on military power…The real sources of insecurity also encompass unsustainable development…" (WCED, §I par.4).

From the discussion and quote directly above, it can be stated that the Brundtland Report (1) placed sustainability and sustainable development onto the global agenda, (2) influenced how the world interpreted these two concepts and (3) ultimately shaped the dominant sustainable development paradigm. It also linked (in)security to (un)sustainable development. Moreover, it noted that military threats are just one of many threats facing nations and emphasised – as Acharya (2001) argues – that security was not just security of the state but also (groups) of persons and an international community. All these ideas were central to the inception of the notion of human security enshrined in the UNDP Human Development Report (HDR). As such, Bajpai (2000) identifies the Brundtland Report as one of the "most important forerunners of the idea of human security" (ibid., 5).

Another important forerunner of the idea of 'human security' is economist Amartya Sen's conceptualisation of "development as freedom" (Sen, 1999) and, more broadly, his work on human capabilities. Sen's capabilities approach defined development in terms of persons' capacity to be and do what they deem desirable[29] (UNDP, 2020); "to develop to their full potential and to have a reasonable chance of leading productive and creative lives that they value" (ibid.). In other words, development was understood as the well-being of individual persons, which, in turn, was linked not to the formal rights and freedoms of persons, but their capabilities to exercise those rights and freedoms in such a way as to live what they each deem to be a meaningful life. Following on from this, it can be said that the capabilities approach is informed by an "*opportunity* aspect of freedom" (Sen, 1993: 231 – *emphasis in original*). To expand, it is informed by the notions that, firstly, one should be free to decide what is valuable to them and what they want. Secondly, one should be free to choose "between different styles and ways of living" (ibid., 227) without any structural impediments (e.g., racial discrimination, poverty or ill health stemming from poor living conditions and a limited/non-existent health care system).

Together Sen's capabilities approach and understanding of development as freedom and the general critique of growth as the measure of development, influenced the thinking of Mahbub ul Haq (Fakuda-Parr, 2003). Haq was the person who introduced the first UNDP Human Development Report (HDR) in 1990, with the aim of "shift[ing] the focus of development economics from national income accounting to people-centered policies" (Mahbub ul Haq, 1995a: 1). Conceptually underpinned by Sen's work on human capabilities, the HDRs took a people-centred approach to development (Fukuda-Parr, 2003). Additionally, they featured a list of policy priorities and tools for analysis, monitoring and evaluation (ibid.). For example, the first of what was to become annual HDRs introduced the human development index (HDI) – a composite index designed to measure and evaluate human development and thus supplement GDP and/or GNP as a key development indicator (UNDP, 2020).

By 1994 Haq wrote a paper titled *New Imperatives of Human Security.* The paper[30] described the mutually reinforcing links between development and security. This thinking was primarily influenced by the preponderance with the issue of sustainable development at the time and the

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[29] Examples include "*Beings:* well fed, sheltered, healthy; *Doings:* work, education, voting, participating in community life" (UNDP, 2020).
[30] Originally published by the Rajiv Ghandi Institute for Contemporary Studies.

fact that the broadening and deepening debate in ISS had reached its zenith. In the paper – republished in 1995[31] – Haq criticised the popular militaristic conception of security and, in announcing that "we are entering a new era of human security" (Haq, 1995b: 68), proposed human security as its replacement in a globalised, interdependent world. Although it is tempting to continue to discuss Haq's paper in detail, in the interest of both time and space, its content has been summarised in terms of the answers it provides to the four central questions of ISS. The summary is presented in Table 3.1 below.

Table 3.1:   Aspects of human security as conceptualised by Haq (1995b).

Question	Answer	Textual evidence
Who/what is the referent object of security?	(The well-being of) individuals and groups of people	"Security will be interpreted as: security of people, not just security of territory; security of individuals, not just security of their nations" (ibid., 68). "[S]ecurity of all the people everywhere - in their homes, in their jobs, in their streets, in their communities, in their environment..." (ibid.). "Whether it is economic growth or whether it is environmental protection, these are only means - the real end is human welfare." (ibid., 69).
Who/what would be responsible for providing security?	A variety of actors at various scales, including the local, national, continental and global scale.	"[I]t is becoming increasingly essential to set up an Economic Security Council in the UN as the highest decision-making forum to deal with threats to global human security" (ibid., 72). "[I]nternational institutions" (ibid.).

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[31] Note that the original 1994 version was not available, thus the 1995 version of the paper – which was published by The Journal of International Issues.

		"Future changes [and security] will not depend exclusively on governments. They will come primarily from the actions of the people at the grassroots - people who are often far ahead of their governments" (ibid.).
What are the best means of providing security?	Sustainable human development	"[S]ecurity through development, not security through arms" (ibid., 68). "We need, therefore, a much broader design of development cooperation than just aid…a design that recognises that real human security in the North will ultimately depend on an investment in reducing global poverty, that secures an equitable access to global market opportunities for all people all over the globe…" (ibid., 71).
What constitutes a threat to security?	- That which creates human misery, limits human capabilities and prevents humans from flourishing. - The threats can originate within a nation's borders or outside of it. - Often, the threats are transnational.	"[T]hreats to global human security - from food security to environmental security, from global poverty to jobless growth, from international migration to drug trafficking" (ibid., 72). "[C]oncerns for human security are more globalised today than even global trade" (ibid., 68).

As exemplified by Haq's thinking above, the term and notion of human security were percolating through academic and policy circles prior to the release of the 1994 HDR. Nevertheless, the report, and the UNDP, are credited with coining the term human security (e.g., Buzan and Hansen, 2009). This might be because the report was the first to deal with the concept comprehensively. For one, much of Haq's ideas in terms of human security are expounded upon in the report, whose "chief architect" (Speth in UNDP, 1994: iv) was none other than Haq himself. Regardless of its questionable status as the progenitor of the term human security, Menon (2007) is correct in stating that the report played a vital role in "popularising the concept of human security" (ibid., 1).

Like all the other HDRs, the HDR of 1994 was underpinned, as stated before, by the thinking of Amartya Sen. Taking into consideration Sen's notion of development as freedom

as well as the connection between sustainable (human) development and security – which the Brundtland Report and Haq outlined – the 1994 report differentiated human security from national security. This was done by, firstly, underscoring that the former took as its referent object/unit of analysis the person/individual whereas the latter focused on the state. According to the report, the latter was redundant, seeing that, as the "dark shadows of the cold war" (UNDP, 1994: 22) retreated and intrastate conflict became more prevalent, it was becoming evident that conflict and insecurity stem from issues related to unsustainable development and underdevelopment (ibid). Such issues include hunger, poor health care, unemployment, crime and environmental hazards (ibid.).

The second manner in which the report differentiated human security from national security was by making recourse to the notions of freedom from want and freedom from fear enshrined in the UN Charter (ibid., 24). The report stated that human security was not just about freedom from physical violence by an aggressor[32]; it was also about having access to (and the means to access) basic goods and services (freedom from want). Seeing that, combined, these two fundamental freedoms were thought to enable a certain degree of human flourishing, sustainable human development, peace and thus security qua human security, anything that frustrated the realisation of such freedoms was deemed a threat to security (ibid.). Hence, drawing upon Haq's assertion that threats to human security include "threats to…food security to environmental security…global poverty to jobless growth…international migration to drug trafficking" (Haq, 1995b: 72), the HDR further defined human security in terms of seven "interdependent components" (UNDP, 1994: 22). The seven components are listed in Table 3.2 below. A brief description of each component is also provided in the table, along with a more detailed one.

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[32] Be that a state, a government, a military junta, a regime or any person or group(s) of persons (UNDP, 1994).

Table 3.2: A basic and a more comprehensive definition of the seven interdependent components of human security. *Sources*: Acharya (2001) and UNDP (1994).

Component of Human Security	Basic description (Acharya, 2001)	Detailed description (UNDP, 1994)
Economic security	Assured basic income.	- Having a basic income, being able to find a steady job, being able to earn an income under safe working conditions.
Food security	Access to food (both physically and in terms of purchasing power).	- Having access to nutritious food (food should be both physically available and one should be able to afford it).
Health security	Access to basic health care. Freedom from disease and illness.	- Having access to health services. - Being safe from polluted water or air, which is linked to several diseases and infections...
Environmental security	Access to potable water, clean air, and arable land.	- Having and being able to benefit (materially or otherwise) from healthy, functioning ecosystems. - Having access to water resources. - Being relatively safe from natural disasters, pollution, water scarcity, desertification, desalination.
Personal security	Freedom from physical violence and threats.	- Being secure from physical violence or threats including, gender-based violence, threats from the state, threats from other states, threats from other groups, threats from individuals or gangs, threats to the self (suicide/self-harm), threats (abuse/neglect) directed at the vulnerable (children/elderly).
Community security	Freedom of association and the ability to preserve one's cultural identity.	- Being part of a group provides one with a set of values and a cultural identity. Community security is the sense of belonging and the sense of identity derived from being a part of a group.
Political security	Fundamental human rights and freedoms are protected formally (in legislation) and substantively (in action).	- One should have their fundamental human rights respected and should be able to exercise their fundamental human rights (e.g., the right to the freedom of speech) within a society.

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Given what has been presented with regards to human security thus far, it is now possible to summarise the Human Security approach in terms of the four questions at the heart of ISS:

- The referent object of human security is the individual
- Seeing that human security is a multifaceted concept, a threat to human security could be defined as that which threatens one or more of the seven facets of human security (ibid.).
- Given the array of threats that fall under these seven dimensions and the fact that they are "interdependent" (ibid., 22), the means through which threats to human security can be dealt with are multiple and varied. They would include values-change, global cooperation, education, poverty reduction, peace-building, crisis management, conflict resolution and building resilient social-ecological systems (UNDP, 1994; Brzoska, 2009; McDonald, 2013; Biggs, Schlüter & Schoon, 2015).

- Given the broad array of threats and the combination of options available to respond to them, a broad spectrum of actors, including individual communities, states, inter-governmental organisations (IGOs) and non-governmental organisations (NGOs), are considered security agents (UNDP, 1994; McDonald, 2013).

From the summary above, it should be apparent that the human security approach aims not only to deepen the security agenda, but also broaden it to include issues such as food security, economic security and environmental security. Hence, critical approaches to security studies should not necessarily be considered part of the deepening debate alone. Even though the approaches have been discussed under the 'deepening' sub-heading here, they are certainly not exclusive to deepening debates. The notion that many critical approaches to security studies somewhat both broaden and deepen the traditional notion of security is arguably further supported by the features of the approach of The Copenhagen School. It is to this approach that the discussion now turns.

3.4.2.2 The Copenhagen School

Buzan's book *People, States and Fear* (1983), together with *Security: A New Framework for Analysis* (Buzan *et al*., 1998), became key texts of what has become known as the Copenhagen School. Following Buzan's thinking, this theoretical approach to security studies defines security in terms of political, environmental, economic and societal security in addition to traditional military security (see Table 3.3). It is thus argued that the School falls squarely under the widening/broadening debate. However, this is not necessarily the case, as is showcased in the brief discussion of societal security below.

Table 3.3:   Five security sectors as conceptualised by Buzan (1983) and adopted by the Copenhagen School. *Sources:* Buzan (1983), Buzan *et al*. (1998) and Buzan & Hansen (2009).

Security sector	Provision of a sense of security through the…	Referent object of security
Military	Protection from Traditional security threats.	State
Political	Preservation of a state/ /regime/ideology.	State
Environment	Protection from natural disasters.	State
Economy	Resources and fiscal stability.	State
Society	Protection and preservation of language, norms, values, culture and identity.	Society

Buzan and the other proponents of the Copenhagen School's argument that security was concerned with societal factors (i.e., that society was a security sector) was particularly novel at the time (the 1980s). To substantiate, those that were part of the earlier widening debates predominantly posited that, in addition to the military sector, the environment and economy were pertinent security sectors (Buzan & Hansen, 2009). Moreover, they explicitly mentioned that the state remained the referent object of security even though the nature of threats had widened. In contrast, by positing the concept of societal security, the School not only brought to light yet another security sector, but they also shifted the referent object from the state to society. In this sense, the School can also be thought of as having, to some extent, deepened the notion of security.

The thinking behind societal security was triggered by the fact that there was a somewhat rapid integration occurring in the EU, which, along with immigration, was deemed a threat to political sovereignty, cultural autonomy and national identities (ibid.). Acutely aware of this, the founders of the School posited the notion of societal security and defined it as "the ability of a society to persist in its essential character under changing conditions and possible or actual threats" (Wæver *et al.*, 1993: 23). In so doing, they opened up the way for studies concerned with identity security (Buzan & Hansen, 2009). Moreover, in conceptualising societal security, the School drew attention to the fact that state/national security does not necessarily equate to security for all within a state. Indeed, "when national minorities were threatened by 'their' state" (Buzan & Hansen, 2009: 22) or when the state/regime/politicians mobilised members of society to confront other "threatening" (ibid.) members, it became evident that state security and societal security do not always align (ibid.). Thus, in positing 'societal security', the School pointed out that there were two referent objects of security, and only two, the state and society.

By limiting the referent objects of security to just two collective units, the School challenged those deepeners who were positing the individual (e.g., UNDP and Haq) or the global community as referent objects of security. In this sense, even as the proponents of the School can be thought of as deepeners, perhaps it is best to call them conservative deepeners. This can be supported by the comments of Wæver (a founder of the School), who, in explaining what constitutes the referent object of security, argues that: –

"it seems reasonable to be conservative along this axis…'security' is influenced in important ways by *dynamics* at the level of individuals and the global system [but that does not mean that one should be]…propagating unclear terms such as individual security and global security" (Wæver, 1995: 49).

With this implicit critique of other deepeners and, more generally, with its somewhat conservative deepening approach, the Copenhagen School set itself up as a middle position in the deepening spectrum. This spectrum has traditional state-centrism on one end and Critical Security Studies' individual, human or global security on the other (Buzan & Hansen, 2009).

Apart from introducing the term societal security and announcing itself as a compromise between CSS and TSS, the Copenhagen School is well-known for introducing securitisation theory. According to this theory, there are no threats out there *per se*. Instead, security threats are constructed; "we as communities choose sometimes to…name certain things security problems" (Wæver, 2014)[33]. When a securitising actor 'speaks security' and calls something a security threat – i.e., an existential threat – and a community acknowledges this call, the issue is collectively constructed as such (ibid.). When this occurs, the issue becomes securitised, subsequently changing the way the issue is dealt with[34]. To expand, an issue that is seen as an existential threat is automatically accorded primacy over everyday policy issues (ibid.). Additionally, given that this threat has to be neutralised immediately and decisively, normal political procedures can be circumvented. In other words, given that the survival and the very existence of something are perceived to be at stake, actors become warranted in circumventing the usual political channels and using extraordinary measures (ibid.).

Overall, then, as Buzan and Hansen (2009) note, "[s]ecurity frames the issue either as a special kind of politics or as above politics" (ibid., 214). So, if one were to place issues on a spectrum, depending on how they are dealt with, the issues would range from non-politicised issues to politicised ones to securitised ones (see Fig. 3.4).

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[33] To be clear, by emphasizing that threats are constructed, the Copenhagen School is not stating that there are no tangible threats to states or societies. Rather, they are stating that threats can only be securitized when an actor, "'selects' or activates certain properties of the concept, while others are concealed" (Balzacq, 2005: 182) and then presents these properties to an accepting audience.

[34] In this sense, the Copenhagen School – referring to Austin's speech-act theory – argue that security is a performative act. Due to the limited scope of this project, Austin's speech-act theory, which the School's notion of securitisation is built upon, cannot be discussed. For a solid discussion of speech-act theory in relation to securitisation theory and the Copenhagen School see Balzacq (2011).

Figure 3.4:   Spectrum of public issues characterised in terms of how they are dealt with. *Sources*: Buzan *et al.*, (1998: 23) and Dexter (2013).

At this stage, it has to be pointed out that securitisation is "an intersubjective process" (Balzacq, 2011: 3). By calling something a security threat, a security actor cannot automatically take extraordinary measures to tackle it. The actor – e.g., the media, "political leaders, bureaucracies, governments, lobbyists, and pressure groups" (Buzan *et al.*, 1998: 40-41) – must be able to convince a sizeable audience that the issue is, in fact, an existential threat before it can be tackled by any means necessary. This notion that the Other (e.g., members of the public) plays a vital role in the successful securitisation of an issue is explicitly mentioned by those of the Copenhagen School:

> "…the security speech act is not defined by uttering the word *security*. What is essential is the designation of an existential threat requiring emergency action or special measures and the acceptance of that designation by a significant audience" (Buzan *et al*., 1998: 27).

By referring to some "significant audience", however, the Copenhagen School opened itself to critique[35]. For instance, the likes of Vultee (2011) ask what constitutes a sizeable or significant audience? How many people have to back a securitising claim before an issue can be securitised, before it is deemed an urgent matter and dealt with decisively? There are no answers to these questions. Nevertheless, they need to be kept in mind when thinking about the use of securitisation language in climate-related newspaper articles and the extent of their possible effects on actions, behaviour, and policy.

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[35] The Copenhagen School has been critiqued on various fronts. It is not within the scope of this project to present and contend with every critique. Only some of the critiques that are relevant to the topic of this project have been discussed. For a more comprehensive discussion of the critiques levelled against this approach see, for instance, Buzan and Hansen (2009) and Balzacq (2011).

Apart from the vague reference to some sizeable audience in the securitisation process, the Copenhagen School's calls for de-securitisation have also been critiqued. Such calls were made following the observation that securitisation takes issues outside the "normal bounds of political procedure" (Buzan *et al.*, 1998: 25) and "grants privilege to official leaders and legitimises the suspension of civil and liberal rights" (id.). Thus, to avoid this danger, the School prescribes "the movement of an issue out of the threat–danger modality of security" (Buzan & Hansen, 2009: 216) such that it can be dealt with through debate, compromise and standard political procedures. In a nutshell, those of the School call for de-securitisation; "less security, more politics!" (Wæver, 1995: 56). Critiquing this call, the likes of Huysmans (1998) contend that de-securitising an issue may lead to it being silenced or ignored in normal policy circles. As such, they opine that de-securitisation should only happen if there is a possibility of the issue being politicised and, thus, being debated in policy-making circles and, subsequently, acted upon.

The above critique and the School's call for de-securitisation only hold, however, if one accepts a core assumption of securitisation theory as conceptualised by the School itself. This core assumption is, as previously discussed, that by employing securitisation language (i.e., presenting an issue as an existential threat), an actor, with the consent of a sizeable audience, can tackle that issue *outside the bounds of normal politics*. In disputing this core assumption, Trombetta notes that "few appeals to environmental security have mobilised exceptional measures" (2008: 589). Consequently, Trombetta contends that when issues pertaining to environmental change (e.g., climate change) are securitised, they are still tackled within everyday policy-making circles. The only thing that using securitisation language does is create a sense of urgency and spur policy debate, decisions and actions "that probably would not otherwise have been undertaken" (Trombetta, 2011: 136). This suggests that the securitisation of an issue does not necessarily lift it out of the bounds of everyday politics and legal/social rules. Rather, an issue "can be politicised through an appeal to security" (Trombetta, 2008: 589). This observation calls into question the model depicted in Fig. 3.4. Moreover, it bolsters the argument that securitising climate change will catapult it to the top of policy-making agendas and allow it to be taken more seriously as a policy issue (e.g., Brown *et al*., 2007; Mehra, 2010; Parsons, 2010).

Following Trombetta's line of thinking, Oels (2012) adds that, instead of talking about the securitisation of climate change, one should be talking about the "climatisation of the security

sector" (ibid., 185). To substantiate this claim, Oels highlights that framing climate change as a security threat transforms the traditional way security threats are dealt with. In Oels' words, "the articulation of climate change as a security issue…incites transformations in the practices of security" (ibid., 201). Thus, framing climate change as a security threat does not lead to military actions or action outside usual political channels and legal frameworks. Instead, it leads to the creation of policies concerned with mitigation, adaptation and risk management (id.). In this sense, policies informed by the field of environmental and climate change science diffuse into the field of security. More generally, this is indicative of the idea that securitisation does not necessarily involve exceptionality and the tackling of an issue via exceptional means.

Taking Oels' and Trombetta's line of thought into account, the often-cited definition of securitisation by McDonald[36] can be adapted to read as follows:

> "Securitisation can be defined as the positioning through speech acts (usually [but not always] by a political leader) of a particular issue as a threat to survival, which, in turn, (with the consent of the relevant constituency)" (McDonald, 2008: 567) calls forth "measures and policies that probably would not otherwise have been undertaken" (Trombetta, 2011: 136).

This is the working definition of securitisation that has been employed in this research project. Consequently, this research project is justified in speaking of the securitisation of climate change in the media and its effects on the public policy-making process even though – in its original conceptualisation – the successful securitisation of climate change would mean that it is neither up for debate in everyday policy-making circles, nor left to be tackled by such circles.

The above-supplied definition of securitisation also constitutes part of the coding definition used to identify a securitisation frame in climate-related articles. As shall be discussed in the next chapter, the existing literature (e.g., Vultee, 2011), inspired by the Copenhagen School's thinking, defines a securitisation frame in terms of exceptional measures. On a *theoretical level*, then, a securitisation frame, as conceptualised in existing literature, needed to be re(de)fined before a coding definition for such a frame could be drawn up. The above-supplied definition was instrumental in this regard.

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[36] "Securitisation can be defined as the positioning through speech acts (usually by a political leader) of a particular issue as a threat to survival, which, in turn, (with the consent of the relevant constituency) enables emergency measures and the suspension of "normal politics" in dealing with that issue" (McDonald, 2008: 567).

3.5 Concluding remarks

By discussing various conceptualisations of security and exploring how they emerged, this chapter arrived at a basic definition of securitisation and, thus, a securitisation frame. In addition, this chapter has implicitly demonstrated that, because different conceptualisations of security exist, it is viable to propose and talk of different security frames (e.g., a national security frame and a human security frame) together with a broad securitisation frame. The definition of these frames would differ – just as the definition of these conceptualisations do – in terms of (1) who/what is seen as the referent object of security, i.e. the thing to be protected from external threats; (2) who/what is believed to be the security agent, i.e. the person/thing responsible for providing security; (3) what constitutes a threat to security and; (4) the means of providing security or the means by which a security threat should be neutralised (Buzan & Hansen, 2009; McDonald, 2013). Although the discussions thus far have provided answers to these questions (see Table 3.4 below), they cannot be used to create the *final* definitions of a human and national security frame, respectively. Only once a basic critical review of the definitions of such frames in existing literature (e.g., Schäfer *et al.,* 2016; Feldman *et al.,* 2017 and Bolsen & Shapiro, 2018) takes place, will the final definitions of a human and national security frame be presented. This is because the researcher decided to adopt a deductive approach to frame and content analyses (see Chapter 2). To recapitulate briefly, this approach involves:

a) Identifying coding categories/frames based on the existing literature and a research question (in this study, the identified coding categories/frames are securitisation, national security and human security);

b) Using existing theory, literature, and/or studies that have dealt with such frames in their analyses, to arrive at a broad definition of each category/frame;

c) Coding data (which, in this study, is the sample of articles) using the predetermined coding definitions to determine, for instance, the prevalence of the coding categories/frames.

In applying a deductive approach to frame and content analyses, the manner in which existing literature defines a securitisation, human and national security frame is critically reviewed in the ensuing chapter. This review is completed by comparing the existing definitions with the content of this chapter. Following this, the definitions in existing literature are re(de)fined and the preliminary definitions presented here (see Table 3.4) are adjusted.

Once this has occurred, the final coding definitions used to identify various security frames in climate-related articles will have been derived.

Table 3.4: Aspects of human and national security (informed by the discussions of this chapter).

	Who/what is the referent object of security?	Who/what would be responsible for providing security?	What are the best means of providing security?	What constitutes a threat to security?
National security (traditional security studies)	The state; territorial integrity; sovereignty; vital economic assets (less so).	The state or military sector	Amassing material power (building military capabilities)	Other states and their military capabilities (e.g., weapons, bombs, missiles).
Human security (critical security studies)	(The well-being of) individuals and groups of people	A variety of actors at various scales including the local, national, continental and global scale.	Sustainable human development	- That which creates human misery, limits human capabilities and prevents humans from flourishing. - That which threatens the seven components of human security.

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Chapter 4: Literature Review

"The media are both important arenas and important agents in the production, reproduction and transformation of the meanings of social issues. The particular discourses that they amplify strongly affect the social construction of problems and of 'authorised voices".

—*Carvalho (2010: 172)*

"Therefore, media(ted) discourses play key roles in social life as they are both conditions of intelligibility of the world and conditions of possibility of action upon it".

—*Carvalho (2010: 172)*

4.1 Introduction

This chapter provides an overview of the various streams of literature that were relevant to this research project. The chapter consists of three major sections – the first of which discusses literature pertaining to climate communication. The second section briefly presents what scholars contend are the possible (policy) implications of securitising climate change. Moreover, the section considers the ramifications that framing climate change as a threat to national and human security, respectively, could have. In so doing, it meets Target 10[37] under RO4.

Informed by the discussions of the previous chapter, the final section of this chapter critically reviews some of the scholarly works that have defined a securitisation frame in general (e.g., Vultee, 2011) and a national or human security frame, in particular (e.g., Schäfer *et al.,* 2016; Feldman *et al.,* 2017; Bolsen & Shapiro, 2018). In this final section, the researcher contends that the existing definitions of such frames require refinement and proceeds to refine them.

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4.2 Climate communication

This section provides a brief exposé of existing research and studies, carried out either internationally or in a South African context, that concern themselves with the media's role in (1) raising awareness about climate change and (2) promoting pro-environmental behaviour. In so doing, the section describes what the mass media does and recommends what it can do to

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[37] As stated in Chapter 1, Table 1.1, Target 10 (which falls under RO4) is to investigate the policy implications of securitising climate change with reference to theory and previous studies. (RO4 is to consider the possible policy implications of the identified trends in the use of various securitisation frames in climate-related articles together with readers' responses to such articles).

ensure that it is an effective climate change communicator, i.e., that it inspires pro-environmental behaviour, actions and decisions (Kollmuss & Agyeman, 2002). In this regard, it contributes to the fulfilment of Target 11 (under RO4): 'to combine findings from the literature review with the results of the frame and content analyses (RO1) and survey (RO2 & 3) to make recommendations to help print newspapers become (more) effective climate change communicators'. Apart from discussing what the mass media does and should do to ensure it is an effective climate change communicator, this section provides a brief overview of the literature concerning (1) the media's influence on the public policy-making process and (2) framing theory in the context of climate communication.

4.2.1 Mass media outlets and climate change: from raising awareness to promoting pro-environmental behaviour

Scholarly works, articles and studies concerned with climate change communication indicate that the mass media is the primary source of information pertaining to climate change and climate science for both decision-makers and members of the general public (Carvalho, 2007; Carvalho, 2010; Schäfer & Schlichting, 2014). The mass media acts as an intermediary between the general public and decision-makers, on the one hand, and the scientific community on the other (Carvalho, 2007; Schäfer, 2015). It is thus responsible for communicating complex scientific issues in ways that are cogent to the general public and key decision-makers.

For the purposes of this research project, the term 'mass media' shall be defined, following Boykoff (2008a), as the "publishers, editors, journalists and other agents within the communications industry" (ibid., 11) who partake in the production, reproduction, transformation, and eventual dissemination of information about climate change, "through outlets such as newspapers, magazines, television, radio and the Internet" (ibid.). Out of these outlets, earlier studies found that national news programmes (Wilson, 1995), the television, newspapers (Stamm *et al.*, 2000) and the internet (Pew Internet Project, 2006 in Boykoff & Roberts, 2007) were the public's primary sources of information about climate change. However, more recent studies found that the public "uses a repertoire of various media" (Schäfer & Schlichting, 2014: 155) to inform themselves about climate change. For sure, studies indicate that members of the public in the United States (Synovate, 2009 in Schäfer & Schlichting, 2014), Germany (Arlt *et al.*, 2011) and India (Leiserowitz & Thaker, 2012) state that television is their primary source of climate change information. Moreover, a very recent study by Newman *et al.* (2020), which included 80,155 respondents from 40 different countries

(South Africa included), found that 35% of respondents claimed they paid most attention to climate change news and information when it appeared on the television (see Fig. 4.1). That being said, the study found that younger respondents (18–24-year-olds) also pay attention to and consume climate-change information from other sources, including social media and blogs (see Fig. 4.2). When asked to elaborate on their choice, members of the so-called Generation Z stated that these sources enabled them to access climate-change news "directly from activists…celebrities or influencers" (ibid.) such as Greta Thunberg, Leonardo DiCaprio and Cody Simpson (ibid.).
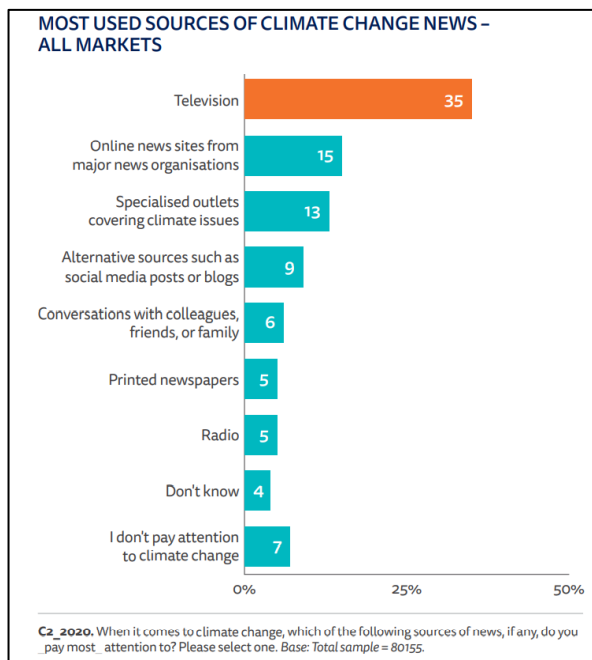
Figure 4.1: Survey results depicting the most commonly used sources of climate change news and information (based on the responses of 80,155 persons across 40 countries (incl. South Africa). *Source*: Newman *et al.* (2020).
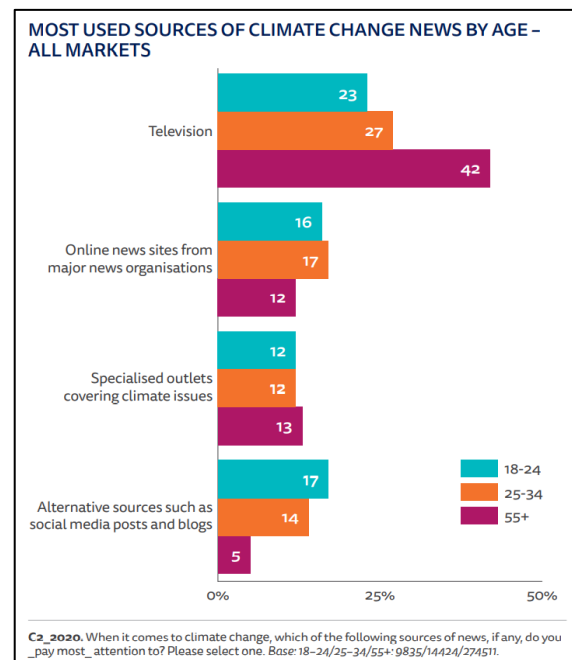
Figure 4.2: Survey results depicting the most commonly used sources of climate change news, by age group. *Source*: Newman *et al.* (2020).

In addition to age, the study by Newman *et al.* revealed that education levels and political affiliation could also affect whether and how different members of the public access climate change news. On the whole, then, it can indeed be said – following Schäfer and Schlichting (2014) – that the public uses various news sources to access information about climate change. Consequently, no single media outlet is *the* primary source of climate change news and information for *all* persons, everywhere (ibid.). Nevertheless, owing to limited space and given the primary focus of this research project, the remainder of this exposé focuses on what –

according to existing literature – *print newspaper outlets* are doing or can do to raise awareness about climate change and mobilise public action to tackle it.

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Informed by the observations that:

1. newspapers are one of the public's primary sources of information about climate change in South Africa, and
2. in both an international context (e.g., Boykoff, 2008a; Schäfer & Schlichting, 2014) and a South African one (e.g., Tagbo, 2010), the coverage of climate change has been low except when noteworthy events occur (e.g., the release of a new assessment report by the IPCC),

one might be inclined to suggest that more (locally relevant) articles about climate change should be produced and published by local (South African) newspapers. This suggestion could be supported by studies like Mazur and Lee's (1993), which found that increased climate coverage translated into heightened public awareness and concern for an environmental issue[38]. Implementing the suggestion *seems* to be a simple way of changing the following statistic concerning climate change literacy[39] in Africa: "fewer than one in five are climate change literate in six countries (Liberia, Mozambique, Namibia, Niger, South Africa, and Tunisia)" (Selormey *et al.*, 2019: 3)[40]. Of course, things are not that simple. Apart from issues of newspaper reach, the language of the newspaper, and the ability of persons to read (actual literacy rates), there is the challenge of "issue fatigue" (Maibach *et al.*, 2010: 9). Constantly bombarding readers with reports about climate change can lead to boredom, desensitisation and, ultimately, "the loss of public interest" in the matter (Grant & Lawhon, 2014: 7) – a condition more aptly referred to by Wibeck (2014) as "climate fatigue" (ibid., 404). Overall, it can be said that effective climate change communication is not just about the quantity of climate-related articles published by newspapers; it is also about the content of the articles and the quality thereof.

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[38] It must be mentioned, however, that Mazur and Lee (1993) concluded that although greater coverage of an environmental issue translated into heightened public awareness and concern, the increased coverage of an issue does not necessarily catalyse greater public engagement or climate action.

[39] According to Selormey *et al.* (2019), one is considered climate change literate "if they have heard of climate change, they understand it to have negative consequences, and they recognize it as being caused at least in part by human activity" (ibid., 3).

[40] This statistic was compiled using data obtained from 45,823 face-to-face interviews which were conducted in 34 African countries between 2016 and 2018 (Selormey *et al.*, 2019). Those interviewed constituted a nationally representative sample "that yield country-level results with margins of error of +/-2 to +/-3 percentage points at a 95% confidence level" (ibid., 2).

Among the numerous studies concerned with the content of climate-related articles, there is a consensus that the content of such articles is inadequate in several respects and thus frustrates newspapers' attempts to be effective climate change communicators[41] (Boykoff & Roberts, 2007). Three of the most commonly cited ways in which the content of news articles on climate change is inadequate are presented below. Following this, the actions that can be taken – especially by those involved in the production and publication of newspapers – to tackle these shortcomings are highlighted.

Boykoff and Roberts (2007) contend that the content of newspaper articles on climate change is inadequate because it emphasises various mitigation measures being adopted by governments, developed nations, institutions and the private sector to reduce greenhouse gas (GHG) emissions. In this regard, Boykoff and Roberts lament that coverage does not include mitigation and adaptation strategies that individual citizens can adopt and/or are adopting to combat climate change. Such coverage could play a vital role in helping citizens overcome "feelings of isolation, hopelessness, [and] powerlessness" (ibid., 34) – feelings that tend to inhibit the adoption of pro-environmental behaviour. Additionally, it could serve to shatter the commonly held belief that scientists, governments and/or developed nations are the only actors responsible for, and capable of, addressing the issue of climate change (Billett, 2010; Schäfer, 2015).

The second reason why newspaper articles on climate change are inadequate is that they, more often than not, focus on conveying as much information about climate change as possible. This is usually done by extensively citing government officials (Han *et al.*, 2017), scientists or experts (Hulme & Mahoney, 2010). Hulme and Mahoney attribute the act of extensively citing 'reputable sources' to the fact that newspapers assume that a lack of climate action is due solely to an information deficit. However, it can also be attributed to people's belief that it is not their responsibility to act or that their actions will be inconsequential (Hulme, 2018). Seeing, then, that a lack of public action and engagement can be attributed to other factors, focusing solely on bombarding readers with 'the facts' does very little to inspire pro-environmental behaviour (Hulme & Mahoney, 2010).

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[41] Recall that, for the purpose of this dissertation, an effective climate change communicator was defined as an actor that inspires pro-environmental behaviour, actions and decisions (Kollmuss & Agyeman, 2002) (see section 4.2).

The final reason why climate-related articles are inadequate is that they focus too heavily on the international context (Tagbo, 2010; Rahman & Panday, 2016). To explicate further, scholars, supported by evidence from studies conducted in the developing world, state that the number of climate-related articles published increased markedly in the lead up to significant international events, such as Conferences of the Parties (COPs), and that these articles tended only to report on the raw facts of these events. For example, a study regarding newspaper coverage of climate change in South Africa and Nigeria in the lead up to the 2009 COP revealed that reporters often focused on reporting what was said by leaders of more developed nations (Tagbo, 2010). Moreover, they tended to echo and/or make recourse to the analysis of "foreign reports, mostly from foreign wire services" (ibid., 34). Finding the same to be true of the way Bangladeshi newspapers cover COP events, Rahman and Panday (2016) critique this manner of reporting because it fails to link the global event to local issues. In failing to communicate the local relevance of global events, this manner of reporting can reinforce beliefs that, for example, climate change is occurring 'over there', that it is a 'Western concern' (Billett, 2010) or that it is something that cannot be tackled by the small actions of everyday persons (Rahman & Panday, 2016).

From the above discussions, it can be concluded that newspapers need to do the following if they are to fulfil their role as an educator of the public in terms of climate change, a promoter of action geared toward tackling climate change and/or a promoter of pro-environmental behaviour:

1. Report on mitigation and adaption strategies that individual citizens can and are adopting to combat climate change.
2. Emphasise the importance of individual actions (Hulme & Mahoney, 2010). This can be done by featuring more articles about the small and everyday actions of local persons trying to do their part to tackle climate change (an example of such an article can be found in Fig. 4.3 below[42]).
3. Make the content relevant to the local context, especially if the content is focused on the proceedings of a global event. This can be achieved by, for example, analysing what any agreements reached during a COP event would mean for locals (Rahman & Panday, 2016).

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[42] The article in Fig. 4.3 was one the climate-related articles that was downloaded from SA Media and that frame and content analyses were conducted on.

Eco-warrior, 5, collects plastic pile to save seas

By **TANYA FARBER**

● Jennifer Kenyon-Wimbush is only five but she is on a mission: recycling plastic to make houses for rescued owls, and saving penguins and turtles in the process.

By the end of the month, when she turns six, Jennifer hopes to have collected the 30m³ of plastic waste that will take her to her recycling target of 200m³.

The plastic goes to the Owl Rescue Centre in Hartbeespoort, in North West province, which turns it into conservation products.

"All that stuff in my garden is plastic," says Jennifer, pointing to bags of waste stacked under a carport at her family's Cape Town home. "It is from people who give plastic to us. If they don't it will go into the sea and the penguins and turtles will get sick."

Her passion is part of a worldwide trend in which young eco-warriors are taking climate change and environmental issues into their own hands. They are personified by Greta Thunberg, the Swedish teenager who has inspired children around the world to march against climate change.

Jennifer's mother, Kath, says: "I think we as adults are a lot more blasé about it because it was all so new when we were growing up, but this generation is more aware of

Jennifer Kenyon-Wimbush set out to protect marine life by collecting and recycling plastic after an inspiring visit to the Two Oceans Aquarium in Cape Town, where she fell in love with the turtles and penguins. Picture: Esa Alexander

Figure 4.3:　Example of a newspaper article showcasing locals' efforts to tackle the drivers of climate change and environmental degradation. *Source*: Farber for *Sunday Times* (2019).

Although adopting the above measures could help newspaper outlets be(come) more effective climate communicators, the questions of whether and to what extent newspapers can or will adopt them remain. These questions are valid and relevant given that various factors may frustrate the adoption of the said measures or render them impossible to adopt altogether (Boykoff & Roberts, 2007). Boykoff and Roberts (2007) categorise these factors as either micro-scale factors (e.g., journalistic norms, journalist's training, knowledge and expertise, the values and norms of the editors, owners and founders of the newspaper) or macro-scale factors (e.g., societal and cultural values, norms and beliefs; regulatory frameworks; economic factors; political factors) (ibid.). Due to limited space, these factors cannot all be discussed. Instead, the manner in which just a few micro and macro-scale factors, in an African context, inhibit effective climate communication in print newspapers are highlighted below for illustrative purposes.

Informed by interviews with the journalists and editors of various Ghanaian, Nigerian and South African newspapers, Tagbo (2010) states that a lack of training, resources and time is a major reason climate change is not covered as much as it should be in African newspapers. In terms of training, both journalists and editors alike noted that they do not understand "the science at the heart of many climate-change stories" (ibid., 36). Preferring to report on issues that they are knowledgeable about and feel they can produce quality pieces about, African

journalists and editors tend to focus more on politics, economics, and entertainment than on climate change (ibid.). The deadline culture of the newsroom only amplifies this tendency as journalists find they do not have the time to investigate and come to grips with the science of any one climate change story (ibid.). Understaffed newsrooms are yet another reason climate change is not covered as often as it should be (ibid.). Whereas the Guardian in the United Kingdom (UK) had six reporters solely dedicated to issues concerning the environment (climate change included), at the time of writing, Tagbo (2010) found that none of the Ghanaian, Nigerian and South African newspapers included in the study had more than two persons reporting on issues pertaining to the environment. Moreover, these persons were responsible for reporting on other issues too. This situation, in conjunction with the fact that African newsrooms and journalists are under-resourced – with some interviewees noting that they do not get paid for months – often means that journalists' attention is drawn to stories that will provide much-needed and "immediate rewards" (ibid., 36).

Even if African journalists want to cover a climate change story, they may not be able to if the editor(s) and the owner(s) of the newspaper do not accord primacy to the issue. That is not necessarily to say that the editors and owners are apathetic towards climate change, but rather that practical matters may be forcing their hand. For instance, the then Deputy Director of The Star (a South African newspaper) commented that "[t]he media publishes or broadcasts news and features to meet the needs of their readers…[i]n executing this delicate task editors have to strike a balance…this means that the environment will be part of the mix and not the sole content in the newspapers…" (Jovial Rantao in Tagbo, 2010: 35-36). Put more bluntly, mass media organisations often rely on advertising revenue (Harding[43] in Kunene, 2021). So, if readers are more interested in issues concerning economics, politics, political scandals (Tagbo, 2010) and current affairs (Harding in Kunene, 2021), then – as emphasised by the senior correspondent of Ghana's The Daily Graphic – it is not economically viable to be "spend[ing] resources and time dealing with an issue that is a hard sell, except in exceptional cases when there is a global event" (Achiawa in Tagbo, 2010). Altogether then, micro factors, including funding concerns and the interest of editor(s) or owner(s), mean that climate change reports in print newspapers of countries such as South Africa most often follow – just as Swain (2017) found in relation to the elite press articles published in the US – "issue-attention cycles sparked by [important or] dramatic events" (ibid., 177).

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[43] Andrew Harding is the BBC's African foreign correspondent.

In addition to all the above-mentioned micro-scale factors, macro-scale factors – more pervasive factors, factors that exist outside the newsroom – determine the extent to and manner in which print newspapers cover climate change (Boykoff & Roberts, 2007). For example, owing in part to their histories (Tagbo, 2010), African countries are faced with several challenges ranging from those related to bringing about just social and economic development to those related to tackling poverty, insurgency, xenophobia and gender-based violence (GBV). These then dominate the news, along with other issues that are more visible and immediate than climate change, such as corruption, political feuds, "power struggles, lack of accountability, and weak institutional structure[s]" (ibid., 36). Hence, given the broader spatial, social, historical, political, and cultural contexts in which climate change is unfolding, climate change news finds itself competing for "shared space" (Harding in Kunene, 2021) with other pressing and relevant issues[44]. Seeing that the public accords primacy to these other, more visible and immediately experienced, issues – climate change news is often pushed around and even pushed off daily news agendas. Put another way, just as (South African) climate activist and scientist Ndoni Mcunu finds it difficult to "talk [to communities] about climate change when people don't have food" (Mcunu in Costello & Bosewell, 2021), African journalists find it hard to cover climate change news and find an audience for such news, given the other issues that have to be contended with and that members of society deem more pressing – *even though* such issues may themselves be intricately linked to climate change. To sum up, then, macro-scale factors, including historical, political factors and societal views, can also determine whether and the extent to which climate change is covered in the news in the first place.

Thus far, this brief exposé has outlined that the media has a significant role to play in raising awareness about climate change and mobilising public action to tackle it. Moreover, it demonstrated that the effectiveness of climate change communication is determined not only by the number of climate-related articles published, but also by the content of the articles. In this regard, it was suggested that newspapers focus, *inter alia*, on adding a local flavour to reports on climate change and showcasing what individual persons can do and are doing to tackle climate change. However, it was pointed out that several micro and macro-scale factors may frustrate attempts at adopting such measures or render them impossible to adopt altogether. As such, it should be stated that future inquiries would do well to consider these

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[44] This is not something that is unique to African countries and media. See, for example, Kumar and Gupta (2016) for a range of studies conducted in, amongst others, Bangladesh, India and Pakistan, that point to this very same issue.

factors and investigate how newspapers in particular, and the media in general, can or do deal with them, such that they may be(come) more effective climate communicators. Research, analyses and evaluations of training programmes[45] aimed at narrowing journalists' knowledge and skills gap when it comes to climate change reporting may also prove impactful.

4.2.2 Mass media outlets, climate change and (strategic) framing: from promoting pro-environmental behaviour to affecting policy change (?)

The first part of the above subsection implied that the public might consider an issue like climate change to be more or less important, depending on how frequently it is covered by the media (Barkemeyer *et al.*, 2017)[46]. While increasing the number of climate change stories may seem like the best approach to increase awareness and catalyse pro-environmental behaviour, it is a flawed approach. For one, it is blind to the fact that the media can only cover what the public deems important, given the need to keep readership figures up and receive advertising revenue. This demonstrates that the interplay between the media and the public determines whether and to what extent climate change is covered in the media, e.g., print newspapers. It is this interplay that also influences *how* newspaper outlets cover climate change and, so, the manner in which this coverage could catalyse pro-environmental behaviour as well as advocacy and/or support for ambitious climate policies. This final point is what this sub-section elaborates upon.

By framing stories in specific ways – i.e., "by select[ing] some aspect of a perceived reality and mak[ing] them more salient in a communication text" (Entman, 1993:52) – the media can manipulate *how* the public understands and interprets an issue or event. Put somewhat differently, through the frames it employs, the mass media can "promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation" (ibid.). In sum, the manner in which the mass media frames an issue/event can significantly influence the manner in which the public makes sense of specific issues/events – and hence the thoughts and actions of the public concerning such. Be that as it may, there is no guarantee that persons *will* pay attention and respond to media reports, or the frames employed in these reports (Feldman & Hart, 2018).

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[45] Take, for example, the 2017 Climate Change Reporting Skills workshops held in Johannesburg, Cape Town and Durban by the African Climate Reality Project (ACRP) in partnership with Eco forum Africa and the Institute for the Advancement of Journalism (ACRP, 2017).

[46] Supporting quote: "increased media attention to a certain issue typically indicates increased public attention and, in turn, increased likelihood that the political system takes up the issue" (Barkemeyer, 2017: 1031).

Members of the public may not respond to a news article or frame simply because that frame or story does not resonate with them. Partisanship, ideology, social identity, values, and beliefs are all factors that could dictate how, whether and to what extent one may respond to a news article or frame (Singh & Swanson, 2017; Feldman & Hart, 2018; Li & Su, 2018). For instance, Petrovic *et al.* (2014) found that conservatives were less responsive to articles concerning the risks associated with higher levels of air pollution if articles referred explicitly to anthropogenic climate change. Moreover, as discussed in Chapter 2, Feldman and Hart (2018) concluded that climate-related articles which adopt a health frame could "increase public engagement with the issue…particularly [engagement] among liberal-Democrats" (ibid., 517).

Altogether then, the media can knowingly or otherwise influence – through the frames they employ in climate change reports – whether the public interacts with climate-related articles, how the public perceives climate change (policies) and their behaviour and attitudes towards such. However, these supposed framing effects are contingent upon the public actually reading and engaging with such reports (ibid.). Additionally, due to media outlets' – print newspapers' especially – heavy reliance on advertising revenue (which is linked to their readership figures), the publication of reports that employ particular frames are somewhat contingent upon the public's preferences (Feldman *et al.*, 2018). To expand, the media may no longer employ a negative, fatalism frame (Nisbet, 2009) or environmental and "doom and gloom frames" (Wibeck, 2014: 403) when it comes to climate change reporting; regardless of how effective past studies claim such frames may be at grabbing the public's attention and/or getting them to act. The reason for this is that such frames may have become redundant. In other words, they have already been (over)used and, consequently, no longer tend to spark interest, catalyse action, or receive responses from members of the public—especially those who are experiencing climate fatigue (ibid.).

Based on observations similar to the above, it has been suggested that the media in general and newspapers, in particular, adopt a 'strategic framing' approach when it comes to climate change reporting (Leiserowitz, 2006; Li & Su, 2018). Strategic framing involves using frames that resonate with readers within a particular locale or of a particular political persuasion so as to promote pro-environmental behaviour or backing for pro-environmental policies. For example, newspapers could refrain from referring to the fact that climate change is anthropogenic to get conservatives to engage with climate-related articles, given that conservatives are more likely to engage with articles that do not explicitly mention

anthropogenic climate change (Petrovic *et al*., 2014). Moreover, newspapers could frame climate change as a threat to national/economic security to rally support for green policies in more conservative areas. This is assuming that framing climate change as a matter of national or economic security can induce conservatives to support renewable energy policies (e.g., Aklin & Urpelainen, 2013). Further still, to combat climate fatigue, newspapers could reframe climate change from an environmental issue to a public health, economic, national security or moral issue (Maibach *et al*., 2010; Boykoff, 2011; Myers *et al.,* 2012; Wibeck, 2014) – depending on which frame resonates most with persons of particular geographic location. Finally, informed by findings that members of the public are likely to support policies that they believe will neutralise security threats (Kamradt-Scott & McInnes in Singh & Swanson, 2017), newspapers could frame climate change as a security threat to rally public support for certain climate policies or place public pressure on politicians and policymakers to tackle the issue (Singh & Swanson, 2017). In sum, by employing strategic framing, it is possible to help ensure that "messages about climate change are tailored to the needs and predispositions of particular audiences" (Leiserowitz, 2006: 64). Thereby, strategic framing could not only help expose persons of various political persuasions to climate-related news, but also promote pro-environmental behaviour and generate support, from such persons, for pro-environmental policies as well as ambitious climate-related policies.

Although the likes of Leiserowitz (2006) advocate for strategic framing approaches such as those detailed above, they fail to acknowledge that such approaches are heavily dependent on the existence of context-specific research. To be sure, strategic framing might enable climate news to be reported in such a way as to catalyse engagement by diverse and varied audiences in different locales (ibid.). Nevertheless, the effectiveness of such a strategic approach is heavily dependent on the existence of information about the preferences of particular audiences in different locales. In this regard, the successful use of strategic framing approaches may require partnerships to be struck between researchers and newspapers or, at the very least, for newspapers' framing of climate change to be informed by context-specific research. But, even then, adopting an effective strategic framing approach may prove challenging. This is because existing studies indicate "that framing effects in the context of climate change tend to be modest and inconsistent" (Feldman and Hart, 2018: 519). For instance, whereas some found that conservatives are more likely to engage with climate-related articles that employ a public health frame (e.g., Myers *et al*., 2012) and national security frame (e.g., Aklin & Urpelainen, 2013), others (e.g., Feldman & Hart, 2018) found that the use of such frames in climate-related articles

solicits backlash from conservatives. Explaining their findings, Feldman and Hart (2018) state that "conservatives may perceive and resent communication efforts to link climate change to issues they care about, such as public health and especially national security, and thus be turned off by news that uses these frames" (ibid., 518).

Even though (1) strategic framing may not be effective, (2) the research meant to inform it will not yield conclusive results and (3) it is not guaranteed that newspaper outlets will take research into account in their future climate-related publications, this research project – by investigating how members of the public respond to various security frames (RO2 & RO3) – sought to contribute to the small pool of context-specific research[47] that can be drawn upon in the event that any South African newspaper outlet wants to employ a specific strategic framing approach in relation to climate reporting. This specific approach, to be clear, is one that involves framing climate change as a security threat in a bid to mobilise resources and public support for green policies, for instance, to tackle this urgent issue.

4.3 The (potential policy) implications of securitising climate change

The previous section explored what newspaper outlets could do to be more effective climate communicators. The final suggestion in the last sub-section was that the media should adopt a strategic framing approach. By referring to existing literature (mainly theoretical discussions, as opposed to empirical studies), the last sub-section also outlined that the securitisation of climate change could constitute such as strategic approach. It did this by highlighting that the employment of a securitisation frame in climate change reporting could, firstly, engage various persons across political and ideological divides. Secondly, such a frame could catapult climate change to the top of policy agendas and – assuming that public participation and public opinion are central to the public policy-making process (Houston & Liebenberg, 2001; Gumede, 2008) – engender policies that tackle climate change and its associated effects. Building upon these insights, this section – after a brief anecdote – explores the types of policies that securitising climate change may call forth. In so doing, it endeavours to raise awareness of some of the costs and benefits of employing a securitisation frame and, more specifically, a human and national security frame in climate-related articles.

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[47] See Schäfer *et al.* (2016) for a thorough discussion of the limited extent to which existing studies deal with the securitisation of climate change in the media, especially the media of non-Western countries that are most vulnerable to the effects of climate change.

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To gain legitimacy for their responses to the current coronavirus pandemic, governments across the globe frame(ed) the coronavirus as a security threat (Hoffmeester, 2020; Schoeman & Henwood, 2020). By securitising the coronavirus, these actors, according to Schoeman and Henwood (2020), became warranted in:

> "…lifting it [the coronavirus pandemic] out of the political sphere and treating it as something above and beyond politics, a threat to be dealt with largely through fear and technicism, by bringing in traditional security agents, turning compliance into enforcement" (ibid.).

South Africa was no exception to this securitisation trend. Indeed, in South Africa, securitisation language was mobilised, and the coronavirus was constructed as a security threat – an existential threat that calls for emergency intervention, including military intervention (Hoffmeester, 2020). For example, in the lead up to the country's first nationwide lockdown, President Cyril Ramaphosa spoke of the "fight against the COVID-19 pandemic" and the need to come together "to wage this struggle against this virus" (South Africa, 2020a). Moreover, by 24 March, the decision was made to deploy the South African National Defence Force (SANDF) (South Africa, 2020b) – a traditional security agent (Esterhuyse, 2015; Schoeman & Henwood, 2020) – during the lockdown period to "maintain law and order, support the state departments and to control our borderline to combat the spread of Covid-19" (Ramaphosa to Modise in Kiewit, 2020). Further still, on the evening before the nationwide lockdown commenced (26 March), the President, donning military apparel, addressed the South African National Defence Force (SANDF) and stated that "we are…waging war against an invisible enemy" (DefenseWeb, 2020).

Following SANDF's deployment, there were numerous reports of excessive force being used by both SANDF and the South African Police Service (SAPS) (Sokanyile, 2020; South Africa, 2020c). Pictures and videos surfaced on social media depicting civilians being treated inhumanely or subjected to police brutality (McKinley, 2020). These pictures and videos all lent credence to claims that some law enforcement officials were abusing their powers. Such claims continued to be made for the period that SANDF was deployed. Consequently, by the end of April 2020, the South African Military Ombud was investigating 33 cases involving alleged human rights abuses by military personnel (Hans, 2020). These cases support Schoeman and Henwood's (2020) claim that, by securitising the coronavirus, the government

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inadvertently heightened the insecurity of civilians in that they were threatened, not only by the prospects of being infected, but also by some law enforcement officials who took to exercising excessive force.

Looking more generally at the above account, it can be argued that it lays testament to the dangers of securitising an issue, dangers which the scholars of the Copenhagen School highlight (see Chapter 3). More precisely, it showcases that the policies and decisions which securitising an issue call forth may be inadequate to deal with the issue (i.e., threat) and may actually exacerbate instances of insecurity. Such possibilities need to be kept in mind given that, in an effort to draw attention to the impending climate crisis and compel the public and policymakers to take decisive action against climate change, the likes of Mehra (2010), Parsons (2010) and Brown *et al.* (2007) have been making calls to redefine and reframe climate change as a security issue/threat (see Chapter 1).

With regards to the above discussion, something needs to be made clear: simply couching climate change in securitisation language (i.e., employing a broad securitisation frame) is not what shapes different policy responses. Rather "particular responses to climate change (and the actors articulating them) are enabled or constrained by the ways in which [security and] the relationship between security and climate change is understood" (McDonald, 2013: 42). Put another way, when climate change is securitised – i.e., deemed an existential threat – different policy responses emerge depending on *how* it is securitised or, rather, what notion of security climate change is seen as a threat to (McDonald, 2013). The reason for this is that conceptualisations of 'security' differ in terms of, *inter alia*:

1. what constitutes a threat to security;
2. who/what is seen as the referent object of security, i.e., the thing to be protected from external threats;
3. who/what is believed to be the security agent, i.e., the person/thing responsible for providing security and, therefore;
4. *the means by which a security threat should be neutralised* (Baldwin, 1997; Buzan & Hansen, 2009; McDonald, 2013).

In a nutshell and in terms of this project's particular concern, the (possible) policy responses to the securitisation of climate change are not shaped by the use of a securitisation frame *per se*, but rather by the sub-securitisation frame employed, i.e., by whether climate change has been framed as a threat to human security or national security. Taking this statement as a point of departure, the ensuing sub-section:

a) examines, based on existing literature, the type of policy responses and/or complications that may stem from framing climate change as a threat to national security and human security; and then

b) based on the policy responses identified in (a), makes a preliminary statement in terms of the efficacy and desirability of framing climate change as a threat to national security and human security, respectively.

4.3.2 Potential (policy) implications of framing climate change as a national and human security threat

In Chapter 3, it was demonstrated that cognisance of the non-military threats to national security emerged during the latter half of the Cold War. The notion of national security was thus broadened to include these non-military threats. However, the nation-state remained the referent object of security. Therefore, as stated in Chapter 3, to frame climate change as a threat to national security is to frame it as a threat to a nation's territorial integrity, sovereignty, values, and (economic) assets. Moreover, based on the discussion of the works of Homer-Dixon and others – which accentuated the salient role climate change supposedly plays in bringing about mass migrations, food shortages and failed states – it was also implied that to frame climate change as a threat to national security is to frame it predominantly as a threat multiplier and, cause or exacerbator of conflict.

Whilst Chapter 3 preliminarily answered the question of what it means to frame something as a national security threat, it did not address other pertinent questions regarding a national security frame. These questions include: what kind of policies and/or complications might such framing lead to? What are the benefits and drawbacks of both the manner in which climate change is framed and the set of policies it might mobilise? Possible responses to these questions are given below. The responses are, in part, informed by a discussion of the critiques levelled against Homer-Dixon – and others who considered climate change a threat multiplier and exacerbator of conflict – by the likes of Daniel Deudney (1990) (1995).

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> "If everything…is labeled [sic] a security threat, the term loses any analytical usefulness...Because national security from violence and environmental habitability have little in common, the new fashion of linking them may create a conceptual muddle rather than a paradigm shift."
>
> —*Deudney (1995: 448)*

Above, Deudney questions the causal link between climate change and environmental degradation on the one hand and (national) security on the other. He also contends that

broadening the concepts of national security and a security threat renders the concepts themselves useless as analytical tools. That is to say that, by creating conceptual fogginess, the act of framing climate change – along with other non-military threats – as national security issues would frustrate attempts to conduct further studies on the subject of national security. Additionally, one might build on this critique by stating that this lack of conceptual clarity may result in the creation of an incoherent and ineffective set of policies to tackle these new threats to national security.

Elsewhere, Deudney (1990) characterises the link between national security, climate change and conflict as "dangerous and self-defeating" (ibid., 474). To expand, both himself and Lister (2014) – albeit separately – stress that rather than broadening the (national) security agenda, linking climate change to conflict and thus framing it as a national security threat will only lead to the "militarisation of the environment" (Lister, 2014: 620). Rodrigues De Brito (2012) adds clarity to this statement by talking instead about the "militarisation of the management of its [environmental/climate change's] negative effects" (ibid., 124). Ambiguities aside, the common concern that these individuals are voicing is simply that: framing climate change as a threat to national security may shift policy attention away from prevention, mitigation and adaptation, towards military solutions. Consequently, framing climate change as a national security threat may generate policies that use "force" to secure scarce resources (Brown *et al.,* 2007: 1153) and that establish tighter border controls to manage or deter climate refugees (Bates-Eamer, 2019).

Specifically citing its propensity to generate policy geared towards tight(er) border controls, Hartmann (2010) opposes securitising climate change. Ultimately, according to Hartmann, the move must be avoided as it turns victims of climate change into threats. Moreover, it emphasises action by individual states despite their inability to adequately respond to the global, complex threat of climate change (ibid.). Building on this point, it is essential to note that in as much as these policies place emphasis on national sovereignty and safeguarding that which exists within state boundaries, their adoption by nations could push the world towards – what the IPBES (2018: 36) dubs – a "Fortress World" scenario. Under this scenario, "[f]ragmented international action" on environmental issues prevails, thus frustrating efforts to mitigate and adapt to climate change on a global scale (ibid., 28). Paradoxically, then, it would seem that framing climate change as a national security threat, in a bid to place more urgency on the matter and stimulate further climate action, may actually complicate further action and,

at worst, have unintended (perverse) effects. Hence Deudney's (1990) aforementioned claim that policies linking national security, climate change and conflict are "self-defeating" (ibid., 474).

Adding to the concerns highlighted thus far are those scholars who suggest that framing climate change as a national security threat could lead to the adoption of policies geared towards coordinating and managing military responses *after* a natural disaster has taken place or conflict erupted. One such scholar is Dalby (2009). He maintains that policy would be "reactive" and concerned with "using troops to prevent disruption to the social order after 'nature' has done her worst" (ibid., 135). In other words, policies would be heavily focused on managing climate-change-related threats rather than on prevention (i.e., tackling underlying causes of change), mitigation and/or adaptation. Although Dalby's work raises a relevant concern, it does not reflect developments in certain regions. Analyses of the climate-security discourse in EU policy-making circles by Trombetta (2008), for instance, contradicts Dalby's claim that the securitisation of climate change calls forth a set of reactive policy measures.

According to Trombetta (ibid., 591), discourses in the EU underscore the need for "preventative, non-confrontational measures" to tackle climate change, despite framing it as a national security threat. Similarly, Rodrigues De Brito (2012: 130) – who uses the same research method as Trombetta – concludes that policy emanating from the region is informed by an understanding of climate change as a national security threat and yet, underscores mitigation and adaptation measures to address climate change. Hence, instead of resulting in the adoption of traditional, "reactive" security measures – as Dalby (2009: 135) predicted – the securitisation of climate change in the EU has resulted in both (1) the "mainstreaming of climate change mitigation and adaptation in development programmes" (Rodrigues De Brito, 2012: 129) and (2) the installation of a sense of urgency within the EU to create and implement such programmes (ibid., 128).

The EU's adoption of the aforementioned policies calls into question other criticisms levelled against securitising climate change. Take, for instance, the criticism launched by Floyd (2007). According to Floyd, to the extent that framing climate change as a national security threat would result in the adoption of "traditional policies" (ibid., 324), it fails to address the indirect drivers of climate change and vulnerability. However, as Rodrigues De Brito's (2012) analysis proves, this is not necessarily the case. Indeed, the set of policies that framing climate change as a national security threat has called forth in the EU, revolve around mitigation, adaptation,

and the deployment of sustainable development programmes; the latter of which help tackle the underlying/indirect drivers of climate change and vulnerability (Díaz *et al.*, 2019). Even so, the criticisms of Floyd (2007) and Dalby (2009) should not be disregarded entirely. Despite not holding true for the EU, further studies in other regions/countries would have to take place before passing Floyd (2007), and Dalby's (2009) concerns off as irrelevant. Moreover, as Rodrigues De Brito (2012) warns, the developments in EU policy circles do not rule out the possibility that framing climate change as a national security threat will not lead to "negative [policy] developments in the future" (ibid., 129). This is all the more so given that policies are determined by other factors, including the beliefs, values and ideologies of elected leaders and officials (ibid.).

Based on the evidence above, it can be tentatively concluded that despite affording climate change centrality in policy-making circles – as assumed by Brown *et al.* (2007) and Mehra (2010)[48] – framing climate change as a threat to national security does not come without dangers. For one, this move may call forth a worrisome set of policies. These include nationalistic ones which militarise the management of climate change's indirect effects (e.g., conflict and migration) rather than addressing the underlying drivers of climate change as well as conflict. Hence, framing climate change as a national security threat, although adding urgency to the matter in policy circles, could not only draw attention away from adaptation, mitigation and resilience building, but also lead to perverse and unexpected policy outcomes. It is for these reasons that, in cautioning against framing issues such as climate change as a national security threat, Hartman (2010) states that "playing with fear is like playing with fire…[y]ou cannot be sure exactly where it will spread" (ibid., 239).

Although framing climate change as a threat to human security also involves "playing with fear" (id.), it does not necessarily give rise to the same kind of policies as framing climate change as a threat to national security does (Oels, 2012)[49]. As Oels argues, "once security is redefined as human security…[it] propels sustainable development policies to the top of the policy agenda" (ibid., 190). Seeing that policies geared towards sustainable development help tackle the indirect/underlying drivers of climate change and vulnerability (Díaz *et al.*, 2019), it

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[48] See Chapter 1.
[49] Supporting quote: "the articulation of climate change as an issue of human security could have different policy implications from the articulation of climate change as an issue of national security" (Oels, 2012: 192).

can be said that framing climate change as a human security threat would enable the issue "to be addressed [more] meaningfully by policy makers" (McDonald, 2002: 278).

Overall, framing climate change as a threat to human security both elevates the issue to the realm of security – which places it at the top of the policy-making agenda – and produces constructive, meaningful policies. In this regard, "human security offers a form of securitization without the counterproductive outcomes that come from securitization by [*sic.*] the state" (Oels, 2012: 195). Consequently, there exists some evidence to support the assumption that framing climate change as a threat to human security would be more desirable than framing it as a threat to national security.

4.3.3 Conclusions

The previous sub-section indicated that employing a national security frame in climate change reporting could lead to the adoption of perverse or ineffective climate change policies (Oels, 2012). Such policies could move South Africa further away from a more sustainable pathway and frustrate the country's goal of achieving an "equitable transition" (National Planning Commission, 2012: 198) to such a pathway. Thus, if it is found that a national security frame is the most prevalently used security frame, then some corrective action – in terms of media framing – would need to be proposed to help combat the creation and adoption of counterproductive policies. Considering the research conducted by Schäfer *et al.* (2016), corrective action may indeed need to be proposed.

As discussed in Chapter 1, Schäfer *et al*. (2016) – extrapolating from their analysis of articles published by the *Sunday Times* – concluded that the percentage of South African climate-related articles that employed securitisation language (i.e., a securitisation frame) was declining (see Fig. 4.4). Moreover, their analysis revealed that in instances where climate change was framed as a security issue, it was more frequently done so in terms of national security rather than human security (ibid.).
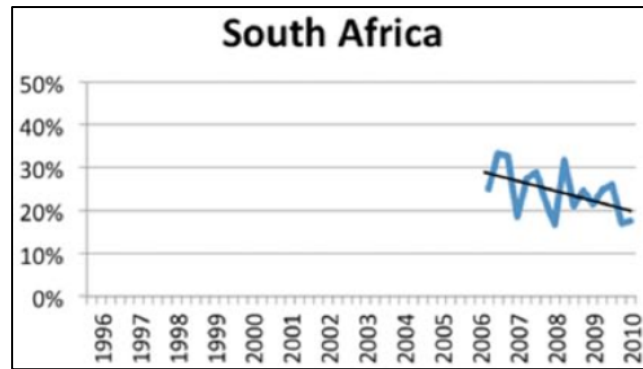
Figure 4.4:   The percentage of climate-related news articles published by the *Sunday Times* that
                employed securitisation language (i.e., a securitisation frame). *Source:* Schäfer *et al*.
                (2016: 12).

As established in Chapter 1, Schäfer *et al*. employed relatively narrow coding definitions to identify different security frames. Thus, Schäfer *et al*.'s findings regarding the employment of a broad securitisation frame and human and national security frames could be called into question. Accordingly, this project sought to further explore and expound upon some of Schäfer *et al*.'s findings, i.e., to explore the prevalence of various security frames in climate-related articles published by South African newspapers *after* expanding various frame definitions. If, despite employing expanded frame definitions, it is found – as per Schäfer *et al*.'s conclusions – that a national security frame is the most prevalently used security frame, then some corrective action may indeed need to be proposed so as to avoid the possible creation and adoption of counterproductive policies.

Apart from further exploring and expounding upon some of Schäfer *et al*.'s findings, this research project also sought to explore the temporal development of the use of a securitisation frame and so note any changes in usage since the study's publication. In this regard, it should be noted that climate change came to dominate much of the global collective consciousness in 2018, following the attention given to Greta Thunberg and youth climate activists. In fact, this (pre)occupation occurred to such a significant extent that the phrase 'climate emergency' was designated the 2019 Oxford Word of the Year[50] (Oxford Languages, 2019). Thus, as a consequence of climate change coming to occupy a more prominent place in the global collective consciousness (Vogler, 2014), it is reasonable to expect an uptick in the use of a securitisation frame in print newspapers from 2018-2019. This is especially since

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[50] According to Oxford Languages (2021), "[t]he Oxford Word of the Year is a word or expression shown through usage evidence to reflect the ethos, mood, or preoccupations of the passing year, and have lasting potential as a term of cultural significance".

strategic approaches, such as securitisation, might have been adopted to draw further attention to the issue and solicit decisive action to tackle it. Such strategic approaches might have also been adopted in the COVID-19 era (2020 to present[51]) given the (unconfirmed) links that have been drawn between climate change, the decline in ecosystems' health and the loss of biodiversity on the one hand, and Covid-19 and its proliferation on the other (e.g., Lorentzen *et al.,* 2020; Fernández *et al.,* 2021; Gorji & Gorji, 2021). As such, it is reasonable to assume that a large proportion of climate-related articles published in 2020 would have employed a broad securitisation frame. Overall, then, the various events of 2018-2020 may break the downward trend (see Fig. 4.4) that Schäfer *et al.* (2016) found in terms of the use of securitisation language (and, thus, a securitisation frame) in climate-related articles published by South African newspapers between 2006 and 2010.

As thoroughly discussed in Chapter 2, the researcher sought to meet the above-mentioned aims and objectives by conducting frame and content analyses on climate change-related newspaper articles published by *City Press*, the *Sunday Times* and the *Daily Sun* between 2012 and 2020. In this chapter and Chapter 3, it was highlighted that in order to conduct the said deductive frame and content analyses – and so be able to make preliminary remarks about the prevalence of security frames and the pattern of their use over time – various security frames have to be defined prior to data collection and analysis, and with reference to existing literature. Only once the definitions for specific security frames are ironed out can they be used as coding definitions/criteria for their respective frames. Subsequently, newspaper articles can be coded for such frames, and the prevalence of such frames, and the temporal development of their usage, recorded and analysed[52].

Keeping the above in mind, it is now necessary to present the researcher's critical examination of the manner in which a securitisation frame, along with a national and human security frame, have been defined in a few recent studies. This examination is what underpinned the creation of the coding definitions that were used in this project to identify various security frames in print newspaper articles published by *City Press*, the *Sunday Times* and the *Daily Sun*. Following the examination, the said coding definitions are presented, along with parts of the

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[51] By 'present' the researcher means the time of writing—2021.

[52] This was all already discussed in Chapter 2 with reference to the methods outlined by Linström and Marais (2012) and Metag (2016).

coding sheet used to conduct the deductive frame and content analyses that informed this research project's findings.

4.4 Securitisation and security frames in the existing literature

4.4.1 Broad frame: securitisation frame

In the chapter *Securitisation as a media frame: what happens when the media 'speak security'*, Vultee (2011) argues that, given its ability to frame an issue in a certain way, the media has a vital part to play in the securitisation process. Vultee makes his argument by drawing upon Entman's framing theory and the Copenhagen School's conceptualisation of securitisation. As such, in order to grasp Vultee's argument, one would need to recall a few points made in the previous chapter, and earlier on in this one, concerning (1) the conditions necessary for an issue to be successfully securitised (according to the Copenhagen School) and (2) Entman's (1993) oft-cited definitions of framing.

In terms of (1) above, the following quote in Chapter 3 should be borne in mind: "the security speech act is not defined by uttering the word *security*. What is essential is the designation of an existential threat requiring emergency action or special measures and the acceptance of that designation by a significant audience" (Buzan *et al*., 1998: 27). In terms of (2) above, the following should be recalled: when the media frames an issue/event in a particular way, it is "select[ing] some aspect of a perceived reality and mak[ing] them more salient" (Entman, 1993:52). By doing this, the media is able to "promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation" (ibid.). For this reason, the media is thought to be able to manipulate *how* the public understands and interprets an issue or event.

Now that the conceptual building blocks of Vultee's argument – that the media constitutes a key player in the securitisation process – have been discussed, aspects of the argument itself can now be detailed. Hence, the discussion below begins by enumerating the conceptual moves that Vultee makes in his argument.

1. Quoting Balzacq (2005), Vultee (2011) asserts that when a securitisation actor makes a securitising move – by designating something as an existential threat – they are themselves employing "a frame…that 'selects' or activates certain properties of the concept, while others are concealed" (Balzacq, 2005: 182 in Vultee, 2011: 81).
2. Drawing on the Copenhagen School's notion of securitisation, Vultee then reiterates that for an issue to be successfully securitised, an audience must accept the

securitisation frame employed by a securitising actor[53]. Put in terms of the quote by Buzan *et al*. (1998) referenced in the paragraph above, the designation of something as an existential threat must be accepted by a significant audience before the threat can be dealt with as a matter of emergency and with exceptional means.

3. Vultee (2011) then proceeds to argue that by framing an issue as a security threat – i.e., employing what he calls a securitisation frame – the media plays a vital role in "creating the picture of the world that the audience of a securitising move sees" (ibid., 82).

4. By referring to (3), Vultee then gets to the crux of his argument: the media – through its use of a securitisation frame – plays a crucial role in getting a significant audience to accept the designation of an issue as an existential threat.

Overall, Vultee is arguing that the media can help ensure that an issue is successfully securitised by employing a securitisation frame. This is because the frame would shape how the public understands and interprets an issue. In other words, the frame could amplify existing perceptions or influence the public's perceptions of a specific issue such that they begin to understand it as an existential threat. By doing this, the media's use of a securitisation frame aligns the public with the securitisation actor's claims. Seeing that it is only when a significant audience is aligned with and legitimates a securitisation actor's claims that "emergency action or special measures" can be taken, Vultee concludes that the media plays a crucial role in the successful securitisation of an issue.

Vultee, convinced that securitisation could be "conceptualised as a news frame" (ibid., 79), then proceeds to define it as one that "highlights the existential threat of an issue…and diminishes the arguments for handling it as a matter of political routine" (id.). The latter half of the previous quote underscores that the effect of employing a securitisation frame is that it convinces a significant target audience that something is an existential threat, warranting emergency action and even exceptional measures to tackle it (ibid.). This, however, is not necessarily the case.

To explain the last sentence above, it is worth starting off by reiterating that Vultee's definition of a securitisation frame is informed by the Copenhagen School's conceptualisation of securitisation. In other words, it associates the successful securitisation of an issue with exceptionality and exceptional measures. This conceptualisation was critiqued, using insights from Trombetta (2008; 2011) and Oels (2012) in a discussion that featured in the preceding chapter. To recapitulate, the essence of the critique was that the successful securitisation of an

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[53] Recall from Chapter 3 that this actor can be the media itself, politicians, political actors, NGOs *etc*.

issue does not necessarily mean that it is elevated outside the realm of everyday politics (i.e., taken out of the "normal bounds of political procedure" (Buzan, Wæver and de Wilde, 1998: 25)); ascribed exceptional status; and tackled using exceptional measures. Instead, when an issue such as climate change is successfully securitised, it often means that it remains within the boundaries of everyday politics but – because the securitisation move creates a sense of urgency – is tackled using courses of action and policies "that probably would not otherwise have been undertaken" (Trombetta, 2011: 136).

Based on the above, it is arguable that the definition of a securitisation frame, as provided by Vultee (2011), needs to be refined on a conceptual and theoretical level. This can be done with reference to the definition of securitisation that was derived in the previous chapter:

> "Securitisation can be defined as the positioning through speech acts (usually [but not always] by a political leader) of a particular issue as a threat to survival, which, in turn, (with the consent of the relevant constituency)" (McDonald, 2008: 567) calls forth "measures and policies that probably would not otherwise have been undertaken" (Trombetta, 2011: 136).

Drawing upon the above, a securitisation frame can be defined as one that presents an issue as an existential threat (a threat to survival). Moreover, it can be defined as one that, by creating a sense of urgency, influences public opinion and catalyses climate action. Furthermore, assuming that public participation and public opinion are central to the public policy-making process[54], it can be defined as one that helps catapult an issue to the top of policy-making agendas. Still further, it can be defined as one that increases the possibility that measures and policies that otherwise would not have been created and implemented, actually are (Trombetta, 2011: 136).

Now that the final theoretical definition of a securitisation frame has been derived, the next task is to detail how such a frame can be identified. In other words, what language is indicative of a securitisation frame, and what language will a coder have to look for if they were trying to pinpoint the use of this frame in climate-related newspaper articles. As is explained below, Schäfer *et al.'s* (2016) definition of a securitisation frame is instructive in this regard.

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[54] This is something that is deemed to be true of participatory democracies and deemed to be true when democratic governance prevails (Houston & Liebenberg, 2001; Gumede, 2008).

In investigating the extent to which climate change is securitised in newspaper articles from nine non-Western countries (including South Africa), Schäfer *et al.* (2016) searched for the use of securitisation language in these articles. They did this by operationalising the following search string:

- "armed, (armies OR army), attacks, clash*, (conflict OR conflicts), confrontation, danger*, (fear OR feared OR fears), fighting, frightening, militar*, (risk OR risks), security, soldier*, tension, threat*, (violence OR violent), (war OR wars)" (Schäfer *et al.,* 2016: 91).

Schäfer *et al.* (2016) derived this search string by, firstly, creating a preliminary list of securitising words based on the Copenhagen School's theoretical account of securitisation. The list of words was then used to search for newspaper articles obtained from a newspaper database. In the third instance, Schäfer *et al.* looked through the newspaper articles that the search yielded and noted down the words that frequently appeared in those articles "discussing the potential security implications of climate change" (ibid., 9). These were then added to the list of securitising words so as to create a search string (see above) associated with securitisation language and a securitisation frame.

Even though Schäfer *et al.*'s above-mentioned method was informed by the Copenhagen School's notion of securitisation, the resulting search string is, arguably, still valid and not in need of extensive refinement. The reason for this is that Schäfer *et al.* themselves acknowledge the limitations of the definition of securitisation provided by the Copenhagen School. Indeed, they identify as one of its shortcomings the "emphasis on 'exceptional' measures" (ibid., 3). Aware of this shortcoming, in deriving their search string, Schäfer *et al.* concentrated squarely on one aspect of the Copenhagen School's definition of securitisation, the aspect underscoring that securitisation involves portraying an issue or event as an existential threat. Considering that this aspect of securitisation forms part of the definition of securitisation derived in this dissertation (see above and Chapter 3), it is arguable that the search string created by Schäfer *et al.* is sound and valid from a theoretical perspective. Additionally, seeing that the scholars define a securitisation frame in terms of the use of securitisation language, which they delineate in their search string, their definition is of practical use. In other words, it can easily be used to identify instances where an issue such as climate change has been framed as an existential threat. It is for this reason that Schäfer *et al.*'s definition of a securitisation frame, in general,

and the search string to identify securitisation language, in particular, more or less suffice at a practical level.

It has been stated that the string only more or less suffices because it does not necessarily cover all securitisation words and language. Indeed, by looking for synonyms of the words in the search string, the researcher was able to expand the search string. A further expansion of the string was facilitated by investigating which words were most frequently employed in the climate-related articles used to create the survey that informed part of this research project. But even the expanded search string[55] does not, and cannot, include all the securitisation language and words. Hence, it is entirely possible that, even though it employed securitisation language and thus a securitisation frame, an article pertaining to climate change was not counted by the researcher in this project or Schäfer *et al.*, in their study.

All in all, the limits of the search string call into question Schäfer *et al.'s* findings that, between July 2006–June 2010, there was a reduction in the use of securitisation language, and hence a securitisation frame, by South African newspapers' reporting on climate change. The limits also frustrate this project's attempts to investigate and report on the prevalence of a securitisation frame, as well as human and national security frames[56], in climate-related news articles. This is something that is dwelt upon in the final chapter, which discusses the limitations of this project and reflects on the conclusions reached. As such, it will not be discussed any further in this chapter in order to avoid repetition and redundancy. All that will be said for the time being is that, due to the impossibility of operationalising all the securitisation words in existence, the expanded search string created more or less sufficed for the purposes of this research project. In other words, given the adequacy of the search string, it could be used to identify securitisation language in the climate-related articles obtained from the electronic databases. More generally, seeing that, at a practical level, a securitisation frame

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[55] "armed, (armies OR army), attacks, clash*, (conflict OR conflicts), confrontation, danger*, (fear OR feared OR fears), fighting, frightening, militar*, (risk OR risks), security, soldier*, tension, threat*, (violence OR violent), (war OR wars)" (Schäfer *et al.*, 2016: 91). **Annihilation, apocalypse, Armageddon, battle*, calamity, cataclysm, catastrophe, chaos, crisis, destroy*, destruction, disaster*, disastrous, dread, struggle, suffer*, surviv*, victim* (added by researcher).**

[56] Recall from the chapter on methods and methodology, that this project first looks for the use of a securitisation frame in the obtained sample of climate-related articles and groups them together. Then, only the group of articles that employed a securitisation frame are analysed to investigate their use of a national security versus a human security frame. Accordingly, it has been stated that the limits of the search string in identifying a securitisation frame could also affect the investigation into the prevalence of national and human security frame in climate-related news articles. Again, this is because the identification of such sub-securitisation frames is contingent upon the identification of a securitisation frame.

has been defined as one that portrays something as an existential threat through the use of securitisation language, the string could indeed be used to identify instances where a securitisation frame was employed in climate-related articles. Informed by this, the coding definition of a securitisation frame, which features in the codebook (see Appendix 10) that the coder (the researcher) used to fill out the code sheet (see Appendix 9) for each climate-related newspaper article, is as indicated in Table 4.1 below.

Table 4.1:   Parts of the code sheet and codebook pertaining to a securitisation frame.

Question in code sheet	Coding definition in codebook
HAS A SECURITISATION FRAME BEEN EMPLOYED? YES / NO	A securitisation frame has been employed if securitisation language is present, i.e., if one or more of the following words have been used in close proximity to the phrases 'climate change' or 'global warming': armed, (armies OR army), attacks, clash*, (conflict OR conflicts), confrontation, danger*, (fear OR feared OR fears), fighting, frightening, militar*, (risk OR risks), security, soldier*, tension, threat*, (violence OR violent), (war OR wars) (Schäfer *et al.*, 2016: 91). **Annihilation, apocalypse, Armageddon, battle*, calamity, cataclysm, catastrophe, chaos, crisis, destroy*, destruction, disaster*, disastrous, dread, struggle, suffer*, surviv*, victim* (researcher's own contribution).**

Having showcased how the coding definition for a securitisation frame was derived, the discussion now proceeds to demonstrate how the coding definitions for the sub-securitisation frames of human and national security were created. In this regard, the following section presents and critiques, based on the content of Chapter 3, the manner in which these two frames have been defined in the existing literature. Subsequently, informed by the various critiques, the definitions in the existing literature are refined, and then the final coding definitions for each frame are derived and presented.

4.4.2 Sub-frames of human security and national security

It is worth beginning this section by recalling a few points highlighted in this chapter and both chapters 1 and 3. The first point is that there exist different conceptualisations of security. Therefore, it is viable to propose and talk of different security frames (e.g., a national security frame and a human security frame) together with an overarching securitisation frame.

The second point is that the (possible) policy responses to the securitisation of climate change are not shaped by the use of a securitisation frame *per se*, but rather by the sub-securitisation frame employed, i.e., by whether climate change has been framed as a threat to human security or national security. This is why this project, in its aim to investigate the possible policy implications of the securitisation of climate change in South African news articles, sought also to investigate the prevalence and use of a national and human security frame in these news articles.

The final point that needs to be reiterated is that the definition of a human and national security frame would differ, just as the very conceptualisations of human and national security differ. In highlighting the defining features of human and national security, Table 3.4 in Chapter 3 laid out these differences. As such, aspects of this table are referenced in the ensuing critique of existing definitions of a (1) national security frame and (2) human security frame and, thusly, in deriving the final coding definitions for each frame.

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In *The US News Media, Polarisation on Climate Change, and Pathways to Effective Communication,* Bolsen and Shapiro (2018) aimed to highlight factors contributing to polarisation in climate change discourses. Moreover, they aimed to pinpoint challenges faced by climate communicators in catalysing action to tackle climate change. Before meeting any of the aforementioned aims, they reviewed how climate change emerged in the news media of the US and highlighted the most prominent frames used to discuss this pertinent issue. One of these frames is a national security frame. According to the scholars, such a frame can be defined as one that "focuses on a threat to energy, water, food security, or to the nation-state (e.g., migration)" (ibid., 150). Informed by the discussions in Chapter 3, it can be said that this is a very vague definition. A more comprehensive one would define the frame either implicitly or explicitly in terms of (1) who/what the referent object is, (2) who/what is responsible for providing security, (3) what actually constitutes a threat to security and (4) what is/are the best means of providing security. Be that as it may, one cannot quite take issue with Bolsen and Shapiro's definition. The reason for this is that they had no intention of operationalising the definition, i.e., creating a coding definition from it and using it to identify a national security frame in newspaper articles. Rather, they aimed to highlight, quite generally, the most common frames used to discuss climate change in US news media. Thus, considering Bolsen and

Shapiro's aims, there was no need to provide a detailed definition of a national security frame, nor should one have been expected.

Qualms about its level of detail aside, the definition highlighted by Bolsen and Shapiro can still be critiqued from a basic theoretical standpoint. To explain, their definition of a national security frame points to various referent objects, including the state, food, water and energy. However, based on the account of national security given in Chapter 3, the referent object and unit of analysis in either a traditional or broadened notion of (national) security is the nation-state. Bolsen and Shapiro's definition of a national security frame, then, should highlight as much. Instead, it only confuses the unit of analysis and referent object by mentioning food, water and energy. Given this shortcoming, the vague and theoretically problematic definition of a national security frame provided by Bolsen and Shapiro needs to be re(de)fined and, as such, could not be used, as-is, to inform the creation of a coding definition of a national security frame.

Apart from Bolsen and Shapiro (2018), Feldman *et al.* (2017) also define a national security frame. One of their specific aims was to investigate how the impacts of climate change were framed in 4 US newspapers[57] between 2006 and 2011. The climate impact frames investigated were "environmental, public health, national security, economic, secular morality, religious morality, public accountability, and conflict/strategy" (ibid, 488). Seeing that, unlike Bolsen and Shapiro (2018), one of Feldman *et al.'s* (2017) aims was to identify a national security frame in news reports about climate impacts, one would expect their definition of a national security frame to be quite comprehensive. This, however, was not entirely the case.

Bolsen and Shapiro (2018) implicitly defined a national security frame as one that portrayed climate change as a threat multiplier. In other words, as that which can result in, for example, "violent conflict", "influxes of climate refugees", and the "displacement of persons" (ibid., 488), thereby indirectly exacerbating threats to a nation's sovereignty, territorial integrity, identity, and resources. With reference to the conceptual framework in Chapter 3, it can be said that Feldman *et al.'s* definition was informed by a broadened understanding of national security. This is evidenced by the fact that they regarded the state as the referent object of security but identified national security threats beyond military-related ones. As discussed in Chapter 3, this is in line with current (neo)realist-inspired notions of national security.

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[57] Namely, The New York Times, The Wall Street Journal, The Washington Post, and USA Today.

Even though Feldman *et al.'s* definition of a national security frame is theoretically sound, it could have been more detailed to better guide coders during the stages of coding and frame analysis. To be more specific, the scholars only define the frame, and implicitly at that, with reference to what the referent object is and what constitutes a threat. A coder could have thus overlooked the use of a national security frame and/or struggled to code newspaper articles because the only definition of a national security frame they had as a reference guide was: "climate change was discussed as having effects on national security (e.g., displacement of populations, violent conflict)" (ibid., 488). This is all the more so given that they also had to code articles for an environmental frame which was defined as one where "climate change was discussed as having effects on the environment (e.g., melting glaciers, threats to plants and animals)" (id.). With the narrow definitions supplied, how does a coder distinguish between the use of an environmental frame and a national security one? Would not the mentioning of melting glaciers in the context of a nation's shrinking land size, and resulting conflict over land, constitute a national security frame? Such challenges, stemming from vague coding definitions, could call into question the findings that "an environmental impact frame was used most often, appearing in 36.4% of stories [followed by] public health (12.6%) economic (7.5%), and national security (4.4%) frames" (ibid., 491).

Altogether then, whilst theoretically sound, Feldman *et al.'s* coding definition for a national security frame could have been both more explicit and comprehensive. Hence, a project concerned with creating a final coding definition for a national security frame to facilitate security frame analysis on climate-related articles would do well to employ Feldman's expanded definition of national security. However, it would do even better to draw on theoretical discussions of national security to define a national security frame explicitly, more comprehensively and in terms of the four questions at the heart of conceptualisations of security[58]. This lesson was kept in mind in deriving the final coding definition for a national security frame, which facilitated the frame analysis conducted in this project. A similar lesson was learnt from reviewing how Singh and Swanson (2017) derived their definition of a national security frame and from reflecting on the definition itself.

Singh and Swanson (2017) researched the extent to which a national security, environment and human rights frame, respectively, influence "the importance that individuals

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[58] To repeat, yet again, these are (1) who/what the referent object is, (2) who/what is responsible for providing security, (3) what actually constitutes a threat to security and (4) what is/are the best means of providing security.

assign to climate change policy" (ibid., 2). Data from their empirical study suggested that the frames had no statistically significant positive effect. Moreover, it pointed out that strategic framing may backfire since Republicans and those affiliated with the political right tended to rate climate change policy as *less* important than the control group when either of the three frames was employed. Informed by their study, Singh and Swanson (2017) broadly concluded that "on average, individuals' beliefs about the importance of climate change are quite rigid, and those seeking to alter such beliefs will find little utility in issue framing" (ibid., 10).

The study that informed the above findings involved showing participants of various political persuasions, short pseudo-newspaper articles that Singh and Swanson (2017) themselves created. Each article framed climate change as a national security, environmental threat and human rights threat, respectively. The content of the article that employed a national security frame was constructed with the knowledge of the "security-oriented discussions about climate change…in the 2015 US Department of Defense report on climate change" (ibid., 3) and the "2015 White House National Security Strategy [which] identifies climate change as a threat to national security" (ibid.). As such, it focused on presenting climate change as that which multiplies or exacerbates the various threats – not necessarily military-related – facing a nation. In this sense, it also employed a broadened definition of national security.

Given the way the article, which was said to evince a national security frame, was constructed, it can be inferred that Singh and Swanson's (2017) definition of a national security frame is that it:

1) Focuses on how an issue can threaten a nation's safety and security by exacerbating instability, hunger, poverty, conflict, food and water shortages, pandemics, diseases, and disputes over refugees and resources, in regions across the globe.
2) Emphasises the central role of armed forces and a nation's military in addressing these threats and monitoring them to keep the nation safe and secure.
3) Focuses on how an issue may impact the way a nation's military and armed forces carry out their missions.

The above definition is much more comprehensive than Feldman *et al.*'s (2017). It not only highlights what the referent object is (the state) and what constitutes a threat, but also who is predominantly responsible for dealing with such threats (the military sector) and the means by which they can be dealt with (by expanding the military's role in monitoring various threats and involving them in the neutralisation of such threats) – all of which are in accordance with

theory. On account of its comprehensive nature and theoretical soundness, this definition forms a solid basis for a coding definition of a national security frame. However, it cannot be used as-is. Despite being more comprehensive, the definition can still be somewhat expanded with reference to theoretical discussions of the conceptualisation of national security. For instance, it could – as per a broadened definition of national security – explicitly define that which threatens the economic resources and wealth of a nation as a national security threat (and thusly define a national security frame in such terms).

Altogether then, given its features, Singh and Swanson's (2017) definition of a national security frame can be used quite extensively in the creation of the final coding definition of a national security frame. That being said, their definition can be improved upon; it can be expanded further to accurately represent a broader conceptualisation of national security, as per broadening debates in the field of ISS.

Yet another definition of a national security frame can be found in Schäfer *et al.* (2016). As discussed in Chapter 1 and 2 already, the first aim of these scholars was to investigate the prevalence of securitisation language in climate-related articles in nine non-Western countries (South Africa included). Their second aim was to determine the prevalence of various security frames, including national security, human security, water security, energy security and food security frames. Consequently, to carry out their research, Schäfer *et al.* had to define a human security frame in addition to a national security frame. To reduce the chances of conflating frames, one would expect the definitions to be quite comprehensive. Nevertheless, this was not so.

Schäfer *et al.*'s coding definitions for the various frames were based on whether or not a specific word was used. For instance, an article was considered to have framed climate change in terms of national or human security if it explicitly used the words 'national security' or 'human security' (ibid.). These narrow coding definitions for different frames put the following conclusions reached by Schäfer *et al.* into question:

- in instances where climate change was framed as a security issue, it was more frequently done so in terms of national security rather than human security (ibid.).
- whilst the use of both national and human security frames was low and declining, the use of water, food and energy security frames in climate change reporting was on the rise (ibid.).

Indeed, based on the theoretical discussion in Chapter 3, it is arguable that the energy, water, and food security frames would fall under the human security frame. Put another way, if a human security frame was instead defined in terms of the features of human security, i.e. as that which centres around the well-being of (groups of) individuals and is concerned with, *inter alia*, food and health security (UNHDR, 1994; UN, 2017), it is arguable that Schäfer *et al.* (2016) would have found that at least some of the articles that framed climate change in terms of energy, water and food security were, ultimately, framing climate change in terms of human security. If this is the case, then the seeming lack of the use of a human security frame (see Fig. 4.5) when it comes to climate change reporting in South Africa, can be called into question.
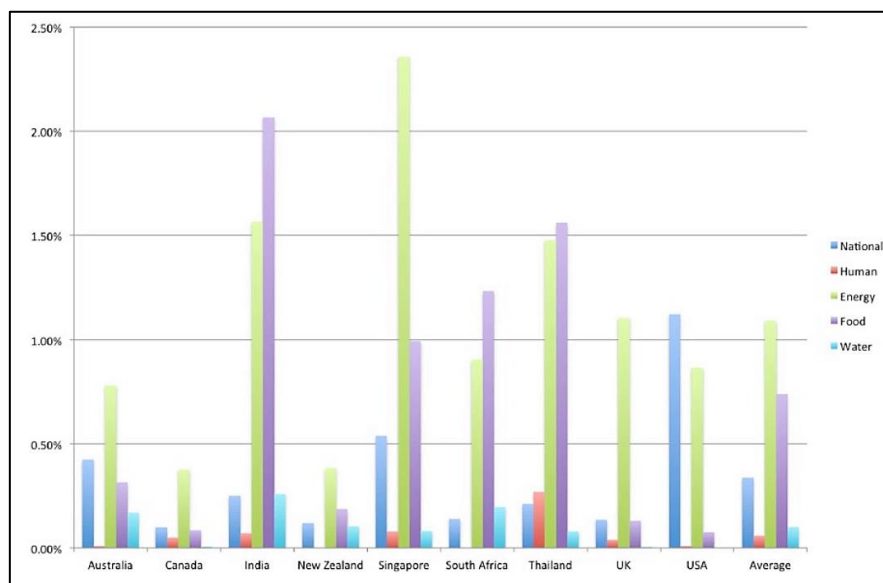
Figure 4.5:   The percentage of all climate-related articles analysed by Schäfer *et al.* (2016) that employed specific security frames. *Source:* Schäfer *et al.* (2016: 13).

Overall, given their rather simplistic nature and lack of theoretical backing, the definitions of a national and human security frame provided by Schäfer *et al.* (2016) cannot be used by a coder to conduct meaningful frame analysis. To reiterate, the use of such narrow frame definitions would significantly call into question the results of any frame analysis that relies upon them. As such, the frame definitions need to be re(de)fined with a cognisance of conceptualisations of security in the field of security studies. In conjunction with these theoretical conceptualisations, the frames need to be re(de)fined bearing in mind aspects of some of the other scholars' frame definitions, not to mention their shortcomings—many of which were discussed above. Before presenting the final coding definitions that the researcher derived in just such a manner, it is worth taking a moment to recapitulate the definitions of a

national and human security frame available in the existing literature and their shortcomings (see Table 4.2).

Table 4.2:   Summary of the brief exploration and review of various definitions of a national and human security frame available in the existing literature.

Source	Frame	Frame definition	Positives	Critique and/or Recommendations
Bolsen & Shapiro (2018)	National Security	• Climate change, via its direct and indirect effects, is discussed as a "threat to energy, water, food security, or to the nation-state (e.g., migration)" (ibid., 150).	• Seems – in accordance with post-Cold War conceptualisations of national security – to apply a broadened notion of national security (it acknowledges threats beyond military ones).	• Vague. • Theoretically problematic in some respects: it lists multiple units of analyses and referent objects. Whereas, in theoretical constructions of national security, the nation-state is the primary unit of analysis and referent object.
Feldman *et al.* (2017)	National Security	• Climate change is discussed "as having effects on national security (e.g., displacement of populations, violent conflict)" (ibid., 488). • I.e., Climate change is discussed as a threat multiplier.	• Theoretically sound. • Applies a broadened notion of national security (it acknowledges threats beyond military ones).	• Needs to be more explicit and detailed to allow more accurate coding. • Could use theory to the above end.
Singh & Swanson (2017)	National Security	• Focuses on how an issue can threaten a nation's safety and security by exacerbating instability, hunger, poverty, conflict, food and water shortages, pandemics, diseases, and disputes over refugees and resources, in regions across the globe.	• Applies a broadened notion of national security (it acknowledges threats beyond military ones). • Quite detailed and comprehensive (allows for more accurate coding).	• Could still be somewhat expanded to include – as per a broadened definition of national security – threats to economic resources and the wealth of a nation as national security threats.

		• Emphasises the central role of armed forces and the nation's military in addressing these threats and monitoring them to keep the nation safe and secure. • Focuses on how an issue may impact the way a nation's military and armed forces carries out their missions.	• Theoretically sound.	
Schäfer *et al.* (2016)	National Security	• The term "national security" is used.	N/A	• Vague and very narrow – thereby rendering the results of the framing analysis less reliable.
Schäfer *et al.* (2016)	Human Security	• The term "human security" is used.	N/A	• Vague and very narrow – thereby rendering the results of the framing analysis less reliable.

Taking all of the above into consideration, the final coding definitions of a human and national security frame were drawn up. The coding definitions that constitute part of the final codebook can be found under section 12 in Appendix 10.

4.5 Concluding remarks

The very broad aim of this chapter was to provide an overview of the various streams of literature that were relevant to this research project. The last of its three constitutive sections presented a critical review of some of the scholarly works that have defined a securitisation frame in general (i.e., Vultee, 2011), or a national and human security frame, in particular (i.e., Schäfer *et al.,* 2016; Feldman *et al.,* 2017; Singh & Swanson, 2017; Bolsen & Shapiro, 2018). Guided by the review and the content of Chapter 3, the researcher proceeded to re(de)fine these frames. Thus, the final section culminated in the presentation of the coding definitions of a securitisation frame and a human and national security frame; all of which form part of the codebook that the researcher used to fill out a code sheet for each climate-related article that frame and content analyses were conducted on.

The section that preceded the third briefly explored what scholars contend are the possible (policy) implications of securitising climate change. In so doing, it highlighted, from mainly a theoretical standpoint, some of the ramifications that framing climate change as a threat to national and human security, respectively, could have.

The first of this chapter's three major sections discussed literature pertaining to climate communication. In this section, the media's role in raising climate awareness, catalysing pro-environmental behaviour, and inducing support for green policies was explored. Along with this, the actions that the media could take to help ensure that they are effective climate change communicators were also briefly explored. Moreover, some of the micro and macro-scale factors that impede or enable newspaper outlets from being effective climate change communicators were discussed. Through this discussion, some insights into South Africa's print news media landscape, with regards to climate change reporting, were gleaned. Together with discussions of COVID-19, the rise of climate activism globally and the various social maladies that are pervasive in a South African context, these insights enabled some speculative statements to be made regarding the interest paid to climate change by both newspaper outlets and the public. In turn, these statements shaped the researcher's expectations regarding the outcomes of the frame and content analyses and the survey. To be clear, though, the empirical research conducted was of an exploratory nature. The content of this chapter, and the first section in particular, just orientated the researcher to the likely emergence of certain trends in the data collected. Seeing that this project's investigations were exploratory, these trends are referred to as expectations rather than explicit hypotheses in the ensuing chapter, which presents and interprets the results of the empirical research conducted.

Chapter 5: Results of Framing and Content Analyses and Survey

"The research techniques themselves, in experimental research, [can] affect the findings. The lab, the questionnaire, and so on, [can] become artifacts".

—Atieno (2009:14)

"In fact, the "objective" scientist, by coding and standardizing, may destroy valuable data while imposing the researcher's world on the subjects".

—Atieno (2009:14)

5.1. Introduction

This chapter presents and interprets the results of the content and frame analyses conducted (a broad overview of these results appears in Fig. 5.1). The results of the survey taken by 20 voluntary participants are also presented and interpreted to help the researcher make better-informed inferences about the possible future policy implications of the results of the content and frame analyses.

The researcher decided to present and discuss the various results of the survey and the content and frame analyses relative to the project's various objectives and corresponding targets. Accordingly, the chapter consists of four main sections, each of which concerns one of the four broad research objectives outlined in Chapter 1. Each section presents the targets related to a specific research objective as well as (where applicable) certain trends or results that the researcher expected to see in the data[59]. The data is then presented, and the extent to which the expected trends were observed (if at all) explored. Additionally, the reasons for the trends emergence or lack thereof are expounded upon. Other identified trends or peculiarities are also underscored and interpreted within a South African context.

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[59] Recall that these were shaped by the discussions of the previous chapter.
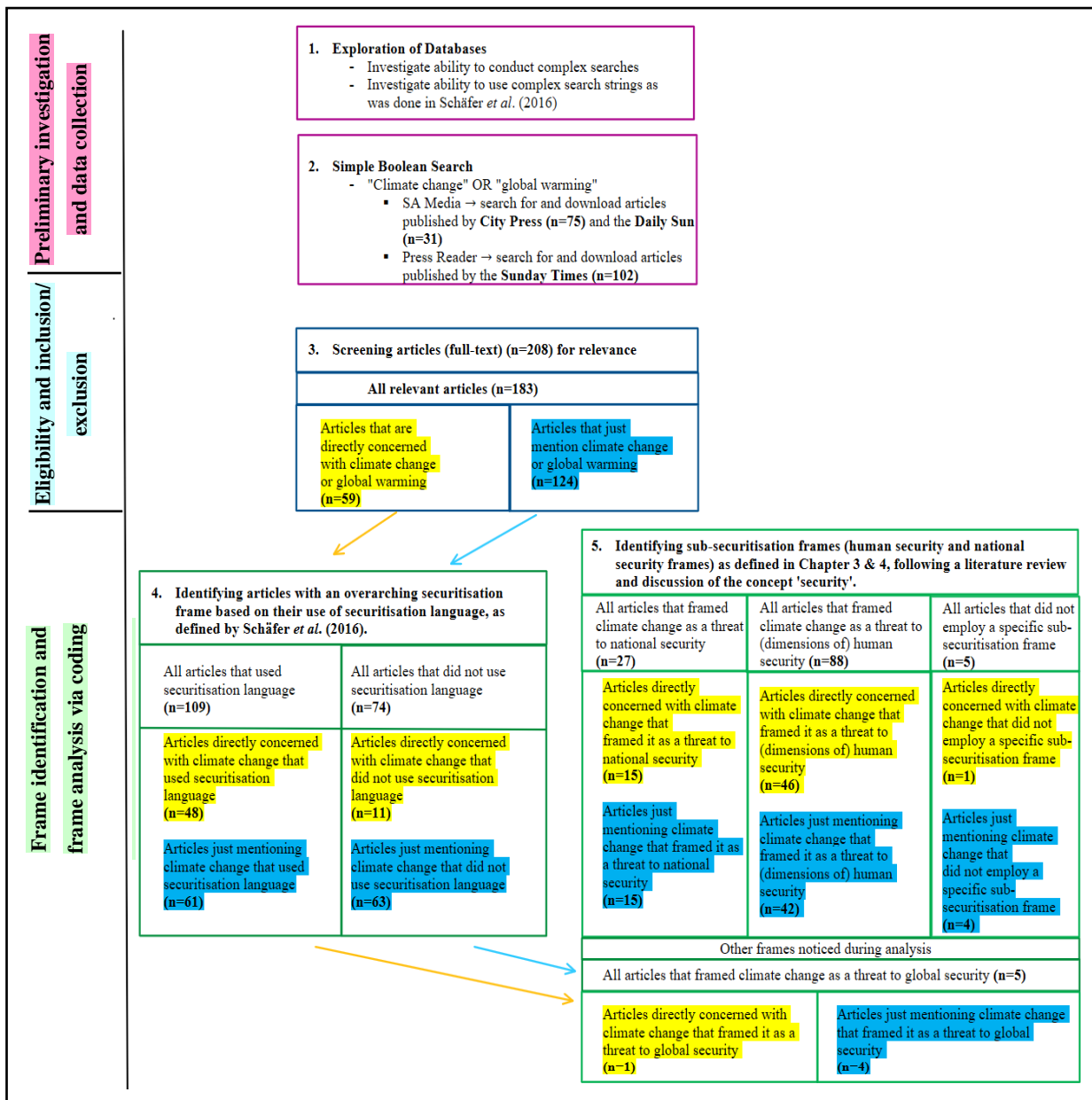
Figure 5.1:   Broad summary of the results of some of the content and frame analyses conducted. *Note:* as discussed in Chapter 2, articles were coded for multiple frames; hence the sum of the article counts in step 5 exceeds the total sample size (n=183) in step 3.

5.2. RO1: relevant targets, broad expectations and results

RO1: To assess the prevalence of a broad securitisation frame, national security frame and human security frame in climate-related articles published by South Africa's print newspapers between 2012 and 2020 (RO1).

- **Target 1:** to explore the number of climate-related articles (i.e., those articles that either mention or are directly concerned with climate change) published by South African print newspapers between 2012 and 2020.

- **Target 2:** to explore the temporal development of the publication of climate-related articles in South African newspapers.
- **Target 3**: to investigate the prevalence of various security frames in climate-related articles published by South African print newspapers between 2012 and 2020.
- **Target 4:** to explore the temporal development of the use of various security frames in climate-related articles published by South African print newspapers between 2012 and 2020.

5.2.1 Target 1: broad expectations

In Chapter 4, it was stated that studies conducted in both an international context (Boykoff, 2008a; Schäfer & Schlichting, 2014) and a South African one (Tagbo, 2010) found that print newspapers' coverage of climate change has been low, except when noteworthy events occur (e.g., COPs). Moreover, it was established that various micro and macro-scale factors inhibit the coverage of climate change in African newspapers in general and South African ones specifically. One of the pertinent macro-scale factors highlighted was the broader spatial, social, historical, political, and cultural context in which climate change unfolds in South Africa. Within this unique context, climate-change news finds itself competing for "shared space" (Harding in Kunene, 2021) with other pressing and relevant issues such as corruption, poverty, inequality, xenophobia and gender-based violence (GBV). Seeing that the public accords primacy to these other issues – because they are more personal, visible and immediately experienced (ibid.) – climate change news is often pushed down, and even off, daily news agendas.

Based, in part, on the above, one would expect the following in terms of climate news coverage in South African print newspapers between 2012 and 2020:

- **Expectation 1a**: there will be a relatively low number of climate-related articles published vis-á-vis the total number of articles published by the three newspaper outlets between 2012 and 2020.
- **Expectation 1b:** there will be more articles just mentioning climate change than those directly concerned with it, i.e., those that had climate change as their primary topic.

5.2.2 Target 1: results and discussion

Using PressReader and SA Media, the researcher searched for climate-related articles published by the *Sunday Times*, *City Press* and *Daily Sun* between 2012 and 2020. The search turned up the following results:

- The *Sunday Times* – 102 climate-related articles

- *City Press* – 75 climate-related articles
- *Daily Sun* – 31 climate-related articles

The researcher thus downloaded a total of 208 articles (see Fig. 5.1 above). Once the articles were downloaded, they were combed through manually to ensure relevance. Irrelevant material that made its way into the sample of downloaded articles was removed. Such material included job adverts mentioning climate change or global warming and government-funded adverts. Irrelevant articles were also removed at this stage. Such articles include those that reviewed books, movies and documentaries concerned with climate change/global warming.

After cleaning the raw data, the researcher was left with a total of 183 climate-related articles (87 from the *Sunday Times*, 73 from *City Press* and 23 from the *Daily Sun*). The 183 articles were then copied to a project board in Atlas.ti[9]. With the aid of Atlas.ti[9], the researcher sorted the articles into two broad pools, based on whether or not they were directly concerned with climate change. Out of the 183 climate-related articles, only 59 were directly concerned with climate change, i.e., climate change was their main topic. The other 124 just mentioned climate change[60] (see Table 5.1 below).

Table 5.1:   Summary of data collected from SA Media and Press Reader.

	Sunday Times	City Press	Daily Sun	Combined Results
Articles downloaded	**102**	**75**	**31**	**208**
Irrelevant articles	*15*	*2*	*8*	*25*
Relevant articles	***87***	***73***	***23***	***183***
Relevant articles directly concerned with climate change	27	21	11	59
Relevant articles just mentioning climate change	60	52	12	124

After sorting the climate-related articles into pools and counting them, the researcher searched for the total number of articles (covering any topic) published by each newspaper between 2012 and 2020, using SA Media and PressReader. These numbers were compared to the total number of climate-related articles published between 2012 and 2020 to discern the prevalence of climate-related articles in the three chosen print newspapers.

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[60] In this chapter, the term 'climate change' has been used to refer to both global warming and climate change. This was done to simplify and condense the writing, hopefully making it easier to read through.

The combined results in Table 5.2 reveal that only 183 out of 49,914 articles published by the three newspaper outlets between 2012 and 2020 were climate-related[61]. So, only 0,367%[62] of articles published between 2012 and 2020 were climate-related (see Fig. 5.2). Out of those 183 climate-related articles, only 59 were directly concerned with climate change (see Table 5.3). That would mean that only 0,118% of all articles published between 2012 and 2020 were directly concerned with climate change (see Fig. 5.3).

It should be noted that the above figures are not necessarily an accurate representation of the publication habits of the three newspaper outlets analysed. To explain, the total number of articles published, the total number of climate-related articles published, and the total number of published articles directly concerned with climate change might be understated. One reason for this is that no data was available for articles published by the *Daily Sun* for the period 2012-2014 (see Table 5.2 and 5.3). Another might be that not all articles published by the three newspapers in question were captured by the two databases used.

Table 5.2:   Comparison of the total number of articles published and the total number of climate-related articles published (for all newspaper outlets for the period 2012 - 2020).

Year	All articles published between 2012 and 2020				All climate-related articles published between 2012 and 2020			
	City Press	Daily Sun	Sunday Times	Combined	City Press	Daily Sun	Sunday Times	Combined
2012	2747	No Data	2733	5480	13	No Data	12	25
2013	2140	No Data	3156	5296	12	No Data	14	26
2014	1890	No Data	1971	3861	8	No Data	4	12
2015	1822	4622	1645	8089	8	2	6	16
2016	1417	2545	1308	5270	6	1	4	11
2017	1203	3068	1365	5636	6	1	10	17
2018	1233	3929	1492	6654	6	10	9	25
2019	1075	3388	1234	5697	12	9	19	40
2020	1011	1917	1003	3931	2	0	9	11
Totals (Σ)	*14538*	*19469*	*15907*	*49914*	*73*	*23*	*87*	*183*
Mean	*1615,333*	*3244,833*	*1767,444*	*5546,000*	*8,111*	*3,833*	*9,667*	*20,333*

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[61] To be clear, by 'climate-related articles', the researcher means the sum of articles that (1) just mentioned climate change and (2) those that were directly concerned with climate change.

[62] All values in his chapter have been quoted to 3 decimal points.

Table 5.3: Comparison of the total number of articles published and the total number of published articles *directly concerned* with climate change (for all newspaper outlets for the period 2012 - 2020).

Year	All articles published between 2012 and 2020				All articles directly concerned with climate change that were published between 2012 and 2020			
	City Press	Daily Sun	Sunday Times	Combined	City Press	Daily Sun	Sunday Times	Combined
2012	2747	No Data	2733	5480	1	No Data	0	1
2013	2140	No Data	3156	5296	0	No Data	7	7
2014	1890	No Data	1971	3861	3	No Data	2	5
2015	1822	4622	1645	8089	5	1	3	9
2016	1417	2545	1308	5270	1	1	1	3
2017	1203	3068	1365	5636	0	0	4	4
2018	1233	3929	1492	6654	4	6	3	13
2019	1075	3388	1234	5697	6	3	4	13
2020	1011	1917	1003	3931	1	0	3	4
Totals (Σ)	14538	19469	15907	49914	21	11	27	59
Mean	1615,333	2163,222	1767,444	5546,000	2,333	1,222	3,000	6,556
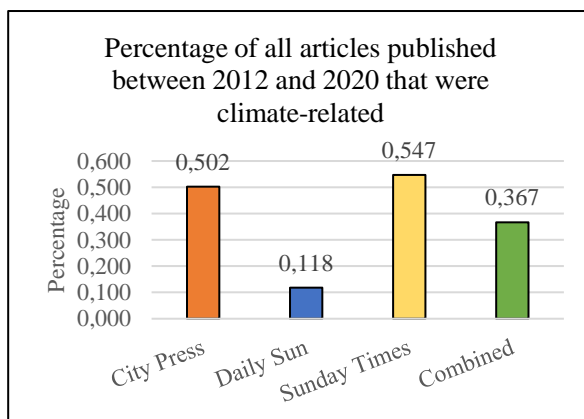
Figure 5.2: Percentage of all articles published between 2012 and 2020 that were climate related. *Note:* 'climate related' pertains to both articles that were directly concerned with climate change and those that just mentioned it.
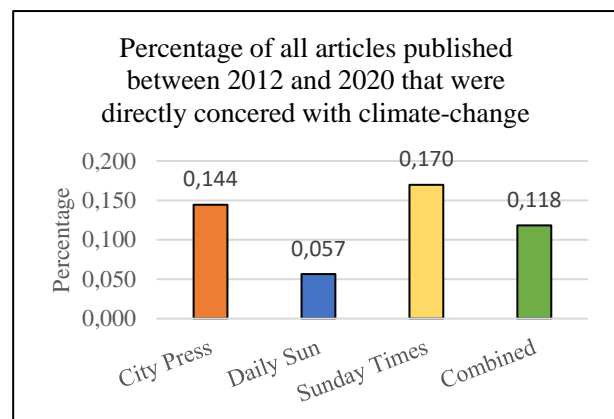
Figure 5.3: Percentage of all articles published between 2012 and 2020 that were directly concerned with climate-change.

Despite the limitations of the data, one can still tentatively state that articles pertaining to climate change have not been very prevalent in the three chosen print newspapers during the period in question. Even less prevalent are articles directly concerned with climate change. Seeing that out of the 183 climate-related articles published, 124 just mentioned climate change, it would seem that climate change is more often covered, if at all, alongside other issues rather than on its own. These findings cohere with expectations 1a and 1b, which were informed by previous studies (e.g., Tagbo, 2010).

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Extrapolating from the above results, one could state that South Africa's print newspapers concentrated very minimally on climate change between 2012 and 2020. Various micro-scale factors including, the newsroom deadline culture, the preferences of owners and editors and the training, resources and time that journalists have to research and write about climate change (Tagbo, 2010), could explain this. Nevertheless, to pinpoint the specific micro-scale factors that significantly inhibit climate reporting by South Africa's print newspapers, one would have to speak to journalists and investigate newsroom practices.

Apart from micro-scale factors, macro-scale factors could also explain the low level of climate reporting relative to all reporting in the period concerned. Indeed, the unique South African context within which journalists and the public are embedded means that climate change has to compete, for space and attention, with other issues (e.g., corruption and GBV) and events (e.g., #FeesMustFall and the Cape Town water crisis)[63]. Again, to begin to understand which of these events and issues dominate South Africa's print newspapers and outcompete climate stories most, it is vital to speak to journalists and editors. An analysis of the content of the non-climate-related articles published by selected newspaper outlets in a given period might also prove fruitful in this regard.

The low prevalence of climate-related articles in the three newspapers – possibly explained by specific micro and macro-scale factors – provides an indication that the readership of these newspapers has had low exposure to climate change stories. As such, the effect that the newspapers' climate-reporting may have on readers' behaviour, action and policy support/preferences could be quite minimal, especially if one accepts Barkemeyer *et al.'s* (2017) instantiation that the public considers issues like climate change more or less important, depending on how frequently they are covered in the media. That being said, the form of the articles (i.e., the technical features of the articles) may also impact behaviour and perceptions[64]. Thus, the number of articles published should be studied in conjunction with the form of the articles (e.g., the technical elements employed) (Reese, 2001; Linström & Marais, 2012).

At this point, it is worth stressing that the results stated and discussed in this section and all the others in this chapter were informed by an analysis of only three national newspapers. Although these newspapers have some of the highest readership figures, they are

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[63] Some of these events are returned to in the sub-section concerning Target 2 and discussed as possible reasons for the troughs in the graphs depicting climate-reporting overtime.

[64] This was discussed in detail in Chapter 4.

not representative of the South African print-newspaper-landscape in terms of climate reporting. This should be borne in mind when the results are extrapolated to make preliminary statements about climate reporting in South Africa's print newspapers. This point will not be stated each time other results in this chapter are presented in order to avoid repetition. It will, however, be returned to in the final chapter.

Further discussion

From Tables 5.2 and 5.3, it is evident that the *Daily Sun* published more articles than the other two newspapers. This finding was somewhat anticipated given that the *Daily Sun* is a daily newspaper, whereas *City Press* and *Sunday Times* are weekly (Sunday) newspapers. Interestingly, despite being weekly newspapers, both *City Press* and the *Sunday Times* published more climate-related articles (see Table 5.2) than the *Daily Sun*. The proportion of all the articles published by *City Press* and the *Sunday Times* between 2012 and 2020 that were climate-related was also higher than that of the *Daily Sun* (Fig. 5.2). Furthermore, the data suggests that *City Press* and the *Sunday Times* published more articles directly concerned with climate change (see Table 5.3 and Fig. 5.3). These findings could be attributed to the missing data for the *Daily Sun* for the period 2012-2014. However, they could also be attributed to the fact that the *Daily Sun* is a tabloid newspaper, whereas the other two are broadsheet newspapers. To explain, tabloids are more likely to lack (specialist) reporters that focus exclusively on the environment and climate (Boykoff, 2011). That being said, Tagbo's (2010) research points out that this also tends to be true of many newspaper outlets in South Africa and Africa in general. Hence, both tabloid and broadsheet newspapers reporting on climate change might be characterised by a lack of specialist reporters. The dearth of climate reporting by the *Daily Sun* might then be more readily attributed to the fact that tabloids tend to focus on gossip and "domestic (national) conflicts and scandals" (Saunders *et al.*, 2018: 97). Of course, all this is mere speculation and would have to be formally investigated by conducting studies of the published content and culture of the individual newsrooms—this is far beyond the scope of this research project.

As a final point, the researcher wishes to highlight that the data presented so far indicates that, in some years, the total number of climate-related articles published are much higher than the mean number of climate-related articles published between 2012 and 2020 (see Table 5.2 and 5.3). For example, the mean number of climate-related articles published between 2012 and 2020 was 20,9, but in 2019 alone, the number of articles recorded was 40, whereas, in 2020, it was only 11. Such data points already provide evidence to support the

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findings of a longitudinal study conducted by Schmidt *et al.* (2013). Those findings were that there are peaks and troughs in South African newspapers' reporting on climate change. The following sub-section further analyses the data collected to say something more in this regard.

5.2.3 Target 2: broad expectations

Recall that Target 2 was to explore the temporal development of the publication of climate-related articles in South African newspapers. Since literature indicates that the reporting of climate change occurs in waves or cycles – with peaks in the number of articles/reports published coinciding with the periods either during, before or after, *inter alia*, extreme weather events and key climate events (Saunders *et al.*, 2018) – the researcher had the following broad expectations:

- **Expectation 2a:** there will be a spike in the number of climate-related articles either leading up to, during or directly after the period in which noteworthy events occurred (e.g., COPs; droughts).
- **Expectation 2b:** there will be a rapid increase in the number of climate-related articles from 2017-2019 due to the (re)emergence of climate activism and the rise of youth climate activists.
- **Expectation 2c:** there will be a fall in the number of climate-related articles between 2019 and 2020 as attention shifted to Covid-19. However, more climate-related articles will have been published in 2020 compared to 2012-2017, seeing that climate change was still high on the agenda in 2018-2019, and (unconfirmed) links have been drawn between climate change and Covid-19 and its proliferation.

5.2.4 Target 2: results and discussion

Of the 183 climate-related articles published, 40 (21.858%) were published in 2019 alone (see Table 5.4). The second-highest number of climate-related articles published in a given year was 26 (corresponding to the year 2013). Each with a total of 25 climate-related articles published, 2012 and 2018 were the years in which the third-highest number of climate-related articles were published.

Table 5.4: Number of climate-related articles published by all three newspapers in a specific year and month.

Number of climate-related articles published - Combined										
	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Jan	3	1	1	0	1	0	1	3	3	13
Feb	4	0	1	0	2	4	0	0	1	12
March	3	1	2	0	1	2	0	5	0	14
April	4	1	1	0	1	0	2	8	0	17
May	1	3	1	0	0	2	1	3	0	11
June	3	5	2	1	1	3	6	5	1	27
Jul	1	0	0	5	0	1	0	3	3	13
Aug	0	2	1	1	0	3	4	2	1	14
Sept	1	5	3	3	1	0	4	4	1	22
Oct	1	4	0	1	1	1	2	4	1	15
Nov	4	2	0	3	2	0	4	0	0	15
Dec	0	2	0	2	1	1	1	3	0	10
Total	25	26	12	16	11	17	25	40	11	183

Plotting the above data points (see Fig. 5.4) reveals that climate change reporting in South Africa occurs in waves or cycles. This finding coheres with both theory and empirical studies conducted in relation to South Africa's climate-change reporting (e.g., Schmidt *et al.*, 2013) and that of the U.S. (e.g., Swain, 2017) and UK (e.g., Saunders *et al.*, 2018).
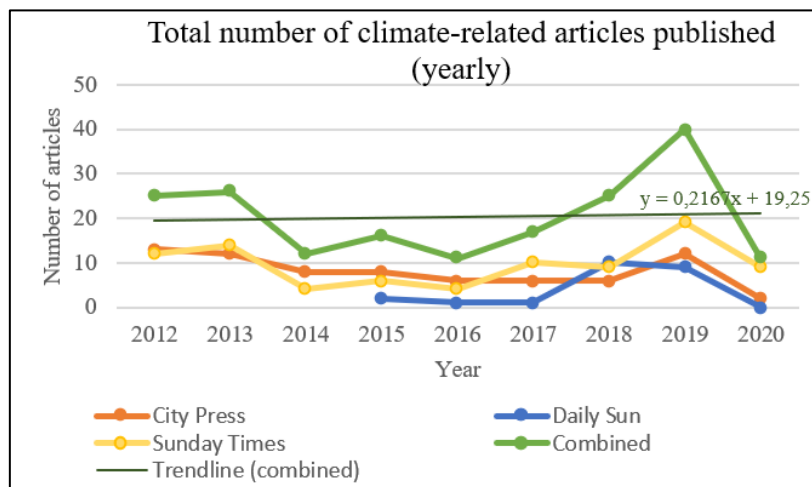
Figure 5.4: The total number of climate-related articles published (2012-2020).

An inspection of the trendline (see Fig 5.4) for all the climate-related articles published between 2012 and 2020 reveals that the number of climate-related articles published in print newspapers is gradually increasing. This can very generally be attributed to the fact that climate change has come increasingly, as Vogler (2014) opines, to occupy the global consciousness. True to expectation 2b, Fig. 5.4 also depicts a rapid rise in climate reporting between 2017 and 2019. As stated, this can be attributed to noteworthy events during these periods. This point is expounded upon below and with reference to Fig. 5.5.
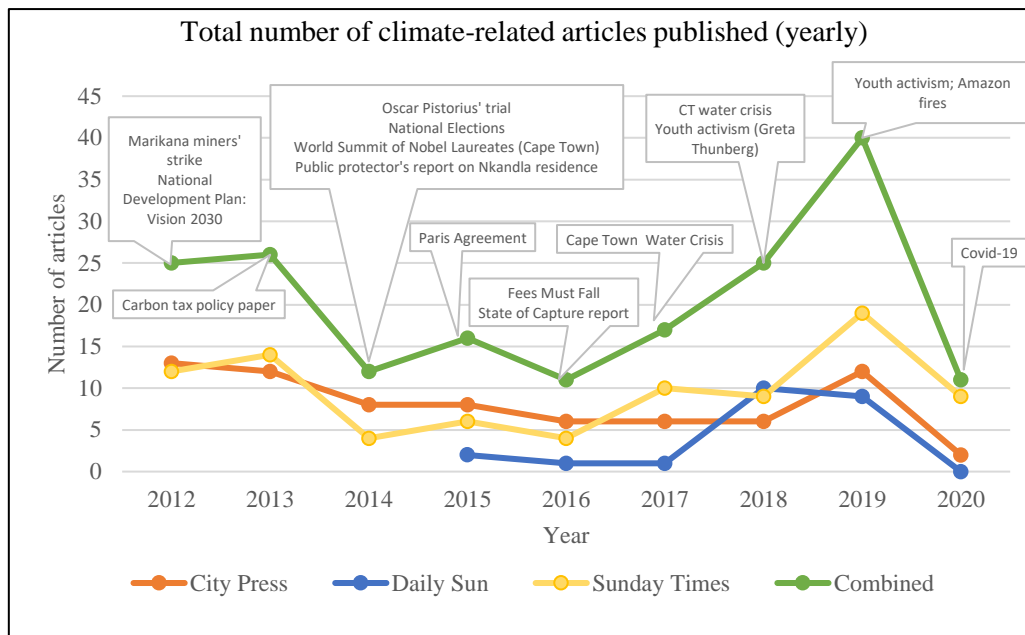
Figure 5.5:   The total number of climate-related articles published (2012-2020) and noteworthy events that could explain the troughs and peaks depicted.

Meeting expectation 2a, Fig. 5.5 indicates that peaks in the number of articles/reports coincide with periods in which noteworthy events occurred. For example, the peak in 2013 can be explained by the carbon tax policy paper being released for public comment in May (National Treasury, 2013). That articles published by the *Sunday Times* and *City Press*[65] contain debates and discussions about the effects, efficacy, and necessity of imposing carbon taxes in South Africa – both before and after May – support the argument that the publication of the carbon tax policy paper served as a prompt for newspaper outlets[66]. Moreover, the 2019 peak in climate reporting can be attributed to prompts such as youth climate activism and the widespread fires witnessed in the Amazon rainforest. Looking at the content of the articles published by all three newspapers during this period supports this, seeing that they all had reports on the Amazon fires and the power of the youth to tackle climate change.

At this point, it should be emphasised that news prompts are defined as events or actions that prompt climate change news but which themselves are not necessarily covered (Saunders *et al.,* 2018). So, prompts can also be actions or events that result in higher coverage of climate change in the media but are not themselves covered by the media. It is such prompts that could,

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[65] Recall that no data from this time period was available for the *Daily Sun*.

[66] Titles of some articles published in this period include "Business lobby lashes carbon tax" (Van Rensburg in *City Press*, 2013: 5), "Arcelor-Mittal may be forced to pay carbon tax" (Van Rensburg in *City Press*, 2013: 5), "The hidden calamity of carbon tax" (Peacock in *Sunday Times*, 2013: 6).

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in part, be responsible for the 2015 peak in the number of climate-related articles published. For example, even though the articles analysed did not directly cover the Paris Agreement and COP21, the event could still have prompted/catalysed climate reporting more generally[67].

Apart from peaks in the plotted data series, the higher number of climate-related articles (compared to some other years) in 2012, 2017 and 2018 can also be explained by prompts in the form of noteworthy events. To expand, the figure corresponding to 2012 could be attributed to the fact that the National Development Plan (NDP): Vision 2030 was launched in this year. The NDP's overarching aim is "to eliminate poverty and reduce inequality by 2030" (National Planning Commission, 2012: 24). One of the ways in which South Africa hopes to achieve this aim is – as discussed in Chapter 5 of the NDP – to ensure "environmental sustainability and an equitable transition to a low-carbon economy" (ibid., 197). Given that articles published across two newspapers included titles such as "Parliament gets its greenhouse in order" (Groenewald for *City Press*, 2012: 6), "Muddling along a new normal for all" (Draper for *Sunday Times*, 2012: 8) and "Growth can be green" (Volgraaff for *Sunday Times*, 2012: 5), one could indeed assume that this event acted as a news prompt.

An additional news prompt may have been the so-called "wildcat strikes" by miners, particularly after police killed 34 miners in what has become known as the Marikana Massacre (Smith, 2012). The finding that most articles published in this period just mentioned climate change whilst focusing on large coal mines, mining reforms and the benefits and drawbacks of alternatives to coal power led the researcher to make this connection. Examples of titles of such articles include "Nuclear war" (Adam & Myoli for *City Press*, 2012: 30), "I'll be damned if the lights go out" (Dames for *City Press*, 2012: 13), "SA ready to roll out R300bn nuclear stations" (Kgosana for *Sunday Times*, 2012: 5), and "Wind of change blows for big miners" (Prinsloo for *Sunday Times*, 2012: 5).

Even though the two previously discussed events might have prompted climate-related reports, it must be accentuated that they themselves were not the focus of these reports. These findings support Saunders *et al.*'s (2018) statement that although not covered (or covered extensively), specific events and actions can prompt or catalyse climate reporting. Assuming that the statement holds, it should also be said that the Rio+20 (United Nations Conference on Sustainable Development), which took place in Brazil in 2012 and COP17, which South Africa

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[67] Common topics of the articles published in this year were sea level rise, loss of marine biodiversity, water security and the climate crisis in general.

hosted in the preceding year (2011), could have also acted as news prompts. Consequently, the high number of climate-related articles published in 2012 could also be attributed to these events.

Analysing those articles published across all three newspapers in 2017 and 2018 reveals that their primary focus was on water scarcity, water security and drought. To illustrate, some of the titles of articles published in this period include the following:

- "When taps run dry" (Kretzmann for *City Press*, 2017: 13).
- "Prepare for a long season of drought, and some floods, too" (Mthethwa for *Sunday Times*, 2017: 6).
- "Africa's drying up!" (CAJ News Africa in *Daily Sun*, 2018: 8).
- "Impact of drought on water security" (Department of Water and Sanitisation in *Sunday Times*, 2018: 10).
- "Doomsday clock ticking for Cape water" (Jordan for *Sunday Times*, 2018: 6).
- "Foreigners jump on Cape iceberg plan" (Jordan for *Sunday Times*, 2018: 8).
- "Water levels are not looking good" (Raletjena for *Daily Sun*, 2018: 11).

Given that Cape Town experienced a pronounced water crisis from mid-2017 to mid-2018 (Mlaba, 2020), it is viable to propose the crisis as one of the main events prompting climate-related news coverage, focusing on water security, between 2017 and 2018. However, if this is the case, the question of why a higher number of climate-related articles were published in 2018 as compared to 2017 remains. A possible answer to this question is that 2018 coincided with both the water crisis *and* another major event – the rise of youth climate activism and, in particular, youth climate activist Greta Thunberg.

Interestingly, if one plots the data for just the number of published articles pertaining directly to climate change (see Fig. 5.6 below), the basic cycle in terms of climate reporting over time (refer again to Fig. 5.5) becomes more pronounced; especially for 2015 and 2018. There are some exceptions, though, such as 2012 and 2017.
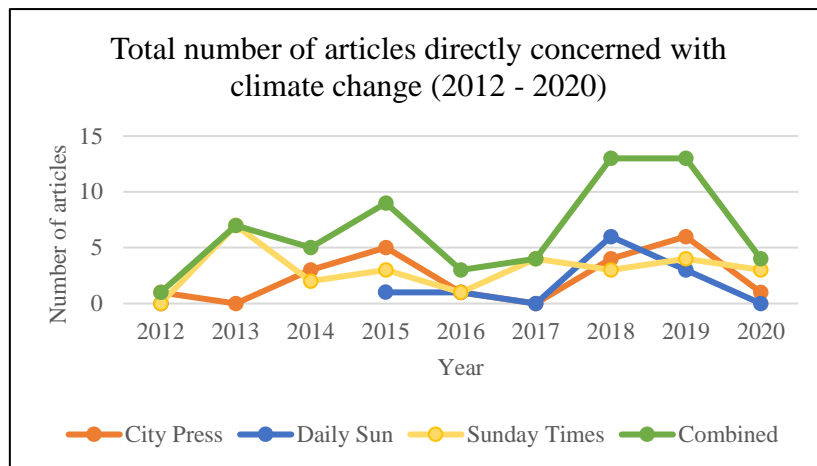
Figure 5.6: The total number of articles directly concerned with climate change published between 2012-2020.

Seeing that the category 'climate-related articles' is comprised of two sub-categories (articles just mentioning climate change and those directly concerning it), a comparison of the data in Fig. 5.5 and 5.6 suggests that the events of 2012 and 2017 led to the publication of more articles that just mentioned climate change. On the other hand, the data indicates that the events of 2015 (COP21) and 2018 (climate activism) might have prompted newspapers to write more articles directly concerning climate change. Although these are observations made with regards to just three newspapers' publication habits over a relatively short period, they could still point to the possibility that some events led to climate change being dealt with directly in newspaper articles (i.e., climate change being the primary topic of the articles) whilst others only led to climate change being mentioned more frequently in articles pertaining to other topics. Future research might consider delving into this matter. Such research into the type of climate reporting that certain events catalyse could also be augmented by interviews with the journalists who wrote climate-related articles in the period in question and the editors of the newspapers concerned.

Further discussion

Just as the peaks in the number of climate-related articles and articles directly concerning climate change can be attributed to noteworthy events, so can the troughs. Put simply, the troughs can be attributed to significant, non-climate-related events that shifted attention away from the issue of climate change altogether. Such events were identified in Fig. 5.5 (reproduced below for convenience).

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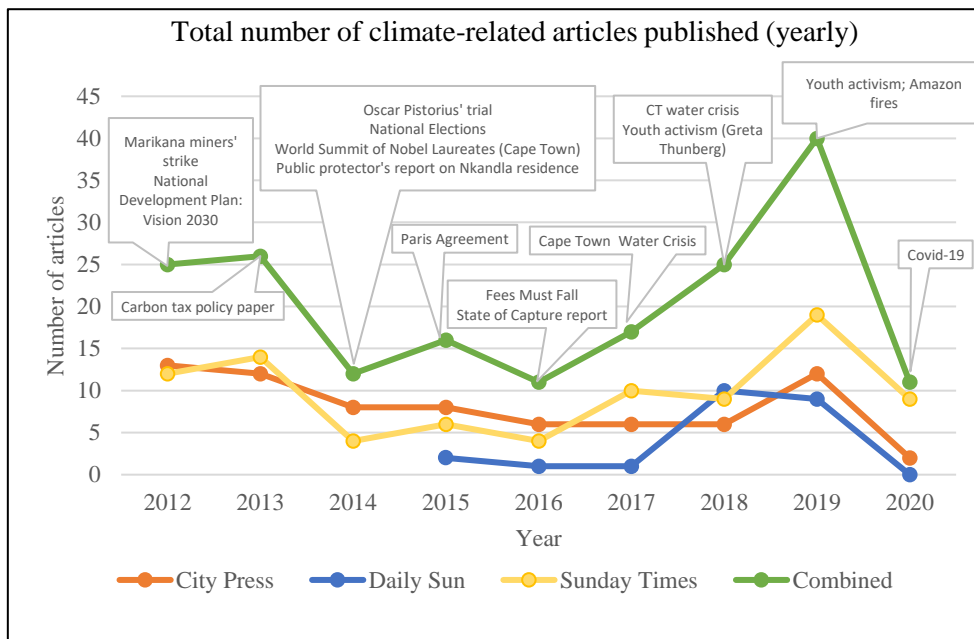
Figure 5.5 (reproduced):   The total number of climate-related articles published (2012-2020) and noteworthy events that could explain the troughs and peaks depicted.

It should be noted that the researcher compiled the list of events associated with the troughs in Fig. 5.5 after a brief exploration of the content of other news articles that appeared in the same newspaper volumes/editions as the sample of climate-related articles downloaded. Bearing this in mind, it must be highlighted that future studies could conduct a more thorough exploration and analysis in this regard. Such exploration and analysis would be worthwhile as they can help shed light on the events that outcompete climate change stories and, thusly, throw them off daily news agendas.

A final statement that must be made regarding the troughs depicted in Fig. 5.5 (reproduced) – particularly the one for 2020 – is that they contradict expectation 2c. Indeed, looking at data for 2020, there is a substantial fall in the number of climate-related articles published. Additionally, and contrary to expectation 2c, the numbers actually fall below those of preceding years. This provides some evidence to suggest that the links drawn between climate change and Covid-19 and its proliferation in journal articles were not picked up on by newspaper outlets and/or did not prompt climate reporting. It also provides evidence to suggest that COVID-19 either directly and/or indirectly (by making other social maladies such as GBV, poverty, corruption and police brutality more salient) pushed climate change (further) down South African newspapers' daily news agendas. Of course, one could challenge this statement by attributing the rapid decline in 2020 to the fact that fewer articles were written– owing either to COVID-19 and its effects on print media or owing to a more general trend: the gradual

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"death of print media in South Africa" (Boucher, 2018). However, plotting the number of climate-related articles published as a percentage of the total number of articles published by the three newspaper outlets (see Fig 5.7 below) reveals a similar, albeit not as dramatic, dip in the year 2020. Hence, it can be said that COVID-19 was a noteworthy event that significantly shifted South African newspaper outlets' attention away from the issue of climate change.

The chart title: "Percentage of published articles that were climate-related (yearly)". Y-axis labeled "Percentage" with values 0, 0,2, 0,4, 0,6, 0,8, 1, 1,2, 1,4, 1,6. X-axis years 2012 to 2020. Trendline equation: $y = 0{,}0027x + 0{,}3558$. Legend: City Press, Daily Sun, Sunday Times, Combined, Trendline (combined).
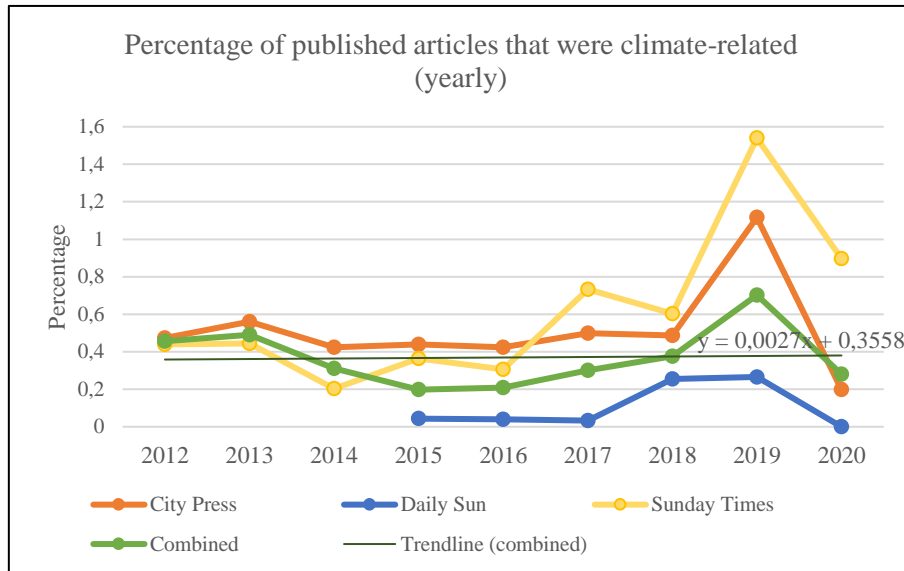
Figure 5.7:   The number of climate-related articles published as a percentage of the total number of articles published between 2012 and 2020.

Considering that the ongoing COVID-19 pandemic adversely affected climate reporting in South Africa in 2020, one is left questioning how far into the future the pandemic's adverse effects on climate reporting will last. Generally, the proportion of articles published by South Africa's print newspapers that are climate-related seems to have been very gradually increasing (see trendline in Fig. 5.7). However, this trend could be altered by a sustained yearly shift away from climate-change reporting to reporting on COVID-19 and its (in)direct effects. Data from 2020 seems to be pointing to this possibility and so brings to light a broader cause for concern: that COVID-19 could frustrate effective climate communication and climate coverage, just as it becomes most crucial. To begin to explicate the last point, it is worth looking at UN Secretary-General António Guterres' remarks concerning the IPCC's WG1 contribution to AR6:

> "We are already at 1.2 degrees and rising. Warming has accelerated in recent decades. Every fraction of a degree counts...The viability of our societies depends on leaders from government, business and civil society uniting behind policies, actions and investments that will limit temperature rise to 1.5 degrees Celsius" (Guterres, 2021).

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From the above, it is evident that actions at the individual level – not just the national and supranational levels – are needed to help curb significant warming and climate change. A sustained decrease in the number of climate-related articles published could mean that such crucial actions are not encouraged and adopted as much as they could be in a South African context. Again, this is assuming 1) that media reports can influence individual behaviour and policy advocacy and support, and (2) that members of the public consider issues like climate change to be more or less important, depending on how frequently they are covered in the media (Barkemeyer *et al.*, 2017).

Nevertheless, one must not hastily conclude that the discovered shift in South African newspapers' attention away from climate change will adversely affect the adoption of pro-environmental behaviour, the support for greener policies and, thus, the creation and adoption of constructive policies to tackle the issue of climate change. In a globalised world South Africans with access to internet services can consume digital news from various sources, international news services included. Consequently, climate reporting in other countries or by international news services may influence South Africans' actions and behaviours to help curb climate change. Moreover, policy advocacy in South Africa and the creation of constructive policies to tackle climate change may be catalysed by international events, agreements and agendas. Further still, individual persons' may not be influenced solely by the quantity of the climate-related articles – the content of the articles, including the type of frames they employ, e.g., a securitisation frame, could also catalyse pro-environmental behaviour and climate action.

5.2.5 Target 3 & 4: broad expectations

- **Target 3**: to investigate the prevalence of various security frames in climate-related articles published by South African print newspapers between 2012 and 2020.
- **Target 4:** to explore the temporal development of the use of various security frames in climate-related articles published by South African print newspapers between 2012 and 2020.

Schäfer *et al.* (2016) – extrapolating from their analysis of articles published by the *Sunday Times* between 2006 and 2010 – concluded that the percentage of South Africa's climate-related articles that employ a securitisation language (i.e., a securitisation frame) was decreasing. Assuming that the downward trend that the scholars identified continued to the present moment, one would not expect a securitisation frame in climate-related articles to be

very prevalent. However, there is reason to believe that this trend did not continue to the present moment.

Given that climate change has come increasingly to occupy the global consciousness (Vogler, 2014), it is likely that, since the study by Schäfer *et al*. (2016) was published, a securitisation frame has been employed more often in climate-related articles. This is especially since strategic efforts, such as securitisation, might have been made to draw further attention to the issue of climate change and solicit decisive action to tackle it. Given this possibility, there is reason to suspect that a securitisation frame will have been quite prevalent in climate-related articles published from 2012-2020; and especially from 2018-2020. Moreover, there is reason to expect that the results of the frame analysis will reveal that the downward trend identified by Schäfer *et al*. in terms of the use of a securitisation frame came to an end.

Schäfer *et al*.'s analysis also revealed that in instances where climate change was framed as a security issue, it was more frequently done in terms of national security than human security (ibid.). From their analysis the scholars also noted that food, energy and water security frames in climate-related articles were on the rise. These frames were defined separately from a human security frame, which was identified and defined in terms of the use of the word 'human security'. Suppose a human security frame was instead defined with reference to the seven dimensions of human security. In that case, it is arguable that some of the articles that Schäfer *et al*. (2016) found to have framed climate change in terms of energy, water, and food security were, ultimately, framing it in terms of human security. Assuming this to be the case, there is some reason to believe that a human security frame might have been more prevalent than a national security one—and still is in current climate-related articles.

Informed by the above, the researcher expected the following to emerge from the frame analysis conducted:

- **Expectation 3a**: a relatively high proportion of the total number of climate-related articles published between 2012 and 2020 will have employed a broad securitisation frame.
- **Expectation 3b:** when it comes to sub-securitisation frames, a human security frame would be more prevalent than a national security one.
- **Expectation 4a:** there will be a rapid increase in the number of articles employing a securitisation frame between 2018 and 2019.

- **Expectation 4b:** owing to the general decline in the number of climate-related articles published in 2020, there will be a drop in the number of climate-related articles adopting a broad securitisation frame in 2020.

5.2.6 Target 3 & 4: results and discussion

After using Atlas.ti[9] to sort the downloaded articles into two broad pools, depending on whether they just mentioned or were directly concerned with climate change, the researcher searched for the use of securitisation language in the articles of each pool (see Fig. 5.8). This was done in order to identify instances where an overarching securitisation frame was used. In this regard, the search string mentioned in Chapter 1 and Chapter 4, and stated in the codebook (see Appendix 12), was used.
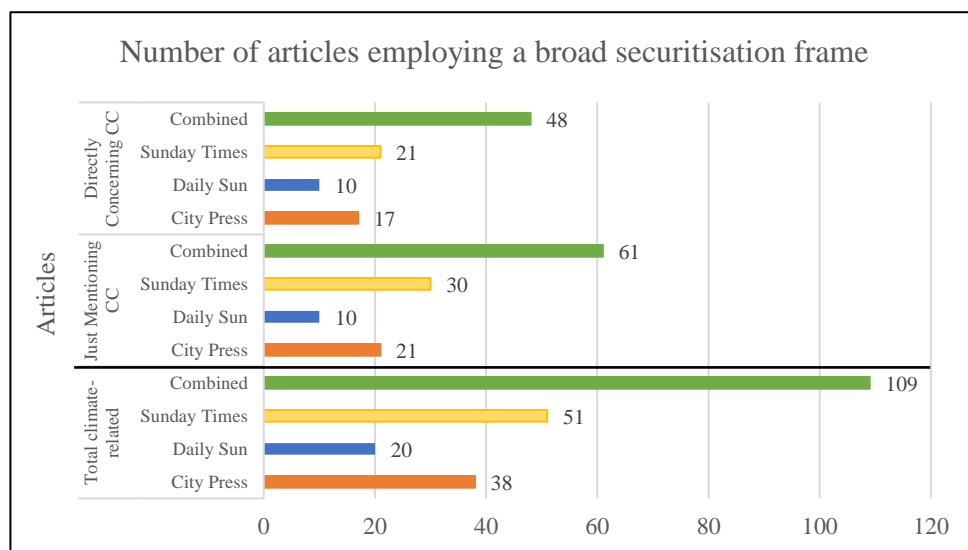
Figure 5.8:   The number of articles published by three South African newspapers between 2012 and 2020 that employed a broad securitisation frame.

It was found that 59,563% (109 out the 183) climate-related articles employed a broad securitisation frame. As discussed in relation to expectation 3a, this finding can be attributed to the fact that climate change has come increasingly to occupy the global consciousness (Vogler, 2014) and the fact that strategic efforts, such as securitisation, might have been made to draw further attention to the issue of climate change and solicit decisive action to tackle it.

Out of those 109 articles that employed a securitisation frame, 48 (44,037%) were directly concerned with climate change, and 61 (55,963%) just mentioned it. That there were more articles just mentioning climate change that employed a securitisation frame can be attributed to the fact that the total sample of 183 climate-related articles consisted of more

articles just mentioning climate change (124 articles) than those directly concerned with climate change (59 articles). Put differently, given that there were more articles just mentioning climate change in the sample of articles that frame analysis was conducted on, the results may just be reflecting this. It is, therefore, better to look at the proportion of articles, in each of the two pools, that employed a securitisation frame.

Looking at the two pools independently:

- 48 out of the 59 articles directly concerned with climate change employed a broad securitisation frame – that is 81,356%
- 61 out of 124 articles just mentioning climate change employed a broad securitisation frame 49,194%

Based on the above, it can be inferred that those articles directly concerned with climate change employed a securitisation frame more often than those just mentioning climate change. Generalising, one could infer that South African newspapers more frequently employ a securitisation frame when covering climate change directly. This trend is not surprising given the focus and content of articles directly concerned with climate change. To elaborate, a preliminary analysis of the content of these articles revealed that they primarily focused on explaining climate change and, more so, on highlighting its potential effects and communicating the urgent need to tackle it. The use of securitisation language can facilitate the latter. Hence, the use of securitisation language in such articles can be seen as a strategy to grab attention, communicate what is at stake and catalyse action.

An investigation into the temporal development of the use of a securitisation frame (see Fig. 5.9) reveals that the frame was most often employed at times when noteworthy events – discussed in the previous section – occurred (see Fig. 5.10). These events were already discussed in section 5.2.3, so they will not be elaborated upon here. All that will be repeated is, firstly, the rise of climate activism in 2018-2019 coincided with a sharp rise in the number of climate-related articles employing a securitisation frame. This coheres with expectation 4a. Secondly, the onset of the COVID-19 pandemic coincided with a significant drop in the number of climate-related articles published between 2019 and 2020. This meant that there was also a significant drop, between 2019 and 2020, in the number of climate-related articles adopting a broad securitisation frame. In this regard, expectation 4a was met.
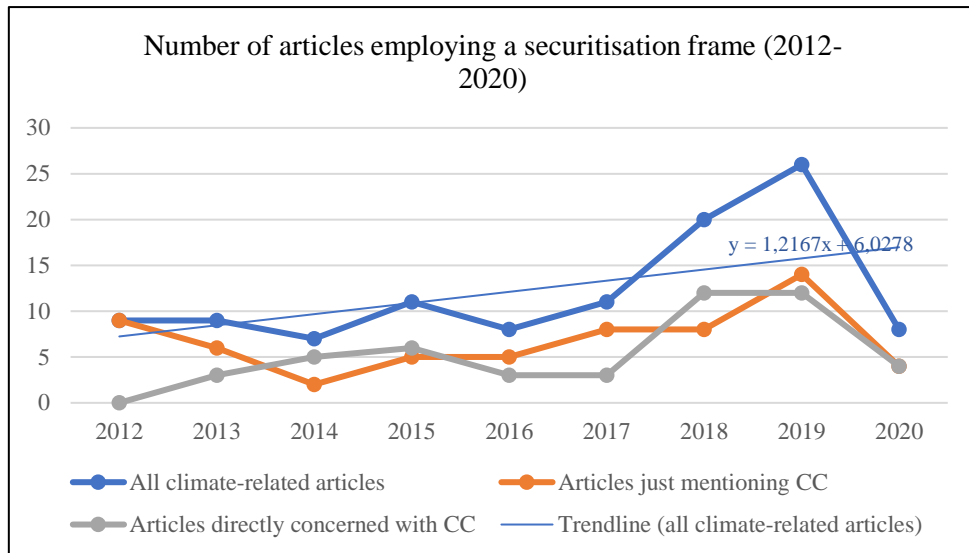
Figure 5.9: Number of articles employing a securitisation frame between 2012 and 2020.
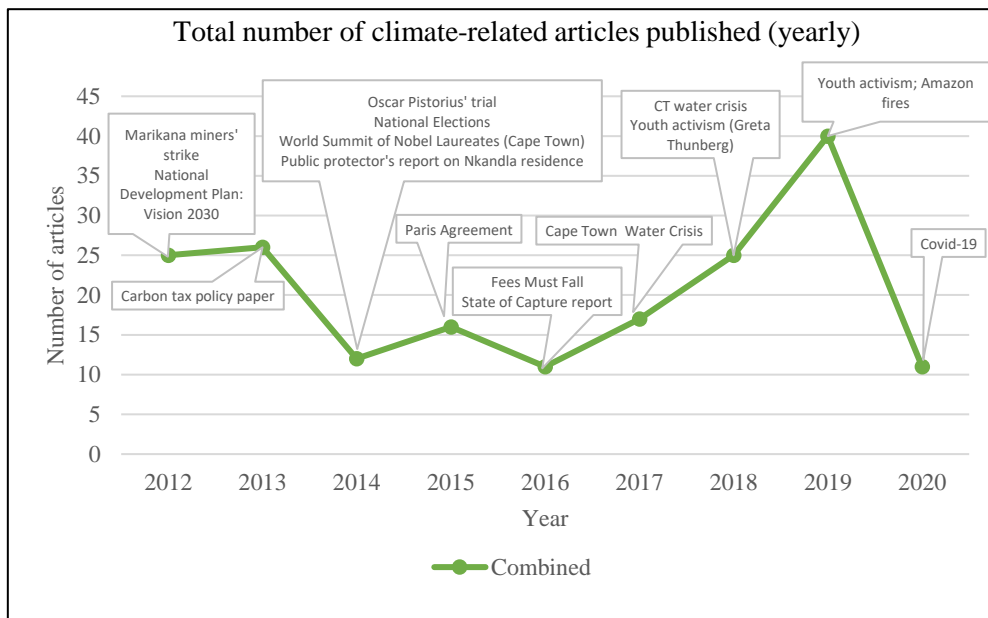
Figure 5.10: Total number of climate-related articles published between 2012 and 2020, with noteworthy events highlighted.

Without talking to the journalists who wrote the articles, it is hard to emphatically explain the more general finding that noteworthy events seem to have prompted or catalysed the use of a securitisation frame. Nevertheless, the researcher opines that the correlation between an increase in the use of a securitisation frame and the occurrence of noteworthy events might be explained by strategic framing habits. In other words, given that the public might have paid more attention to climate-related news in the run-up to and as noteworthy events were unfolding, the newspapers might have taken the opportunity to strike while the

iron was hot, as it were, and really drive home the threat that climate change poses. By employing a securitisation frame, they could do just that whilst also creating a sense of urgency.

To conclude this discussion, it is worth noting that the trendline depicted in Fig. 5.9 indicates that, in general, the use of a securitisation frame in climate-related articles is on the rise. This diverges from Schafer *et al.*'s conclusions that the use of securitisation language in South African newspapers was declining. So, the results of the frame analysis reveal that the downward trend in the use of securitisation language in South African newspapers, as identified by Schäfer *et al.*, came to an end. As already stated, this is likely due to climate change coming to occupy the global consciousness more prominently over the years. Given that COVID-19 seems to have dampened the use of a securitisation frame in climate-related articles, the discovered trend – i.e., the trend that the number of climate-related articles published over recent years is increasing – might also come to an end. Indeed, depending on how far into the future the pandemic and its indirect effects might dominate headlines for, both the number of climate-related articles published and the use of a securitisation frame in South Africa's print newspapers may fall. This points to something disconcerting: COVID-19 could frustrate future strategic framing efforts – aimed at conveying urgency and catalysing climate action and behavioural change – when they are most needed[68].

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Thus far, the discussion focused on what the frame and content analysis revealed in terms of the prevalence and temporal development of the use of a securitisation frame in climate-related articles. Now the discussion turns to demonstrating what the analyses revealed in terms of the prevalence and temporal development of sub-securitisation frames (i.e., of a human security and national security frame). However, before presenting the results of the analyses, three points that will help explain the results have to be underscored.

Firstly, once the pool of climate-related articles employing a broad securitisation frame was created in Atlas.Ti[9], the researcher manually combed through them again and coded each article, using the codebook developed in Chapter 4, for *multiple* sub-securitisation frames. Hence, any article could have been assigned both a human and national security frame depending on its content. On account of this, the total number of articles employing a

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[68] What the researcher means by 'when they are most needed' was discussed in detail in section 5.2.4.

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securitisation frame will be smaller than the total number of articles employing either a human or national security frame.

Secondly, whilst coding the articles, the researcher found that some of those articles employing a broad securitisation frame focused not on the threat climate change poses to the individual or the nation, but rather on the threat it poses to the globe/earth. For example, one article spoke of "the risk that the climate crisis poses to global financial markets and the global economy" (The Guardian in *City Press*, 2020: 12). The researcher recorded such articles as those employing a global security frame and coded them thusly.

Thirdly, the researcher found that some climate-related articles using securitisation language – and, hence, a broad securitisation frame – did not employ a specific sub-securitisation frame. For example, one article mentioned climate change as a "tragedy of the commons, requiring less confrontation and more collaboration to avert catastrophe" (Mazibuko for *Sunday Times*, 2020: 15). In this instance, securitisation language was employed, but no specific referent object was mentioned. When the researcher encountered such articles, they were assigned the code 'no_spec_SF' (no specific sub-securitisation frame) and recorded thusly.

On account of the points above, the results presented below also include findings pertaining to climate-related articles that employed no specific sub-securitisation frame and a global security frame. However, on account of spatial constraints, the following discussion focuses on the findings vis-á-vis a human and national security frame.

Fig. 5.11. summarises the number of climate-related articles (across all three newspaper outlets) that employed a human security frame (a), a national security frame (b), a global security frame (c) and no specific sub-securitisation frame (d). The figure reveals that the three newspaper outlets combined published more climate-related articles employing a human security frame (N=88) than a national security frame (N=27). Whilst this is in line with expectation 3b, it diverges from Schäfer *et al.*'s (2016) finding that a national security frame was more prevalent in climate-related articles published in South Africa. A possible reason for this divergence could be that the researcher, guided by previous literature, employed more extensive coding definitions to help identify a national and human security frame in climate-related articles.

A possible reason for the prevalence of a human security frame would be that the frame makes the climate-related articles more relatable, thereby increasing the chances that members of the public would engage with such articles. In this respect, it must be remembered that mass print newspapers would have to publish articles and content that readers are likely to engage with, lest they lose their readership and, therefore, the advertising revenue which it is closely linked to (Harding in Kunene, 2021).
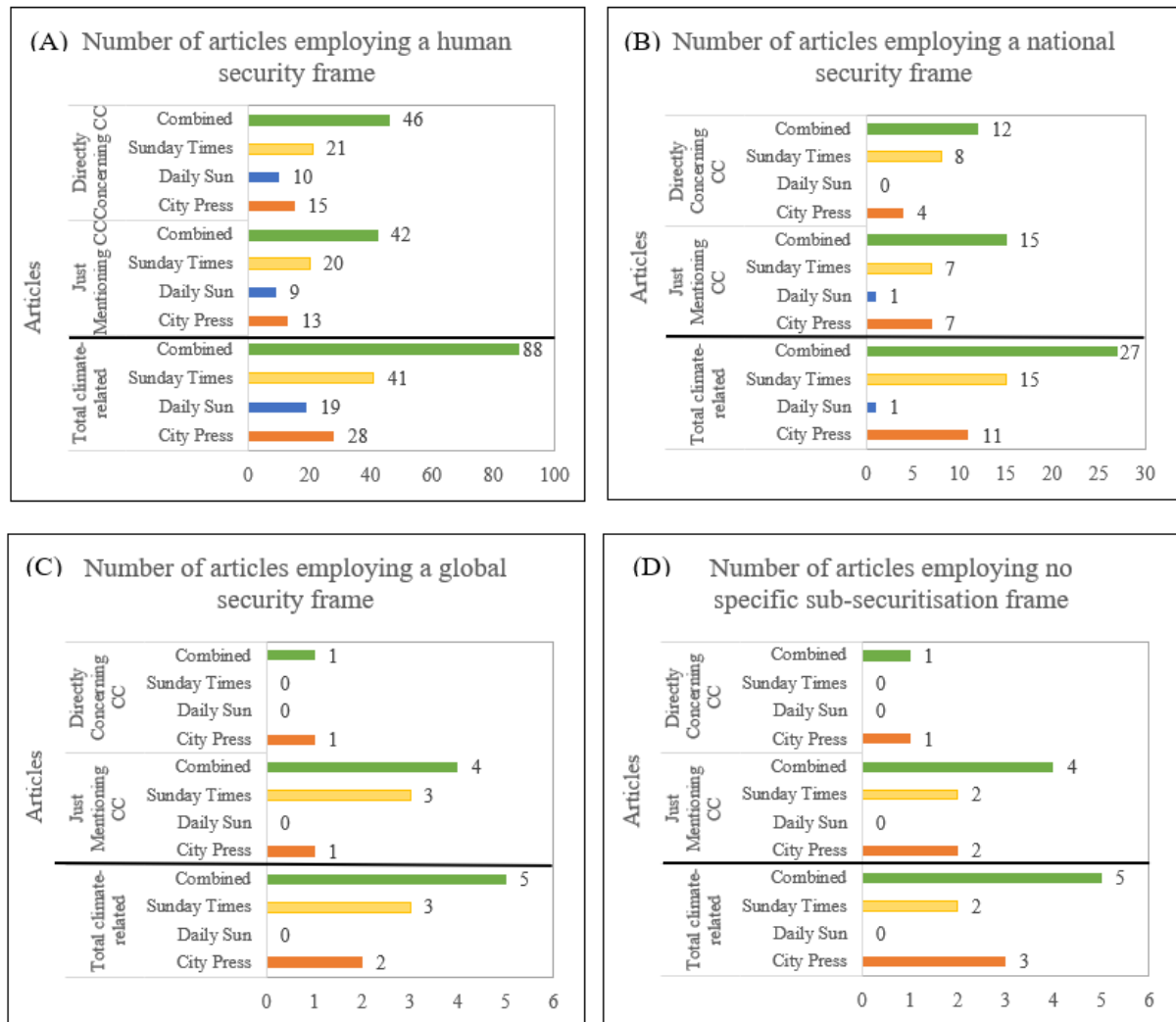
Figure 5.11:   The number of climate-related articles (across all three newspaper outlets) that employed a human security frame (a), a national security frame (b), a global security frame (c) and no specific sub-securitisation frame (d).

Just as the results in terms of the prevalence of a human and national security frame differed from those of Schäfer *et al*. (2016), so did the results pertaining to the temporal development of the two sub-securitisation frames. Contrary to Schäfer *et al*.'s finding that the use of human and national security frames was declining, frame analysis revealed that the use of both frames was increasing – with the increase in the use of a human security frame being

more pronounced (see trendlines in Fig. 5.12). This can be attributed to the fact that climate change has become a more prominent issue over recent years, thus prompting newspaper outlets to cover the issue in such a way that captures readers' attention and/or gets them to act.
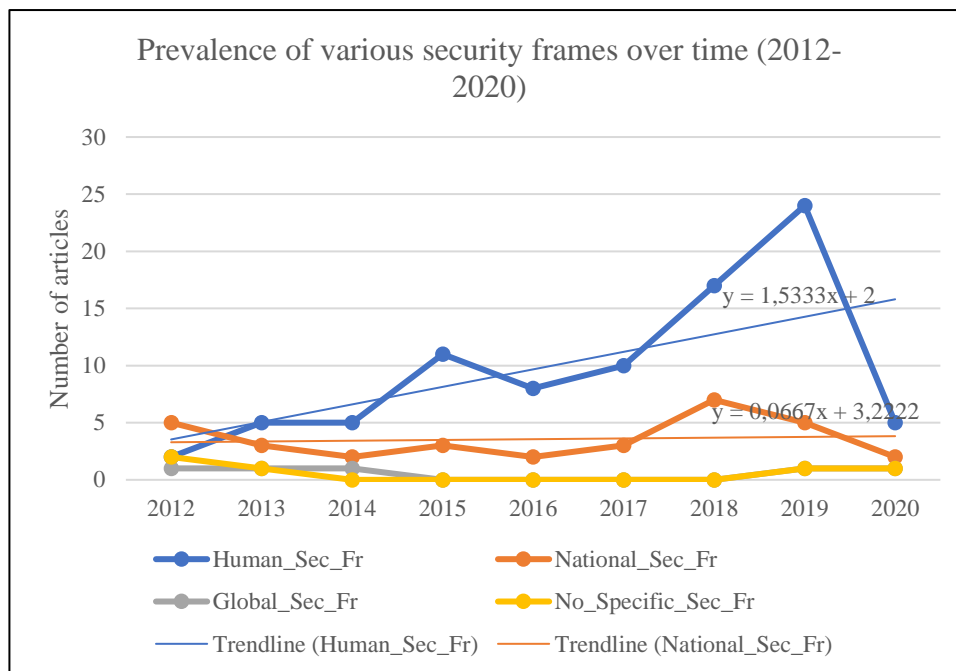
Figure 5.12:   The number of climate-related articles published between 2012 and 2020 that employed either no specific sub-securitisation frame or a specific sub-securitisation frame (a human security, national security or global security frame).

The results in terms of the temporal development of the use of various sub-securitisation frames (Fig. 5.12) also reveal that a human security frame, in particular, was most often employed at times when noteworthy events occurred. Once more, this can be attributed to strategic framing on the part of newspaper outlets. To explain, given that (1) persons are more likely to pay attention to climate-articles that employ a human security frame and (2) persons might have paid more attention to climate-related news in the run-up to and as noteworthy events were unfolding, the newspapers might have used such a frame to increase the likelihood that members of the public would engage with climate-related articles.

Additional findings and further discussion

After coding the pool of climate-related articles for sub-securitisation frames and adding them to a new pool, the researcher combed through the new pool of articles and coded them for multiple sub-human-security frames. As indicated in the codebook and Chapter 4, these are an economic, food, health, environmental, personal, community and political security frame. Whilst coding, the researcher also came across articles that presented climate change and its (in)direct effects as a threat to individual persons' energy needs. For instance, one article

tried to link climate change and attempts to meet "climate change commitments" (Radebe in Dube for *Daily Sun*, 2018: 2) to higher electricity prices. Moreover, it stressed that "[m]any people are struggling to pay for services and are going back to using wood for cooking" (ibid.). Noting this theme in particular articles, the researcher ascribed the code 'energy_sec' to them and recorded them as articles employing an energy security frame. This frame was grouped with the seven pre-defined sub-human-security frames. So, although the codebook and Chapter 4 feature seven human security sub-frames – as per the seven dimensions of human security defined in the UN HDR (1994) – the results presented below feature eight human security sub-frames. That being said, it must be underscored that the researcher is not diverging from or re-shaping human security theory by adding energy security to the list of dimensions of human security and grouping it with the other seven sub-human security frames. For sure, the UNDP HDR (1994) implies that its list of the seven dimensions of human security is not necessarily exhaustive[69], thus allowing for additions to the list in the form of, for example, energy security. The fact that Schäfer *et al.* (2016) identified an energy security frame in their study further indicates that it is viable to talk of energy security and an energy security frame. Moreover, it provides evidence that an energy security frame has been "recognised by others and is not…a figment of a researcher's imagination" (Linström & Marais, 2012: 30).

The results of the coding and frame analysis described above revealed that the most prevalent sub-human-security frame used across all three newspaper outlets was an environmental security frame (see Fig. 5.13). Considering that an environmental frame was defined in the codebook as one which: 'indicates that climate change is a threat to biodiversity, water security, or air quality', the researcher combed through each of the articles that employed an environmental security frame to investigate what, if any, specific topic (i.e., biodiversity, water security, or air quality) they most concerned with.

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[69] "The list of threats to human security is long, but most can be considered under seven main categories" (UNDP HDR, 1994: 24).

Prevalence of sub-human-security frames in climate-related articles (2012-2020)

Figure 5.13:   The prevalence of sub-human-security frames employed in climate-related articles published by South African newspaper outlets between 2012 and 2020.

The results of the investigation conducted revealed that the majority of climate-related articles employing an environmental security frame were concerned with "water scarcity", "water security", "droughts", "water crises", and "day zero". This is unsurprising in a South African context. To explain, South Africa is a "water-scarce country" (Department of Water Services, 2016: iii), with some provinces, e.g., the Western Cape, having faced severe water shortages and the prospects of taps running dry ('Day Zero'), as recently as 2017/18. Thus, the fact that the majority of the articles framing climate change as a threat to environmental security were ultimately concerned with water security reflects a preoccupation about how climate change will impact a key issue facing South Africa(ns). Moreover, it reflects that South African newspaper outlets focus on the local context when discussing climate change and its threats.

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This is an encouraging finding. Indeed, as the literature suggests, by reporting on the local relevance of climate change and its effects, the media make climate-related articles personally relevant, thereby increasing the chances of persons engaging with such articles (Rahman & Panday, 2016). This, in turn, can have the effect of catalysing climate action and pro-environmental behaviour (ibid.).

<div align="center">***</div>

Apart from sub-human-security frames, the researcher coded the new pool of articles employing sub-securitisation frames for multiple sub-national-security frames. As defined in Chapter 4, these frames speak of an issue such as climate change (and its various effects) as a threat to a nation's: (1) territorial integrity and sovereignty, i.e., as a threat to a traditional conception of security, (2) resources and energy needs (3) infrastructure and (4) economy. The codes corresponding to these frames, and which feature in the results in Fig. 5.14 below, are as follows: nat_sec_trad, nat_sec_energy, nat_sec_infra and nat_sec_econ.
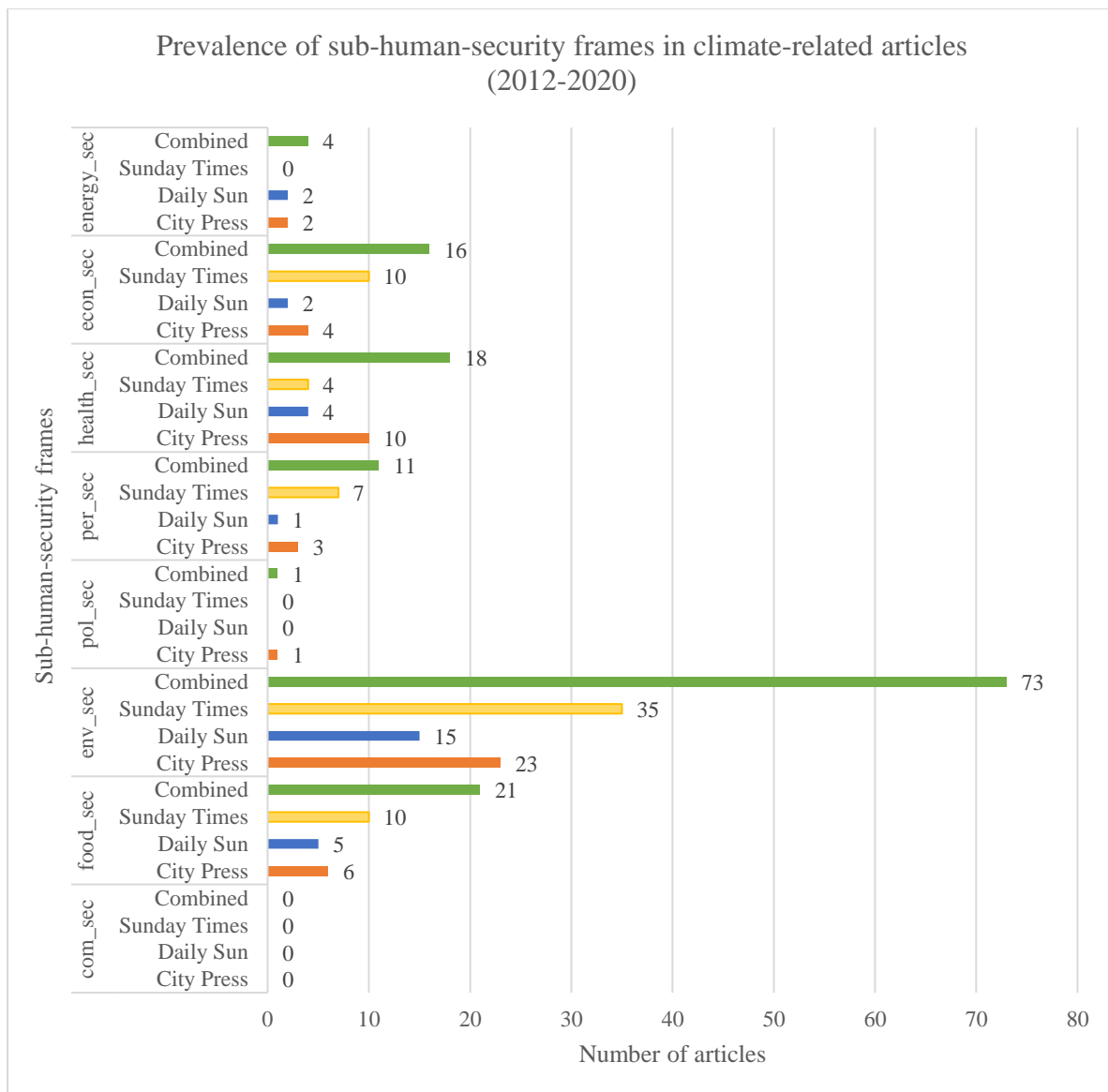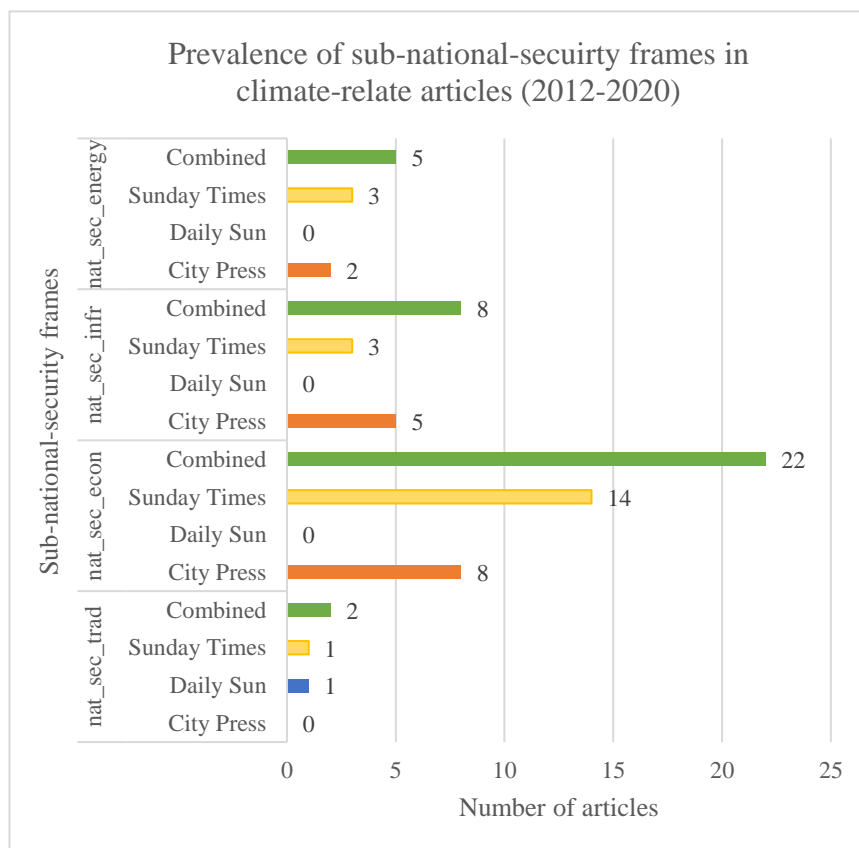

Figure 5.14: The prevalence of sub-national-security frames employed in climate-related articles published by South African newspaper outlets between 2012 and 2020.

The data in the table above reveals that when climate-related articles framed climate change as a threat to national security, they predominantly focused on the threats it would have on tourism

and industry and, hence, the threat it poses to the nation's economy. Text from the articles analysed are presented below as examples of such framing:

- "Climate change threatens sardine run…when it comes to tourism on the South coast, the sardine run is a big drawcard…500 million rands – the tourism revenue generated by the sardine run" (Govender for *Sunday Times*, 2017: 8).
- "People desperately need jobs and tourism is one industry that could oblige… Having seen how the industry can transform places…every single local municipality has plans for tourism…But then the impact of the climate crisis starts to be felt and the whole picture changes. The prospect of losing some of those precious jobs and valuable income looms large" (Smallhorne for *City Press*, 2019: 13).
- "Over half of the businesses surveyed late last year by the Cape Chamber of Commerce and Industry said the water crisis threatened their survival and 23% said it had prompted them to halt or postpone new investments…climate change is thought to be the cause of the crisis" (Jordan for *Sunday Times*, 2018: 6).
- "Bee colonies around the world have declined by between 30% and 70% over the past few years as a result of pesticides, land clearing and climate change…According to a statement by the University of the Witwatersrand, declining bee colonies are putting industry worth R20-billion at risk. This includes the Western Cape's fruit industry" (Farber for *Sunday Times*, 2017: 11).

A sub-national-security frame focusing on climate change's threats to the nation's economy may be more frequently used (relative to the other sub-frames) in climate-related articles, such as those above, because it is more relatable and personally relevant. Indeed, having an impact on, *inter alia*, employment levels, and future investment and government spending, the health of the nation's economy has consequences for individual persons. Demonstrating that climate change could affect the economy's health would make it a matter of personal interest. Overall, the prevalence of this specific sub-national-security frame could reveal efforts to communicate the threats of climate change in terms that are most relevant and relatable to South African readers.

<p style="text-align:center">***</p>

The last two discussions revealed which sub-national and sub-human security frames were most prevalent in the pool of climate-related articles analysed. To conclude this sub-section concerning Target 3 and 4, findings regarding the overlap of various sub-frames in climate-related articles are discussed. More precisely, the sub-frames that were frequently employed together in climate-related articles are identified and discussed. Note that this discussion is possible given that every article was coded for multiple sub-human-security and sub-national-security frames.

The analysis conducted revealed that when any one sub-human-security frame is employed in a climate-related article, it is often in conjunction with other sub-human-security and sub-national-security frames (see Table 5.5). For example, when an environmental security frame is employed in an article, it is often in conjunction with food, health, and economic security frames and national security sub-frames focusing on infrastructure and the economy. Moreover, the table reveals that when a national security sub-frame is employed (except the one focusing on territorial integrity and sovereignty), it is in conjunction with sub-human-security frames. For example, articles framing climate change as a threat to a nation's infrastructure also framed it as a threat to the following dimensions of human security: energy, environment and food security.

Table 5.5: Cross-tabulation of various sub-human and national security frames employed in climate-related articles published by South African newspapers (2012-2020).

	Com_Sec	Econ_Sec	Energy_Sec	Env_Sec	Food_Sec	Health_Sec	Pers_Sec	Pol_Sec	Glob_Sec	Nat_Sec_Econ	Nat_Sec_Infra	Nat_Sec_Trad	Nat_Sec_Energy
Com_Sec	1	1	0	1	1	0	1	0	0	1	0	0	0
Econ_Sec	1	16	0	8	9	1	6	0	0	6	0	0	0
Energy_Sec	0	0	4	3	2	2	0	0	0	1	1	0	1
Env_Sec	1	8	3	73	13	14	7	1	0	13	8	0	1
Food_Sec	1	9	2	13	21	5	3	0	0	8	3	0	1
Health_Sec	0	1	2	14	5	18	2	0	0	4	2	0	0
Pers_Sec	1	6	0	7	3	2	12	0	0	3	0	0	0
Pol_Sec	0	0	0	1	0	0	0	1	0	0	0	0	0
Glob_Sec	0	0	0	0	0	0	0	0	5	0	0	0	0
Nat_Sec_Econ	1	6	1	13	8	4	3	0	0	23	3	0	2
Nat_Sec_Infra	0	0	1	8	3	2	0	0	0	3	8	0	1
Nat_Sec_Trad	0	0	0	0	0	0	0	0	0	0	0	1	0
Nat_Sec_Energy	0	0	1	1	1	0	0	0	0	2	1	0	5

The findings above speak to theory and are somewhat unsurprising given the theoretical discussions featured in Chapter 3. To be brief:

- The finding that sub-human-security frames are employed together might be a reflection of the fact that "the components of human security are interdependent" (UNDP HDR, 1994: 22).

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- The finding that sub-human-security frames are employed in conjunction with some sub-national-security frames may attest to the inextricable link between national and human security that Buzan (1983) highlights in the statement: "the security of any one referent object or level cannot be achieved in isolation from the others, the security of each becomes, in part, a condition for the security of all (Buzan, 1983: 13).

Overall, the findings discussed might attest not only to the multi-faceted nature of climate change and its effects, but also to the interrelatedness of different conceptions of security. This interrelatedness makes it very likely that in discussing the threat climate change poses to just one notion/aspect of security, the threat it poses to others ends up being drawn into journalists' discussions.

5.3. RO2: relevant targets, broad expectations and results

RO2: To investigate and evaluate South African readers' preferences for articles that framed climate change as a threat to national security versus ones that framed climate change as a threat to dimensions of human security (including economic, food, health, environmental, personal, community and/or political security).

- **Target 5:** to investigate if members of the public are likely to select an article that discussed climate change using a human security frame over one using a national security frame.
- **Target 6:** to document which, if any, human security sub-frame (i.e., personal, political, community, food, health, economic, environmental security frames) members of the public are inclined to select.
- **Target 7:** to investigate if there is some consistency in individual persons' choice of frame.

To meet the above targets, the researcher asked survey participants (N=20) to read the heading, sub-heading and lead paragraph of various articles about climate change and choose the heading, sub-heading and lead paragraph corresponding to the article they would most want to read in full. The headings, sub-headings and lead paragraphs shown to participants were obtained from one article that framed climate change as a threat to national security and seven other articles that framed climate change as a threat to each of the seven dimensions of human security[70]. Once participants selected their preferred heading, sub-heading, and lead, they were asked a couple of questions regarding their article choice. After this, the entire process was repeated a second time – with a new set of headings, sub-headings and lead paragraphs – to test whether participants would choose an article with the same frame as the one they chose in the first round.

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[70] See Chapter 2 and Appendix 3.

5.3.1 Targets 5, 6 & 7: broad expectations

In Chapter 2, Feldman and Hart's (2018) two news browsing experiments were discussed. Recall that the first experiment involved presenting participants of various political persuasions with the heading and lead paragraph of articles concerning climate change, each of which employed a different frame[71]. These included a health, environment, national security, conflict, economic and morality frame. The scholars found that participants chose and spent more time reading a story that employed a health frame, i.e., one that framed climate change as a threat to human health. Given this finding, the researcher expected a health security frame to be one of the frames that most survey participants would choose. The fact that the participants were embedded in a pandemic context and that links were being drawn between climate change and the pandemic (e.g., Lorentzen *et al.,* 2020; Fernández *et al.,* 2021; Gorji & Gorji, 2021) gave the researcher further cause to expect such a result. More generally, the researcher expected the articles employing a human security frame to be selected more often than a national security one, seeing that a health security frame falls under a broader human security frame. Another reason for expecting this was that articles that take the referent object to be the human rather than the nation (and its borders, resources, economy, or infrastructure) tend to be more personal, relatable, and immediate[72]. Accordingly, such articles were expected to resonate more with the participants.

Based on the above, the researcher's prediction in terms of Targets 5 and 6, in particular, can be summarised as follows:

- **Expectation 5a**: members of the public will likely select an article that discussed climate change using a human security frame over one using a national security frame.
- **Expectation 6a:** the health security frame will be the sub-human-security frame that members of the public select the most.

In terms of Target 7, it should be restated that, in their write-up, Feldman and Hart (2018) assumed persons usually pay more attention to, and are subsequently more likely to be affected by, a frame that resonates most with them. In this regard, the authors hypothesised that

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[71] The participants were then asked to select and read their preferred article about climate change. Once a participant chose an article, the time spent reading it was recorded. After an article was read, the participant could go back to the initial list of articles and select another one. All participants were only given seven minutes to select and read articles, thus it was assumed that the ones chosen would be the ones that most resonated with each of them.

[72] These were the same reasons Feldman and Hart (2018) gave when trying to explain why a health frame was more often chosen and read by those participating in their study.

"issue framing…can guide news selection" (ibid., 506). This hypothesis was partially supported by their finding that liberal-Democrats and moderate-Independents "spent significantly more time" (Feldman & Hart, 2018: 515) reading articles that employed a human health frame than those that employed a morality, economic, and national security frame. Considering this notion that persons respond to a particular frame more than others, one could expect some consistency in their choice of frame. Explained differently, one could expect survey participants, when asked to choose between articles on two different occasions, to choose an article that employs the same frame on both occasions – even if the article used on the first occasion differs from the one used in the second. However, this would not necessarily be the case if more than one frame resonates with a person. Indeed, in this instance, it is possible that a person would choose different frames on two different occasions. On account of this possibility, the researcher could not make an informed prediction of the type of results that part one of the survey would yield in terms of Target 7. Consequently, there are no specific expectations related to Target 7.

5.3.2 Targets 5, 6 & 7: results & discussion

A summary of the findings of the first part of the survey used in this research project appears in Table 5.6. The table indicates that, for both rounds of this part of the survey, the number of participants that chose a particular article corresponding to a national security frame (indicated in blue) or a particular human security frame (indicated in orange).

Table 5.6:   The number of participants that chose a particular article corresponding either to a national security frame or a particular human security frame in rounds 1 and 2 of the first part of the survey.

	Community Security	Economic Security	Environmental Security	Food Security	Health Security	Personal Security	Political Security	National Security	Total
Round 1	0	0	5	3	3	4	3	2	20
Round 2	0	5	1	2	3	3	3	3	20
Total	0	5	6	5	6	7	6	5	40
Frame Totals	Human Security Frame n=35							National Security Frame n=5	40

Based on the results in Table 5.6, it can be said that the participants were more inclined to choose an article that framed climate change as a threat to human security than national security. This coheres with expectation 5a. That being said, one must consider that only one article pertaining to national security was shown to participants in each round. In contrast,

seven articles pertaining to the seven dimensions of human security were shown to participants in each round. Hence, the finding that 17/20 participants chose a human security frame in round 1 and 15/20 participants chose a human security frame in round 2 could partly be due to the fact that, overall, there were more articles employing a human security frame to choose from. In this respect, one could argue that this survey could have benefitted from having an equal number of articles employing a human security frame and a national security frame. Moreover, the 'national security articles' should have been those that framed climate change as a threat to the different aspects of national security[73]. Hence, articles that frame climate change as a threat to a nation's borders, resources, infrastructure, and economy, respectively, should have formed part of the pool of articles employing a national security frame.

Instead of the above, the first round of the survey consisted of one article that framed climate change as a threat to a traditional notion of national security, i.e., as that which could, by bringing about wars, between countries, over resources, threaten a nations' existence. And then, the second round consisted of one article that framed climate change as a threat to a more broadened notion of national security, i.e., as that which could threaten a nation's economy[74]. Part of the reason for this was that the survey had to be designed before substantive research and writing[75]. At the time of design, the researcher had not completed extensive reading on the topic of national security and therefore had a narrow, neo-realist notion of national security. Only after delving further into the literature did the researcher pick up on the different aspects of national security that climate change could be framed as a threat to, i.e., the different sub-frames of a national security frame. However, by this time, the survey had already been sent out, and all responses were received. Therefore, it was impractical to re-design the survey to include other articles that framed climate change as a threat to these sub-national-security frames.

On that note, it is vital to move the discussion along and examine what the survey results revealed in terms of the seven different sub-human-security frames. These frames could be,

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[73] These aspects were highlighted in the coding definition for a national security frame in Chapter 4 and in the code book.

[74] Refer to Appendix 3 or the coding definitions in Chapter 4 for the heading, sub-heading, and lead of both the articles – shown to the survey participants in rounds 1 and 2 – that employed a national security frame.

[75] Recall that this was one of the requirements that the Ethics Committee expected the researcher to meet before clearance could be given for the research to take place.

and were, incorporated into the survey since the researcher had prior knowledge of the UNDP's 1994 HDR, and so the seven aspects of human security highlighted in it.

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The column totals in Table 5.6 indicate that there was no one sub-human-security frame (e.g., a health security frame) that most participants chose. With the exception of a community security frame, the participants' frame preference was relatively evenly distributed across the various frames (see Fig. 5.15). These results diverge from the findings of Feldman and Hart (2018) and so the expectation (6a), which they informed. One reason for this divergence could be that the frames used in Feldman and Hart's study differed markedly from those in this one. To explain, note that the statement "issue framing…guides news selection" (ibid., 511) could mean that the type of frames employed in other available climate-related articles may prime or depress interest in a particular article employing a particular frame. If this is the case, it may be that when choosing between articles that employ an economic, morality, national security, environment, public health and conflict frame, specifically, participants choose the article employing a public health frame (as was found by Feldman and Hart). However, when choosing between articles that employ an economic, personal, community, health, environment, food, political and national security frame, specifically, participants may choose disparate frames. This might be because each of the frames resonates with one or more of the participants. In turn, this might be because various issues characterise the context within which the participants are embedded. Thus, framing climate change as that which threatens to exacerbate these issues makes it relatable and relevant to the collective consciousness.
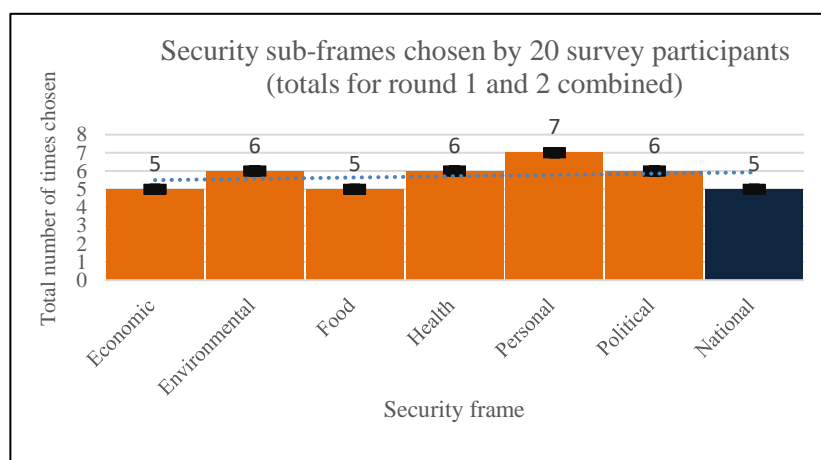

Figure 5.15:   The security sub-frames chosen by 20 survey participants in both round 1 and round 2 of the first part of the survey.

The difference between the findings of the survey conducted in this research project and those of Feldman and Hart could also be attributed to differences in the size of the participant pools and the backgrounds of the participants. To elaborate, Feldman and Hart's findings were informed by a survey in which a much larger number of persons participated (see Chapter 2). Moreover, these participants were recruited from "a national paid opt-in online survey panel of U.S. adults" (ibid., 511). Hence, they were probably from more diverse backgrounds than the participants – recruited using a snowball sampling technique – in this project's survey. This point will be expanded upon in due course.

Yet another reason a health frame was not chosen most often (expectation 6a) could be that, embedded in a South African context, participants were worried about health *and* a range of other issues, thrown in stark relief by COVID-19. These issues include unemployment (economic security), gender-based violence (personal security), food security and water security (which falls under the category of environmental security[76]). A preliminary investigation into the reasons participants gave for their choice in article somewhat bolsters the argument that they were, collectively, worried about a range of issues and hence chose articles framing climate change as an exacerbator of or threat to such issues.

In round 1 of part 1 of the survey, 55% of participants who chose an article employing a sub-human-security frame stated one of the following as a primary reason for their choice:

- The heading, sub-heading and lead paragraph are related to a specific topic that I am interested in.
- The heading, sub-heading and lead paragraph are related to an issue that I and/or my broader community are directly affected by.
- The heading, sub-heading and lead paragraph are related to an issue that I am not directly affected by, but which worries me.

Similarly, in round 2, 66,667% of participants who chose an article with a sub-human-security frame stated one of the above as the primary reason for their article choice.

The qualitative data thus indicates that the main reason participants chose a sub-human-security frames was because they felt personally connected to the issue that climate change was portrayed as an exacerbator of (e.g., GBV, unemployment, poverty, health complications) or a threat to (food and water security). This is not surprising given that they were embedded in a South African context characterised, *inter alia*, by stark inequality and GBV. Hence, the fact

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[76] See codebook and Chapter 4.

that participants chose various sub-human-security frames (with the exception of a community security sub-frame) may be an indication of the fact that there are a variety of issues that are prevalent in a South African context, one or more of which a particular person may be affected by and/or concerned about. Thereby, as a whole, South Africans may be predisposed to various human-security frames (*including* a community security sub-frame) when it comes to climate-related articles, seeing that each frame may be relatable and of personal significance.

At this point it is incumbent upon the researcher to explain why the previous statement includes a community security sub-frame even though the survey results indicate that South African readers' may be averse to such a frame. To begin to explain this, it must be highlighted that the two articles employing a community security frame in the two rounds of part 1 of the survey discussed:

- how climate change is affecting the annual ceremony of the Lozi people in Zambia.
- how climate change fuelled the conflict of Darfur, forcing many Darfuris – now refugees on the Chad-Sudan border – to leave behind "an ancient way of life" (Borger for *Mail & Guardian*, 2007: 3)[77].

Broadly speaking, the articles employing a community security frame emphasised how climate change could threaten the practices and beliefs of groups of persons (predominantly indigenous persons) and, therefore, the bedrock of their shared and individual identities. Such articles in particular, and, more generally, articles that frame climate change as a threat to community security, might not have been immediately relatable and of personal interest to the survey participants. This is because they were most likely young, cosmopolitan adults from urban areas (within the province of Gauteng). The researcher can make this inference about the participants, given that a snowball-sampling technique was used to recruit them (see Chapter 2). Given this sampling technique, it is very likely that most participants were part of the researcher's "personal communication field" (Bjelland, 2020: 77)[78], and therefore likeminded

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[77] If the reader is wondering why an article that was published by the Mail & Guardian in 2007 was used, she/he/they must recall that the survey was created prior to substantive research, data collection and analysis (see Chapter 2). Moreover, it was informed by preliminary searches for articles that fully met the following criteria: (1) the article was published by a South African newspaper that is printed in English and distributed nationally, (2) the article is accessible through PressReader or SA Media, and (3) the article used a national security frame or (one or more of the seven aspects of) a human security frame when reporting on climate change. As such, the articles used in the survey were not solely sourced from the three newspapers whose climate change reporting habits were analysed. Nor were they solely sourced from a pool of article published in the period 2012-2020.

[78] This is defined as "the informational counterpart of that person's [the researcher's] activity space" (Bjelland, 2020: 77) – the size and shape of which is dictated by the number of persons the researcher comes into close contact with (physically or virtually) whilst carrying out regular activities including, working, studying, researching, shopping *etc*.

and/or of a similar age group and/or from the same geographical location. Of course, given that the surveys were taken anonymously and none of the participants' personal data was captured, there is no sure-fire way of knowing this. Nevertheless, this remains a strong possibility and a viable explanation for the lack of interest in a community security frame. If this is indeed the case, then, firstly, it becomes evident, once more, that this study could have benefitted from a more significant number of participants and a different sampling technique, one which could have yielded a sample that was more representative of the South African population. Secondly, it becomes problematic to infer from the survey results alone, that South Africans are averse to a community security sub-frame.

On the whole, the results of the survey do not indicate that participants are more predisposed to any one specific sub-human-security frame. Although the results seem to indicate that survey participants are averse to a community security sub-frame, they do not necessarily provide compelling evidence to support the inference that South African newsreaders may be averse to a community security frame. Additionally, given the flaws in the survey design, the results do not necessarily provide compelling evidence to suggest that employing a human security frame – as opposed to a national security frame – in South Africa's climate-related articles would increase public engagement with the issue.

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Hitherto the discussion has focused on the combined results of round 1 and round 2 of part 1 of the survey. Looking at the results of each round independently (see Table 5.7) reveals some interesting patterns, which will now be discussed.

Table 5.7:   Comparison of security sub-frames chosen by survey participants in rounds 1 and 2 of the first part of the survey.

	Community Security	Economic Security	Environmental Security	Food Security	Health Security	Personal Security	Political Security	National Security	Total
Round 1	0	0	5	3	3	4	3	2	20
Round 2	0	5	1	2	3	3	3	3	20

Concerning the results of round 1 and round 2 combined, the previous discussion pointed out that participants chose disparate frames (i.e., there was no single frame that most participants were drawn to). An investigation into the selection habits of participants in each round independently tells a slightly different story. Note, firstly, that in round 1, there was quite an even spread in participants' choice of frame (excluding community and economic security frames), with marginally more participants choosing an environmental and personal security

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frame. Interestingly, between rounds 1 and 2, there was a drop in the number of participants who chose an environmental security frame. Moreover, there was an increase (from 0 to 5) in the number of persons who chose an economic security frame. Further still, in round two, the participants' selections were not as evenly distributed across frames, with participants' leaning more towards the article that framed climate change as a threat to economic security than those that framed it as a threat to other aspects of security. A basic analysis of the content of the articles shown in both rounds, and the participants' reasons for choosing the articles they did, can help explain these results.

Firstly, the researcher wishes to address the increase in the number of participants who chose an economic security frame between rounds 1 and 2. Of note in this regard is that the article[79] employing an economic security frame in round 1 focused on how climate change threatened individual persons' jobs and the commercial agricultural sector in the Karoo. In contrast, the article used in round 2 framed climate change as a threat to global efforts to tackle poverty. Moreover, it had the heading "Adapt or die, warns UN report" followed by the sub-heading "Climate change is undermining international efforts to combat poverty". Considering the content of the articles, it could be argued that participants were less drawn to the article in round 1 because it concerned another province, i.e., the Northern Cape. Seeing that it was inferred earlier that the majority of participants were from or residing in the province of Gauteng, it is likely that the article in round 1 was less relatable and not of any personal significance. Given the other inferred characteristics of the pool of survey participants (i.e., that they would be cosmopolitan persons or more globally minded), it is not particularly surprising that they were drawn to the article discussing climate change from a global perspective and with reference to a global body such as the United Nations.

Looking at the reasons the survey participants gave for choosing the article employing an economic security frame in round 2 can help support the above notion that participants were drawn to the article discussing climate change from a global perspective. To explain, one reason participants who chose the economic frame supplied for their choice in article was that "[t]he heading, sub-heading and lead paragraph are related to a specific topic that I am interested in". Those who elaborated on this "specific topic" gave the following responses:

- "poverty in Africa" (Respondent A)
- "world poverty" (Respondent F)

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[79] See Appendix 3 or section 12 in Appendix 10 for the heading, sub-heading and lead paragraph of this article.

- "global poverty" (Respondent J)

The above indicates that the participants who chose the economic frame in round 2 were interested in climate change's effect on poverty levels at a supra-national or global level. Altogether then, the preference for an economic security frame in round 2 could be explained by the shared characteristics of the survey participants. Therefore, it is not prudent to recommend that South African newspapers focus on a global context to maximise reader engagement with articles employing an economic security frame.

Apart from the reasons above, participants also stated that they chose the article because the heading intrigued them. Those elaborating on the aspect of the heading that intrigued them stated: "Adapt or die...more of a do or die situation being given" (Respondent K) and "adapt or die" (Respondent E). This particular result could point to the fact that using dramatic language catches readers attention and could thus increase the chances that they would engage with an article. This result is not easily explained by the (assumed) shared characteristics of the survey participants. Moreover, it diverges from literature discussed in Chapter 4, which states that a negative, fatalism frame (Nisbet, 2009) or "doom and gloom frame" (Wibeck, 2014: 403) have already been (over)used and consequently, no longer spark interest, catalyse action, or receive responses from members of the public (ibid.). Given this divergence from international studies, it might be worthwhile for future studies to investigate what language or stylistic devices employed in climate-related articles of South Africa's print media can help promote public engagement with the issue.

Moving away from the above discussion, the researcher wishes to, in the second instance, address the drop, between rounds 1 and 2, in the number of participants who chose an environmental security frame. To begin to do so, it must be recalled that, as defined in the codebook, an environmental frame is one which: 'indicates that climate change is a threat to biodiversity, water security, or air quality'. The survey was designed to present two of these aspects of an environmental frame to participants in two different articles (one of which appeared in round 1 and the other in round 2). To expand, the article corresponding to an environmental frame in round 1 portrayed climate change as a threat to South Africa's biodiversity – specifically to the variety of species in the Kruger National Park (KNP). In contrast, the article used in round 2 was concerned with water security. Its focus was on how climate change affects the water security of inhabitants of a village in northern Namibia and the national government's approach to tackling such insecurity.

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Although the KNP is not in Gauteng, it is well known to many South Africans, including those who have the inferred characteristics of the survey participants. It can thus be argued that the article in round 1 was more immediate, personal and relevant to the survey participants than the article in round 2. The rationale given by some participants for their choice in article may somewhat support this. For example, one participant who chose the article corresponding to an environmental frame in round 1 stated that it concerned an issue that they themselves and their broader community were affected by. Elaborating on the "issue", the respondent stated, "[o]ur children will grow up not seeing the same animals we have in KNP" (Respondent P). This statement provides reason to believe that the participant was drawn to the article because its content, being concerned with the effects of climate change on biodiversity in the KNP, indicated what could be at stake in a South African context if climate change continues unabated. Simply put, the article's content was relatable and personally significant because it discussed climate change in relation to something familiar (the KNP).

Apart from the above reason, participants also stated that they chose the article because the heading – "Evolve or die: Time is running out for plants and animals" – intrigued them. Those elaborating on the aspect of the heading that intrigued them stated: "evolve or die" (Respondent K) and "alarmist language" (Respondent R). Again, this particular result could point to the fact that using dramatic language catches readers' attention and could thus increase the chances that they would engage with an article.

Together, the two previous discussions, which provide possible explanations for the difference in participants preference for articles that employed an environmental security frame and economic security frame, in rounds 1 and 2, bring something vital to the fore. This is that it is not just the security frame employed, but also (a) the content (e.g., context that climate change is discussed in and the language/stylistic devices) of the articles as well as (b) the characteristics of the reader that determine whether the reader chooses and engages with a climate-related article. The findings pointing to (a) cohere with Boykoff's (2008a) instantiation that "the amount of exposure and placement (front page or buried deep in the newspaper), as well as the use of headlines and photographs" (ibid., 14), can also affect the public's perception of climate change. Moreover, the findings pointing to (b) are aligned with a statement made in Chapter 4. This statement was that context, characteristics, partisanship, ideology, social identity, values, and beliefs are all factors that could dictate how, whether and to what extent one may respond to a news article or frame (Singh & Swanson, 2017; Feldman & Hart, 2018; Li & Su, 2018).

Bearing in mind the above, this study can be further informed or built upon in two respects. Firstly, the characteristics (e.g., age, nationality, gender, political orientation) of survey participants could be recorded (within ethical parameters) alongside their frame choice. This could allow one to investigate and document patterns that emerge regarding participants' characteristics and frame choice. Ultimately, such an investigation can inform South African print newspaper outlets of how best to frame climate-related articles to maximise engagement by a particular group of readers. In the second instance, focus group discussions can be carried out in which willing participants elaborate on their article preferences between rounds. The discussions could reveal what aspects (e.g., language, tone, technical elements, and stylistic devices) of climate-related articles (other than the frame it employs) draw the public to such articles, thereby increasing their exposure to climate issues. Again, such revelations can be used to create a set of recommendations for South African print newspaper outlets striving to be effective climate communicators.

Further discussion

The previous sub-section tried to explain the difference in participants frame choice between rounds 1 and 2. Taking these differences as its point of departure, this sub-section delves into the final target under RO2; Target 7 (to investigate if there is some consistency in individual persons' choice of frame).

The finding that more participants chose an environmental frame in round 2 than in round 1 of the first part of the survey gives one reason to assume that individual participants are not consistent in their frame preference. To further investigate this, the researcher cross-tabulated the participants' responses from round 1 with those from round 2 (see Table 5.8).

Table 5.8: Cross-tabulation of participants' frame choice in round 1 and round 2 of the first part of the survey.

		Round 2								
		Community Security	Economic Security	Environmental Security	Food Security	Health Security	Personal Security	Political Security	National Security	Total
Round 1	Community Security	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
	Economic Security	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
	Environmental Security	0 / 0%	2 / 10%	0 / 0%	0 / 0%	1 / 5%	2 / 10%	0 / 0%	0 / 0%	5 / 25%
	Food Security	0 / 0%	2 / 10%	0 / 0%	1 / 5%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	3 / 15%
	Health Security	0 / 0%	0 / 0%	1 / 5%	0 / 0%	1 / 5%	0 / 0%	0 / 0%	1 / 5%	3 / 15%
	Personal Security	0 / 0%	0 / 0%	0 / 0%	1 / 5%	0 / 0%	0 / 0%	1 / 5%	2 / 10%	4 / 20%
	Political Security	0 / 0%	1 / 5%	0 / 0%	0 / 0%	1 / 5%	1 / 5%	0 / 0%	0 / 0%	3 / 15%
	National Security	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	2 / 10%	0 / 0%	2 / 10%
	Total	0 / 0%	5 / 25%	1 / 5%	2 / 10%	3 / 15%	3 / 15%	3 / 15%	3 / 15%	20 / 100%

The table indicates that participants were not consistent in their frame choice. If they were, the navy-blue blocks running diagonally across the table would contain most of the data. Instead, only two data points lie in these boxes. In other words, the table reveals that only 2 (10%) respondents were consistent in their choice of frame, choosing, in both rounds, a food and health security frame, respectively.

Whilst it might be tempting to conclude that participants were inconsistent in their choice of frame, one must resist this temptation. As stated in the sub-section concerning the expected results for RO2 and Target 7, there could be more than one frame that resonated with participants. In order to explore this possibility, the study could be expanded to include more rounds[80] and more (diverse) participants. Both would help reveal patterns in frame preference and consistency in frame preference by eliminating the possibility that the results were due to multiple frame preferences or the fact that the participants all shared similar characteristics.

On the whole, the findings stated in this final sub-section – and in relation to Target 7 – are inconclusive. They thus cannot be extrapolated from to make statements about the frame and news selection habits of all South Africans.

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[80] At the very least the number of rounds (N) should be equivalent to the number of frames presented to participants (NF) +1. So, N=NF+1.

5.4. RO3: relevant targets, broad expectations and results

RO3: To gauge the extent to which South African readers show a preference for climate-related articles (employing either a national security or human security frame) over articles concerning other topics.

- **Target 8:** to investigate the extent to which members of the public select a climate-related article that employs a securitisation frame when confronted with articles considering other matters of interest.
- **Target 9:** to investigate the specific security frame corresponding to the article that members of the public most often select, if at all, when confronted with articles considering other matters of interest.

In order to meet the above two targets, the researcher added a second part to the survey discussed in the previous section. In this part of the survey, the participants were presented with various headings and sub-headings relating to various topics. Of these, only one heading (and its corresponding sub-heading) was from a climate-related article employing a specific sub-securitisation frame[81]. The other headings and sub-headings were from actual articles concerned with health, national politics, foreign affairs, lifestyle (art/entertainment/pop-culture/beauty), economic or business issues and, lastly, social issues[82].

Once participants skimmed through the list of (sub-)headings, they were asked to select the one heading (and sub-heading) corresponding to the article they would have been most interested in reading. When the participants did this, they were taken to a new page containing another list of articles; the climate-related article in this new list used a different sub-securitisation frame from the one encountered on the previous page. This process was repeated eight times. The heading and sub-heading of a different climate-related article (that used a different sub-securitisation frame) were presented amongst a new list of distractor stories each time.

5.4.1 Target 8 & 9: broad expectations

Feldman and Hart's (2018) second experiment – which informed the design of part 2 of the survey being discussed (see Chapter 2) – revealed that if a participant selected a climate-related article from various distractor-articles, the time spent reading it did not vary significantly with the frame employed. They supposed that this was because, when news

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[81] I.e., a national security frame or one of the seven sub-human-security frames.

[82] As was established in Chapter 2, the researcher sourced the heading and sub-heading of these distractor articles from the same newspaper issues that the articles pertaining to climate change were sourced from.

content is varied, the topic of the articles (e.g., climate change, entertainment, business and economy) becomes "more salient than the frame used" (ibid., 519).

Informed by the above, the researcher expected participants to select news articles about other issues over those about climate change. The reason for this had to do with the fact that a range of other (more immediate and visible) issues (Harding in Kunene, 2021) – some brought into stark relief by COVID-19 – plague South Africa(ns). Drawing on this, the researcher assumed that participants would be drawn to articles discussing these immediate and visible matters, rather than ones discussing climate change.

In addition to the above, the researcher expected that if, and when, a climate-related article is chosen, it is likely that it would be one that employed a human security frame. As stated in previous sections, this is because such a frame – by focusing on how climate change is affecting (groups of) individuals – might be more personal and relatable. Additionally, the researcher expected that if, and when, an article framing climate change as a threat to human security is chosen, it is likely that the sub-human-security frame employed in the article would be a health security frame. This prediction was based on the fact that participants were embedded in a pandemic context which might have primed interest in articles related to health[83].

Informed by the above, one can summarise the expectations pertaining to RO3 and Targets 8 and 9 as follows:

- **Expectation 8a:** survey participants will be more likely to select articles about other issues over those about climate change, i.e., the presence of other stories may depress interest in climate-related articles.
- **Expectation 9a:** If participants choose a climate-related article, it will likely be one employing a human security frame.
- **Expectation 9b:** if and when an article framing climate change as a threat to human security is chosen, the sub-human-security frame it employed would likely be a health security frame.

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[83] Note that these expectations were formed before any data analysis and interpretation. Therefore, the results from the previous section – which reveal that a health security frame is not the frame that most participants chose – were not known.

5.4.2 Target 8 & 9: results and discussion

Table 5.9 reveals the topic of the article that the 20 participants chose in each of the eight rounds of the second part of the survey.

Table 5.9:   Topic of articles shown to survey participants in all eight rounds of part 2 of the survey and the number of participants who selected the articles in each round.

	Topic						
	Climate-change (various security frames)	*National Politics*	*Business / Economy*	*Health*	*Entertainment / Lifestyle / Art / Travel / Pop Culture*	*Social Issues*	*Foreign Affairs*
Round 1	5	0	2	4	3	6	1
Round 2	8	0	2	5	1	4	1
Round 3	4	1	1	0	3	4	8
Round 4	8	0	2	4	1	3	3
Round 5	4	0	1	5	0	7	3
Round 6	7	1	0	9	0	1	2
Round 7	4	0	6	5	0	4	1
Round 8	8	0	1	2	1	3	5
Total	48	2	15	34	9	32	24

Round 1	Health Security
Round 2	Personal Security
Round 3	Economic Security
Round 4	Food Security
Round 5	Community Security
Round 6	Environmental Security
Round 7	Political Security
Round 8	National Security

Looking solely at the total number of times participants selected an article pertaining to a specific topic (the row shaded in green), it can be said that participants chose a climate-related article more often than they chose articles concerning other topics. This result diverges from expectation 8a. Moreover, it provides some compelling evidence to believe that members of the public, despite being in a pandemic context and surrounded by a range of other issues, still accord some primacy to climate change. Since all the climate-related articles employed a broad securitisation frame, the results may also indicate that securitising climate change in print newspapers draws the attention of readers. Whilst these are all encouraging findings, they cannot be readily extrapolated from and thus used to either make statements about South Africans' news consumption habits or to recommend specific lines of actions to those writing future climate-related articles. There are at least two reasons for this.

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Firstly, the survey included an information sheet. Hence, it is likely that the participants knew what the project was concerned with before taking the survey. As such, their choice was likely influenced by what they thought the researcher was looking for. This could be supported by the fact that no participant selected a climate-related article employing a community security frame in round 1 or 2 of the first part of the survey (refer back to previous section), but 4 participants did so in this second part of the survey.

Secondly, as stated before, the majority of participants were likely a part of the researcher's personal communication field. Therefore, it is very likely that they would be like-minded and concerned about climate change. That the survey participants would have a shared concern about climate change may explain why the climate-related articles were chosen more often.

Looking at the number of participants who chose a climate-related article in each round reveals that, relative to the other rounds, a larger number of them selected a climate-related article in rounds 2, 4, 6 and 8 (See Fig. 5.16). The climate-related articles featured in these rounds correspond to a personal, food, environmental and national security frame, respectively. Interestingly, the personal, environmental, and national security frames corresponded to the articles that most participants selected in part 1 of the survey. This provides some evidence to suggest that these frames would be the most effective at catalysing (further) public engagement with climate-related articles.

At this point, it must be added that the findings depicted in Table 5.9 and summarised in Fig. 5.16 diverge from what was stated in expectation 9b. This was that the climate-related article employing a health security frame would be the one that participants would most likely select. Again, this divergence can be explained by the fact that participants were preoccupied with a range of issues (not just health-related). This, coupled with their preference for climate-related articles in general, could mean that they would be interested in how other issues are linked to or exacerbated by climate change.
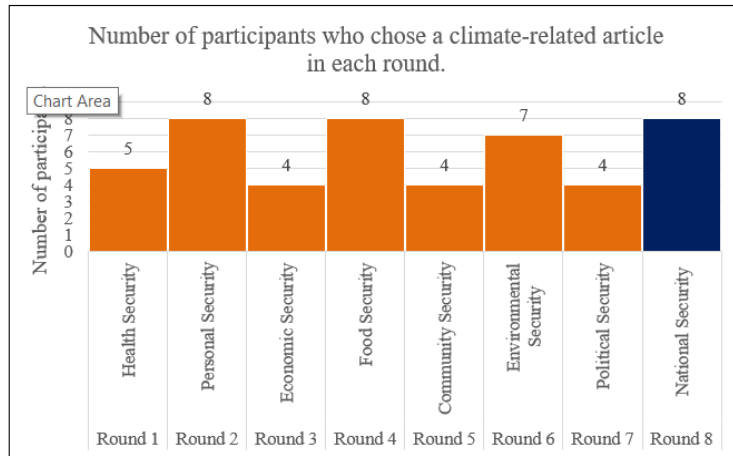
Figure 5.16: Number of participants who chose a climate-related article in each of the eight rounds of part 2 of the survey.

Fig 5.16 could also somewhat challenge what was stated in expectation 9a: that the climate-related articles employing a human security frame would be the one that participants would most likely select. To explain, although 40 of the 48 participants who chose a climate-related article, chose one employing a human security frame (orange), it must be noted that climate-related articles employing a human security frame were used in seven of the eight rounds[84]. Consequently, that participants chose an article employing a human security frame if and when they chose a climate-related article might be a reflection of the unequal number of climate-related articles employing a human and national security frame, respectively. Perhaps, then, this part of the survey could have benefited from more than eight rounds, with the additional rounds including climate-related articles that employed a national security frame, in general, and different sub-national-security frames in particular.

Ideally, in total, an equal number of climate-related articles employing a human and national security frame, respectively, should constitute the total number of climate-related articles shown to participants across rounds. So, if seven climate-related articles employing a human security frame were used in part 2 of the survey, then seven climate-related articles employing a national security frame should also be included. Altogether then, at the very least, part 2 of the survey should consist of 14 rounds. Designing the survey in this way could help eliminate the possibility that the difference in the number of participants who selected climate-related

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[84] As stated in section 5.4, this had to do with the fact that the survey was designed prior to substantive research and writing. As such, the researcher was not wholly knowledgeable about the possibility that different sub-national-security frames could exist and thus that there could be different ways print newspapers could present climate change as a threat to national security.

articles with a human security frame and those with a national security frame was a reflection of an imbalance in the number of articles shown, rather than a reflection of frame preference. Consequently, it would enable one to make a more informed statement about whether participants who chose climate-related articles from a list of distractor articles chose the ones that employed a human security frame more often than those employing a national security frame.

Overall, given issues with the survey's design, it is not possible to conclude that members of the public are more inclined to choose an article that employs a human security frame if, and when, they select a climate-related article from a list of other distractor articles. In this respect, the findings neither meet nor diverge from expectation 9a.

5.5. RO4: relevant targets, inferences and their limits, and recommendations

RO4: To consider the possible policy implications of the identified trends in the use of various securitisation frames in climate-related articles together with readers' responses to such articles.

- **Target 11:** to combine findings from the literature review with the results of the frame and content analyses (RO1) and survey (RO2 & 3), to make inferences about the possible future policy implications of South African newspapers' securitisation of climate change and to make recommendations to help print newspapers become (more) effective climate change communicators.

A finding discussed under Target 3 was that many climate-related articles published by the three newspaper outlets employed a broad securitisation frame. Of those articles, a human security frame was the sub-securitisation frame that was most frequently used. In this regard, three points from Chapter 4 should be noted:

1. The use of a broad securitisation frame could create a sense of urgency, thereby catalysing pro-environmental behaviour and climate action (including policy advocacy) by members of the public. In so doing, it could spur policy debate, decisions and actions "that probably would not otherwise have been undertaken" (Trombetta, 2011: 136).
2. Framing climate change as a human security issue calls forth a different set of policies than framing it as a threat to national security would (Oels, 2012); and, more specifically,
3. Framing climate change as a threat to human security places it at the top of the public policy-making agenda *whilst* producing less dangerous or perverse policies than those stemming from policy circles where climate change is framed as a national security threat/issue (ibid.).

The findings of the frame analysis conducted in this research project provide reason to believe that the manner in which climate change has been securitised and framed in South African newspapers is desirable. Theoretically, the frequent use of a human security frame in climate-related articles could help usher in policies that shift South Africa towards a more sustainable pathway and towards realising the aspirations highlighted in its NDP. This is all contingent, however, on the validity of the three premises above. In this regard, it should be borne in mind that the premises were shaped by empirical studies conducted in the EU and North America. As such, the statements made in terms of the policy implications of the securitisation of climate change in South African newspapers would benefit from context-specific research. More precisely, it would benefit from research into the securitisation of climate change in policy-making circles in South Africa and the type of policies it called forth, historically. The connections (if any) between the way climate change is securitised in newspapers and the way it is securitised and addressed in policymaking circles could also be investigated. Such investigations could also help reveal the extent to which it is viable to make the other assumptions upon which inferences about the policy implications of the media's framing of climate change rest. These assumptions are that:

1. The public is a key actor in the public policy-making process;
2. Public opinion shapes the actions of other actors in the policy-making process, e.g., politicians and political parties;
3. The media can have a significant influence on the public and public opinion apropos the frames it uses; and thus,
4. How the media frames specific issues (e.g., climate change) can affect the public policy-making process and resulting policy/policies.
5. Through its influence on the public, the media has at least some purchase on the public policy-making process and policy-making arena.

In light of points 3 and 4 above, it should once again be underscored that other factors, apart from frames, can influence the effects of an article or the internalisation of the message in an article. Indeed Boykoff (2008a) argues that "the amount of exposure and placement (front page or buried deep in the newspaper), as well as the use of headlines and photographs" (ibid., 14), can also affect the public's perception of an issue, e.g., climate change. Accordingly, investigations into, *inter alia*, the use and prevalence of such "technical devices" (Linström and Marais, 2012: 32) might also prove insightful. To be more specific, they could help gain better insights and support, or call into question, conclusions made in terms of the extent to which a particular frame, if found to be the most prevalent, could significantly affect public support, action or policy preference.

5.6. Concluding remarks

This chapter presented and discussed the findings of the empirical research undertaken. Moreover, it did so relative to the various research targets introduced in Chapter 1. Consequently, the conclusion of this chapter marks the fulfilment of research targets 1-9 and 11[85]. These targets had to be fulfilled before the broader research objectives (RO1-RO4) could be met. Hence the discussions in this chapter have also contributed to the realisation of RO1-RO4.

A detailed summary of the findings and limitations highlighted in this chapter with regards to RO1-RO4 can be found in Appendix 12. A more general summary of the findings of this research project, together with its limitations, are discussed in the ensuing chapter. Recommendations and the way forward for future research are also discussed in the next (concluding) chapter.

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[85] Recall that Target 10 (to investigate the policy implications of securitising climate change with reference to theory and previous studies) was fulfilled in Chapter 4.

Chapter 6: Conclusion(s), Reflection(s) and the Way Forward

"I'm no prophet. My job is making windows where there were once walls."

—*Michel Foucault*

6.1. Broad summary and overarching aim

In recent years, greater primacy has been accorded to climate change in political discourse and policy-making circles (e.g., Trombetta, 2008; Oels, 2012; Rodrigues De Brito, 2012), as well as popular, academic and mass media discourses (Boykoff & Roberts, 2007; Vogler, 2014; Schäfer & O'Neill, 2017). As climate change comes increasingly to occupy the collective consciousness, more frequent and varied attempts may be made to securitise climate change. Indeed, seeing that security issues are considered issues of high politics and that governments tend to "prioritise security matters" (Baylis & Wirtz, 2016: 2), the securitisation of climate change could catapult it to the top of policy agendas and "mobilise political attention and resources" (Vogler, 2014: 354) to tackle it. The role that the mass media can and has been playing in this regard should not be underestimated (Vultee, 2011).

The mass media is not a neutral purveyor of information; it sets the public agenda by not so much "telling people what to think but…telling its readers what to think *about*" (Cohen, 2016: 13 – *emphasis in original*). Moreover, by framing stories in specific ways, the mass media can manipulate how the public understands and interprets an issue or event (Entman, 1993). Be it in its own capacity or influenced by certain political actors, the mass media could – intentionally or otherwise – frame an issue (e.g., climate change) as a security threat. In so doing, it can convey a sense of urgency and catalyse pro-environmental behaviour (e.g., sustainable consumption patterns) (Boykoff & Roberts, 2007) and climate action (including advocacy and support for ambitious and constructive climate policies). Additionally, given that the public is central to the public policy-making process, the mass media, by framing something as a security threat, could influence how climate change is framed in policy circles, the type of policies supported in such circles and, ultimately, the type of policy responses that emerge from the process.

When climate change is securitised, different policy responses emerge depending on *how* it is securitised or, rather, what notion of security climate change is being portrayed as a threat to (McDonald, 2013). In the words of McDonald, "particular responses to climate change

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(and the actors articulating them) are enabled or constrained by the ways in which the relationship between security and climate change is understood" (ibid., 42). Thus, there is reason to believe that framing climate change as a threat to national security will catalyse the creation of a different set of policies than framing it as a threat to human security would. Supporting this is Oels' (2012) instantiation that "the articulation of climate change as an issue of human security could have different policy implications from the articulation of climate change as an issue of national security" (ibid., 192).

Apart from stating that different conceptualisations of security give rise to different policies, Oels' notes that "once security is redefined as human security…[it] propels sustainable development policies to the top of the policy agenda" (ibid., 190). Considering that policies geared towards sustainable development help tackle the underlying drivers of climate change and vulnerability (Díaz *et al.*, 2019) and, thus, bolster efforts to realise Agenda 2030 and the Sustainable Development Goals (SDGs), there is reason to believe that framing climate change as a threat to human security is more desirable than framing it as a threat to national security. This is further supported by findings that framing an issue like climate change as a national security threat could give rise to perverse and "counterproductive outcomes" (Oels, 2012: 195).

Taking the above-mentioned discussions as points of departure, this research project aimed to investigate the prevalence and possible policy implications of the use of national and human security frames in climate-related articles in South Africa's print newspapers. In so doing, it endeavoured to contribute to the shallow pool of literature dealing with an "under-researched phenomenon" (Schäfer *et al.*, 2016: 15) – the securitisation of climate change in the media[86].

6.1.1 Envisaged outcomes and objectives

To meet the overarching aim of investigating the prevalence and possible policy implications of the use of security frames in climate-related articles, this research project was geared towards:

- Assessing the prevalence of climate-related articles in South African newspapers and the extent to and manner in which they securitise climate change.

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[86] Recall, from Chapter 1, Schäfer *et al.'s* (2016) statements that "the relevant literature consists of theoretical accounts of such a 'securitization', and as most empirical studies on the matter focus on Western countries and/or supranational political bodies…it has been unclear whether this securitization can be found beyond institutionalized politics, in the broader public, and whether it extends beyond Western countries" (ibid., 14).

- Highlighting the possible policy implications of the manner in which South African newspaper outlets securitise climate change.
- Making recommendations, based on previous studies and the results of the survey and frame and content analyses, about specific actions that South African print newspapers can take to help ensure that they are effective climate change communicators and help usher in constructive climate policies.

Four broad research objectives, each of which consisted of research targets, were in service of the three envisaged outcomes stated above. The objectives were:

- To assess the prevalence of a broad securitisation frame, national security frame and human security frame in climate-related articles published by South Africa's print newspapers between 2012 and 2020 **(RO1)**.
- To investigate and evaluate South African readers' preferences for articles that framed climate change as a threat to national security versus ones that framed climate change as a threat to human security (including economic, food, health, environmental, personal, community and/or political security) **(RO2)**.
- To gauge the extent to which South African readers show a preference for climate-related articles (employing either a national security or human security frame) over articles concerning other topics **(RO3)**.
- To consider the possible policy implications of the identified trends in the use of various securitisation frames in climate-related articles together with readers' responses to such articles **(RO4)**.

Recall that RO2 and RO3 served to provide further insights and so supplement any findings under RO1. Specifically, they served to clarify the extent to which it could be assumed that a particular frame, if found to be the most prevalent, might significantly affect public support, action or policy preference. Moreover, they served to qualify any statements made in terms of the policy implications of the way climate change has been framed in South Africa's print newspapers. Such a qualification was necessary because, firstly, framing effects are contingent upon members of the public actually reading a climate-related article, and yet, the public may only read a climate-related article that employs a particular security frame. Secondly, the public may choose to read articles concerning other topics over ones concerning climate change.

6.1.2. Methods

In order to satisfy RO1, the researcher used "directed content analysis" (Hsieh & Shannon, 2005: 1281). As such, a codebook, informed by theory and the existing literature, had to be created prior to coding. Thus, to satisfy RO1, the researcher had to 'consult theory in the field of ISS and review existing frame definitions to help inform the creation of coding

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definitions for a securitisation, human security and national security frame' (this was Pre-requisite 1)[87]. Once the codebook was created, and the researcher downloaded and cleaned the relevant data (articles mentioning 'climate change' or 'global warming' published by *City Press*, the *Sunday Times* and the *Daily Sun* between 2012 and 2020), the researcher could move on to the next step. This step was to fulfil Pre-requisite 2, i.e., to obtain, code, and conduct frame and content analyses on climate-related articles (articles that either mention or are directly concerned with climate change) published by South African print newspapers.

In order to meet RO2 and RO3, the researcher had to fulfil Pre-requisite 3, which was to 'create and send out a survey designed to investigate the frame preferences of members of the public'. In this regard, the researcher designed and distributed a two-part survey using Qualtrics Survey Software. Part one of the survey was designed to investigate the extent to which members of the public were likely to select an article that framed climate change as a threat to national security over one that framed climate change as a threat to (dimensions of) human security (RO2). The second part of the survey was designed to investigate the extent to which members of the public were likely to select an article that framed climate change as either a threat to national security or (a dimension of) human security when faced with a choice between these articles and those pertaining to other topics (RO3).

The heading, subheading and lead paragraph of the articles used in both parts 1 and 2 of the survey were obtained from a preliminary search for articles that fully met the criteria below:

- The article was published by a South African newspaper that is printed in English and distributed nationally.
- The article is accessible through PressReader or SA Media.
- The article used a national security frame or (one or more of the seven aspects of) a human security frame when reporting on climate change.

Initially, the researcher intended to source the articles to be used in the two rounds of the first part of the survey from the pool of articles obtained and analysed to meet RO1. Given that the Ethics Committee wanted to see the final survey before permitting the researcher to commence with the research project as a whole, this was not possible. On account of this factor, not to mention other dimensions of, and challenges associated with, the research undertaken, the findings presented in Chapter 5 should only be extrapolated with extreme caution.

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[87] See Table 1.1 in Chapter 1.

6.2. Key findings, challenges and limitations

This section discusses some of the key findings of this project together with the dimensions of the research that would limit the extent to which the findings can be extrapolated. To this end, the challenges that the researcher faced whilst attempting to achieve the four ROs and three envisaged outcomes are also highlighted.

6.2.1 Key findings, challenges and limitations of research conducted to achieve outcome 1

- **Outcome 1:** to provide an assessment of the prevalence of climate-related articles in South African newspapers and the extent to and manner in which they securitise climate change.

One of the key findings of the research was that 0,367% of all articles published, between 2012 and 2020, by the three South African print newspapers analysed were climate-related, with only 0,118% being directly concerned with climate change. Thus, relative to the total number of articles published by the three print newspapers in the period concerned, climate-related articles were not very prevalent. Another key finding was that the advent of COVID-19 seems to have significantly impacted the number of climate-related articles published in 2020.

When interpreting and extrapolating the above results, it should be borne in mind that the researcher had to use a simple search string ("climate change OR global warming") to identify any climate-related articles published by the three newspaper outlets in question[88]. Given this limitation, it is possible that the search results did not include all the climate-related articles published by the respective newspaper outlets in the period concerned. As such, the results may not provide an accurate representation of the number of climate-related articles published. Nonetheless, given the finding that a meagre 0,367% of all articles published between 2012 and 2020 were climate-related, it is unlikely that a similar study employing a more comprehensive search string would have obtained significantly different results. Consequently, it could be concluded that climate-related articles were not prevalent in the newspaper issues published by *City Press*, the *Daily Sun* and the *Sunday Times* between 2012 and 2020. This conclusion is, of course, based on an analysis of the climate-related articles published by just three English-medium national newspapers, which are by no means representative of the publications that emerge from South Africa's diverse print-newspaper-

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[88] Recall from Chapter 2 that this was because the databases from whence the articles were sourced did not allow a more complex search string to be employed in the search field.

landscape. Therefore, the conclusion cannot be used to make more general remarks about the prevalence of climate-related articles in South African print newspapers as such.

Apart from the findings highlighted above, the following findings, in relation to Outcome 1 and RO1, expressly, are also noteworthy:

- ≈60% of climate-related articles employed a broad securitisation frame.
- The sub-securitisation frame that was most often used in climate-related articles was that of human security.
- The sub-human-security frame most frequently employed in climate-related articles was an environmental security frame with a specific focus on water security.
- Supporting Schmidt *et al.*'s (2013) findings, the reporting of climate change in the three South African print newspapers analysed occurred in waves or cycles, with peaks coinciding with the unfolding of noteworthy events and troughs coinciding with the occurrence of other non-climate-related events, e.g., the Oscar Pistorius trial (2014) and #FeesMustFall (2016).
- Interestingly, the employment of securitisation frames also occurs in waves or cycles, with peaks coinciding with the unfolding of noteworthy events.
- Contrary to Schäfer *et al.*'s (2016) finding that the use of a broad securitisation frame and human and national security sub-frames in climate-related articles published by South African newspapers was declining, it was discovered that the use of such frames has been increasing over time.
- Contrary to Schäfer *et al.*'s (2016) finding that a national security sub-frame is more prevalent in climate-related articles than a human security one, it was found that the increase, over time, in the use of a human security frame in climate-related articles was more pronounced than that of a national security frame.

In light of the last two bullet points, it is worthwhile interjecting to state that there are at least two possible reasons why this project's findings differ from those of Schäfer *et al.* (2016). The first reason would be that the researcher employed more comprehensive coding definitions to help identify various securitisation frames. The second reason would be that this project concerned itself with articles published during a period in which much more attention was being paid to the issue of climate change (see Chapter 5). Climate change might have received less attention in the period that Schäfer *et al.*'s study was concerned with (2006-2010).

The aforementioned reasons for the difference in this project's findings and those of Schäfer *et al.* (2016) point to the possibility that the findings of future studies may differ from both those of this research project and those of Schäfer *et al.* (2016), depending on the context in which the studies are carried out and on the coding definitions used to identify various securitisation frames. Regarding the latter, it must be stated that the coding definitions used in this research project, although more comprehensive than those used by Schäfer *et al.* (2016), could be

refined further. For instance, the search string used to identify securitisation language and, hence, a securitisation frame could be expanded (see Chapter 4).

The findings of future studies may also differ from those of this project, depending on the manner in which, firstly, the sample of articles are coded and, secondly, the frame analysis is carried out. In this research project, the researcher was the only one who coded and analysed the articles. Studies that have multiple persons coding and analysing the same sample of articles may indeed render different results. Moreover, by enabling a comparison of the codes that have been assigned to each article by different coders, such studies would allow something to be said of the reliability of the coding (Metag, 2016). Such studies would also help ensure that the frame(s) identified in any one article was/were recognised by others rather than being "a figment of a researcher's imagination" (Linström & Marais, 2012: 30). Lastly, studies that include coders other than the primary researcher may provide better insights as they rule out the possibility that the researcher, with an intimate knowledge of theory and the coding and frame definitions, applied codes too liberally or too strictly.

6.2.2 Key findings, challenges and limitations of research conducted to achieve outcome 2

- **Outcome 2:** to highlight the possible policy implications of the manner in which South African newspaper outlets securitise climate change.

Target 10 under RO4 was to investigate the policy implications of securitising climate change with reference to theory and previous studies. The investigation mentioned in Target 10 occurred in Chapter 4 and revealed the following:

- Framing climate change as a national security threat could give rise to perverse and "counterproductive outcomes" (Oels, 2012: 195).
- "[O]nce security is redefined as human security…[it] propels sustainable development policies to the top of the policy agenda" (ibid., 190).
- Framing climate change as a threat to human security is more desirable than framing it as a threat to national security.

These findings, coupled with the results associated with RO1, suggested that the way climate change has been framed by three of South Africa's newspaper outlets is desirable. To expand, the results associated with RO1 revealed that most climate-related articles published by the three newspaper outlets employed a broad securitisation frame. Moreover, of those articles, the sub-securitisation frame that was most frequently used was that of a human security frame. Hence, considering the findings of the investigation under Target 10, it was tentatively concluded that print newspapers' frequent use of a human security frame in climate-related

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articles could help usher in policies that shift South Africa towards a more sustainable pathway and towards realising the aspirations highlighted in its NDP.

The above conclusion was somewhat further supported by the results associated with RO2 and RO3, which revealed that members of the public were more likely to select articles framing climate change as a threat to human security than those framing it as a threat to national security. Furthermore, they revealed that members of the public were more likely to select articles framing climate change as a threat to human security when confronted with distractor stories. Assuming that persons usually pay more attention to, and are subsequently more likely to be affected by, the frame that resonates most with them (Feldman & Hart, 2018), the researcher preliminarily concluded[89] that a human security frame was the frame that resonated most with members of the public.

Comparing the results under RO2 and RO3 to those associated with RO1 indicated that the frame that resonated with members of the public and the frame most often employed by climate-related articles published in print newspapers were one and the same. It was thus inferred that the effects of the use of a human security frame on policy-making (i.e., the predicted policy implications of the use of a human security frame) could, indeed, materialise. Again, this was assuming, however, that:

1. The public is a key actor in the public policy-making process;
2. Public opinion shapes the actions of other actors in the policy-making process, e.g., politicians and political parties;
3. The media can have a significant influence on the public and public opinion apropos the frames it uses; and thus,
4. How the media frames specific issues (e.g., climate change) can affect the public-policy-making process and resulting policy/policies.
5. Through its influence on the public, the media has at least some purchase on the public policy-making process and policy-making arena.

In the face of Maseng's (2014) instantiation that, in South Africa, the public and other institutions such as the media seem to have limited power over policies given a supposed tendency of the African National Congress (ANC) to concentrate on party interests (ibid.), assumptions 1, 2, and 5 are somewhat tenuous.

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[89] The conclusions were only preliminary because the survey results were, as discussed in Chapter 5, not reliable given the small participant pool and its homogeneity, not to mention the flaws in the survey design.

Regarding assumptions 3 and 4 above, it should be underscored that other factors, apart from frames, can influence the effects of an article or the internalisation of the message in an article. Indeed, Boykoff (2008a) argues that "the amount of exposure and placement (front page or buried deep in the newspaper), as well as the use of headlines and photographs" (ibid., 14), can also affect the public's perception of climate change. Accordingly, investigations into, *inter alia*, the use and prevalence of such "technical devices" (Linström & Marais, 2012: 32) might also prove insightful. To be more specific, given that a human security frame is most frequently used in climate-related articles, an analysis of the technical devices used in these articles (e.g., page number, length and sources cited) can help qualify the extent to which this frame might significantly affect public support, action, or policy preferences.

To conclude this sub-section, the researcher wishes to underscore that although a human security frame was quite prevalent in climate-related articles, results under RO1 suggested that climate-related articles themselves were not prevalent. Therefore, the extent to which the three newspapers' securitisation of climate change could significantly affect behaviour, action, and policy support/preferences was constrained by the public's low exposure to climate change stories.

6.2.3 Key findings, challenges and limitations of research conducted to achieve outcome 3

- **Outcome 3:** to preliminarily recommend, based on previous studies and the results of the survey and frame and content analyses, specific actions that South African print newspapers can take to help ensure that they are effective climate change communicators and help usher in constructive climate policies.

Considering this project's findings that the most prevalent frame used in climate-related articles was that of a human security frame and that a human security frame could bolster support for, and give rise to, policies geared towards sustainable development, it can be assumed that the three print newspapers' framing/securitisation of climate change is desirable. Hence *City Press*, the *Daily Sun* and the *Sunday Times'* use of a human security frame, over a national security frame, in climate-related articles is to be encouraged. Additionally, moving forward, the more frequent use of a human security frame is recommended when it comes to climate change reporting by South Africa's print newspapers as such.

Regarding the sub-human-security and sub-national-security frames, it is recommended that print newspapers consider publishing more climate-related articles adopting a personal, food, environmental and national security (economy) frame. This recommendation is based on

the finding that these specific frames were employed in the articles that many survey participants selected in both parts one and two of the survey conducted. This finding provided evidence to suggest that the four specified frames would be the most effective at catalysing (further) public engagement with climate-related articles.

More generally, and in relation to the findings of the literature review in Chapter 3, it is also recommended that South African newspaper outlets:

- Report on mitigation and adaptation strategies that individual citizens can and are adopting to combat climate change.
- Emphasise the importance of individual actions (Hulme & Mahoney, 2010). This can be done by featuring more articles about local persons' small and everyday actions that are helping to tackle climate change.
- Make the content relevant to the local context, especially if the content is focused on the proceedings of a global event. This can be achieved by, for example, analysing what any agreements reached during a COP event would mean for locals (Rahman & Panday, 2016).

6.3. Final remarks

This research project sought to contribute to the shallow pool of literature dealing with an "under-researched phenomenon" (Schäfer *et al.*, 2016: 15) – the securitisation of climate change in the media. Not only did it highlight the relevance and importance of research dealing with the securitisation of climate change, but it also, in satisfying its four broad objectives, revealed some general trends with regards to climate reporting in South Africa. Furthermore, it made some inferences about the policy implications of the securitisation of climate change in South Africa's print newspapers. Nevertheless, on the whole, the research project gave rise to more questions than answers. Consequently, future studies would do well to improve, build upon, or go beyond the analysis presented. The former two endeavours could help further qualify the research project's findings and shed light upon them, i.e., help understand and interpret them better. In light of this, and by way of conclusion, a research agenda or list of research avenues worth pursuing is provided below.

Moving forward, future studies and research concerned with the same topics, themes and issues as this research project could:

- Compare how climate change is securitised in different provinces, across more newspaper outlets and/or different media (e.g., social media platforms, television and magazines).

- Investigate the specific micro and macro-scale factors that frustrate South African newspaper outlets' ability to fulfil the critical role they have to play in mobilising action to address pressing environmental issues such as climate change.
- Interview journalists and editors about climate coverage.
- Investigate newsroom practices that may inhibit effective climate communication.
- Investigate, analyse and evaluate training programmes aimed at narrowing journalists' knowledge and skills gap when it comes to climate-change-reporting.
- Investigate what language or stylistic devices employed in climate-related articles of South Africa's print newspapers can help promote public engagement with the issue.
- Analyse the technical devices used in climate-related articles.
- Investigate the events that outcompete climate change stories and, thusly, throw them off daily news agendas.
- Explore whether there are links between characteristics (e.g., age, nationality, gender, political orientation) of members of the public and their frame preference.
- Conduct (in instances where a survey is carried out to investigate frame preferences) focus group discussions with survey participants and have them elaborate on their article preferences between rounds so as to shed light on what aspects (e.g., language, tone, technical elements, and stylistic devices) of climate-related articles (other than the frame they employ) catch readers' attention.
- Investigate the securitisation of climate change in South Africa's policy-making circles and the type of policies it called forth, historically.
- Explore the connections (if any) between the way climate change is securitised in newspapers and the way it is securitised and addressed in policy-making circles.

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Appendices

Appendix 1: Example of a 'letter of intent and request' sent to a newspaper outlet.

To Whom it may concern,

My name is Yajna Sewmohan and I am currently enrolled in a Masters programme (MA Environment & Society) at the University of Pretoria. My research is concerned with the manner in which South African newspapers have framed climate change and how the public responds to such frames.

I would like to ask (a) if the Sunday Times has copies of its past *print* newspapers archived physically and/or electronically and if so, (b) whether the Sunday Times might consider providing me with temporary access to such archives for research purposes. I have provided a brief description of my research project below, so as to help you make an informed decision in terms of (b). Please note that I am willing and able to provide a more detailed description of my research project as well as any further information you may require, upon request.

As stated previously, my research is concerned with:

(1) the manner in which South African newspapers have framed climate change; and

(2) how the public responds to such frames.

In terms of (1), I intend to find articles that: were concerned with climate change, were published anywhere between 1998 and 2020 and were published nationally by South African print newspapers.

These articles will then be analysed using qualitative data analysis software (Atlas.Ti 9™) to help me more easily identify and keep track of the frames used, collectively, by the newspapers when discussing climate change.

In order to collect data pertaining to (2), I intend to, firstly, select a few articles – each article would have used a different frame to discuss climate change – and place ONLY their heading and lead paragraphs in a list **(the source of the article will not be shown to reduce potential bias)**. In the second instance, I shall recruit a small sample (n=20) of voluntary survey respondents to whom this list will be shown.

These respondents will then be asked to select which article – based on its heading and lead paragraph ONLY – they would be most inclined to read and to provide an explanation for their choice.

Seeing that researching (2) involves reproducing aspects of news article and showing them to third parties without explicitly mentioning which newspaper the articles originated from, I would also like to clarify whether (c) the news articles that I obtain from your archived

newspapers can indeed be used in the ways hitherto described and, if so, I would like to (d) request an official confirmation letter stating as much. At this point, I must add that I am willing to alter my research programme to ensure that it meets any requirements that the granting of permission to access and use your archived material might be contingent upon.

As a final comment, I want to reiterate that I intend to use articles from more than one nationally published newspaper. I am therefore in the process of sending a similar letter to other newspaper outlets.

Thank you for your time and assistance.

I look forward to your response.

Regards,

Yajna Sewmohan

MA (Environment & Society) Candidate |
Center for Environmental Studies |
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Senior Lecture | Faculty of Natural and Agricultural Sciences |
BA, BA (Hons) UP, MA (University of Sussex), PhD (UWC) |
nerhene.davis@up.ac.za |

Appendix 2: Example of a 'letter of intent and request' sent to a database.

To Whom it may concern,

My name is Yajna Sewmohan and I am currently enrolled in a Masters programme (MA Environment & Society) at the University of Pretoria. I hope to be able to use your database, SA Media, to help me carry out my research.

Both my reading of the terms and conditions of use stipulated on your site, and my mandate to prove that the data I use in my research is legally and ethically sourced, have led me to seek explicit permission to utilise the material obtained from SA Media for the purposes of my research. It would be greatly appreciated if you would consider providing such permission. Kindly find below a brief description of my research to aid you in your decision. Please note that I am willing and able to provide a more detailed description of my research project as well as any further information you may require, upon request.

My research is concerned with:

(1) the manner in which South African newspapers have framed climate change; and

(2) how the public responds to such frames.

In terms of (1), I intend to use SA Media and two other databases to obtain articles that: were concerned with climate change, were published anywhere between 1998 and 2020 and were published nationally by South African print newspapers.

These articles will then be analysed using qualitative data analysis software (Atlas.Ti 9™) to help me more easily identify and keep track of the frames used collectively by the newspapers when discussing climate change.

In order to collect data pertaining to (2), I intend to, firstly, select a few articles obtained from the databases – each article would ideally have used a different frame to discuss climate change – and place their heading and lead paragraphs in a list. In the second instance, I shall recruit a small sample (n=20) of voluntary survey respondents to whom this list will be shown.

These respondents will then be asked to select which article – based on its heading and lead paragraph ONLY – they would be most inclined to read and to provide an explanation for their choice. **(NB the source of the heading and lead paragraph will not be shown to reduce potential bias)**

- Seeing that researching (1) involves using software to help me identify and keep track of the frames, and;

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- Recognizing that researching (2) involves, reproducing some content from the articles obtained through SA Media and representing it to third parties,

I would, as previously stated, like to clarify whether the material (news articles) that I obtain from SA Media can indeed be used in the ways hitherto described and, if so, I would like to request an official confirmation letter, stating as much. At this point, I must add that I am willing to alter my research programme, if need be, to ensure that it meets any requirements that the granting of permission to use SAMedia's archived material – in the manner described – might be contingent upon.

As a final comment, I would like to reiterate that I intend to use material sourced from two other databases namely, PressReader and NewsBank, seeing that they also have archived articles published by various South African newspapers. I am therefore in the process of sending a similar letter to these databases.

Thank you for your time and consideration.

I look forward to your response.

Regards,

Yajna Sewmohan

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Appendix 3: Layout of Online Survey.

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

DEPARTMENT OF GEOGRAPHY, GEOINFORMATICS AND METEOROLOGY

Dear Prospective Research Participant,

You are here because you clicked a link on a page inviting you to participate in an anonymous survey (running from 28 April – 30 June 2021) that will inform a Masters research project.

Thank you for considering to be voluntary participant.

Before you formally volunteer to take part in this survey, you should fully understand what it involves and what you will be asked to do.

The information sheet attached to the invite you read, provided information to this effect. As such, it is strongly suggested that you read through the information sheet before proceeding. A copy of this information sheet can be found below.

Information_Sheet_MA_Research_Miss_Y_Sewmohan.pdf

Please proceed to the next page if you are already familiar with the content of the document above.

Next

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Consent Form

If, having read the information sheet, you agree to participate voluntarily in the study described, kindly click 'I agree, take me to the survey' to proceed to the survey.

Note that by clicking 'I agree, take me to the survey' you confirm that:

- You have been provided with information pertaining to the nature and purpose of the study as well as the risks and benefits of participating in the study.
- You have been provided with the contact details of the principal researcher.
- You are aware that you can contact the principal researcher should you have any queries or concerns in relation to the study, in general, and this survey, in particular.
- **You are between the ages of 25-49 years.**
- You are aware that any information derived from your responses (which will be wholly anonymous) might be used in an academic publication.
- You understand that you would need to finish the survey in a single seating.
- You know that you can withdraw from the study at any time.
- You understand that you will not be penalised in any way should you wish to withdraw from the study.
- You are participating willingly in this study.

Thank you for your time.

Yajna Sewmohan *(Principal Researcher)*
Email: ysewmohan@gmail.com / u15316913@tuks.co.za
Mobile: +27 79 363 2148

Nerhene Davis *(Supervisor)*
Tel: +27 12 420 2882
Email: Nerhene.Davis@up.ac.za

☐ I agree, take me to the survey

Next

Welcome to *Part One* of the survey you have agreed to participate in

Below you will find a list of headings, sub-headings and lead paragraphs corresponding to actual articles related to climate-change.

Please read through the list and **select the heading, sub-heading and lead paragraph** that corresponds to the news article you would be **most interested in reading further.**

Evolve or die: Time is running out for plants and animals

Conservationists focus on elephant and rhino poaching, but there's a far greater threat to all species and it's also caused by people

The temperature this summer regularly hovered above 40°C in Skukuza, the main camp in Kruger National Park, which is emerging from two years of drought. Hundreds of animals died in what park authorities say is an insight into the sorts of problems that will be brought on by climate change. That change could wipe out 60% of the species in the park.

— *Sipho Kings*

No fertile land means no food

Sparse resources could result in global food crisis

Climate change and an increasing population could trigger a global food crisis in the next half century as countries struggle for fertile land to grow crops and rear animals, scientists warned this week.

— *Ian Sample*

The first undeniable climate change deaths

In Japan, in 2018, more than 1 000 people died during an unprecedented heat wave. In 2019, scientists proved it would have been impossible without global warming

Temperatures were more than unusual. They were unprecedented. In fact, without climate change, they would have been impossible.

— *Daniel Merino*

Drought drives Karoo to collapse

Farms abandoned, jobs lost in parched Northern Cape.

Commercial agriculture is collapsing in the Karoo due to a severe and prolonged drought, leaving some farmers with no option but to abandon their farms.

— *Delme Cupido & Tristen Taylor*

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Climate change fuels conflict

Control of increasingly scarce water is being used by armed groups to challenge central governments, causing untold suffering to civilians.

The Tabqa Dam in northern Syria brings green and life to an area that would otherwise be a desert. Its water supplies about five million people and 20% of that country's electricity. Six times the size of the Vaal Dam, Tabqa is also at the heart of a new type of warfare.

— Sipho Kings

Intense heat will drive migration

Climate refugees are already a reality. In Syria, a climate-exacerbated drought led to the migration of thousands of farmers into cities. This largely drove that country's revolution and mass migration.

— Sipho Kings

Ancient ways in deep water

Climate change is affecting the annual Kuomboka ceremony of the Lozi people of western Zambia - and their way of life, writes Nicole Johnston

As the temperature dips and we slip into winter, most of us adapt by putting on an extra jersey, stocking up on soup and carrying on as usual.

— Nicole Johnston

Water wars

When it comes to the Nile, it's not just climate change that Egypt is worried about — it's also conflict.

The construction of the enormous Grand Ethiopian Renaissance Dam has heightened tensions between Egypt and Ethiopia, with Egypt repeatedly threatening to go to war if Ethiopia interferes with its precious Nile water.

— Simon Allison

Next

Looking at the heading, sub-heading and lead paragraph you chose, what would you say is / are the main reason(s) for your choice?

Note: *You may select up to four options below (this does not mean, however, that it is necessary to choose four options - one is sufficient).*

☐ The heading, sub-heading and lead paragraph are related to my field of work/expertise

☐ The heading, sub-heading and lead paragraph are related to a specific topic that I am interested in
  - Kindly specify the topic in the space below

☐ The heading, sub-heading and lead paragraph are related to an issue that I and/or my community are directly affected by
  - Kindly specify the issue in the space below

☐ The heading, sub-heading and lead paragraph are related to an issue that I am not directly affected by, but which worries me
  - Kindly specify the issue in the space below

☐ The heading intrigued me
  - Kindly specify the idea, word, phrase etc. that was intriguing in the space below
    ----

☐ The sub-heading intrigued me
  - Kindly specify the idea, word, phrase etc. that was intriguing in the space below
    ----

☐ The lead paragraph intrigued me
  - Kindly specify the idea, word, phrase etc. that was intriguing in the space below
    ----

☐ Other
  - Please specify in the space below

Next

Below you will, again, find a list of headings, sub-headings and lead paragraphs corresponding to actual articles related to climate-change.

Please read through the list and **select the heading, sub-heading and lead paragraph** that corresponds to the news article you would be **most interested in reading further.**

> ## Under the weather
>
> *As the conflict in Darfur spreads, Julian Borger investigates the origins of what is being seen as the world's first climate change war*
>
> In the relief camps scattered around the Chad-Sudan border, the refugees from Darfur tell the same story of an ancient, shared way of life catastrophically lost.
>
> — Julian Borger

> ## Climate change cuts SA's GDP by 10%
>
> Floods. Droughts. Wildfires. Cyclones. Extreme weather events are making life for everyone more difficult, expensive and dangerous. This is the reality of a world where carbon emissions are driving climate breakdown. But it is a reality that is not being fairly shared.
>
> — Sipho Kings

> ## Violence increases as climate heats up
>
> Minor changes in temperature and climate are strongly linked to increases in violence and conflict, according to a new study.
>
> — Larry Elliott & Ashley Seager

> ## 'Kung fu' nuns cycle for change
>
> *After facing the consequences of climate crisis in their own villages, the nuns started travelling across Nepal and India with two strong messages: Protect the environment and empower women.*
>
> In 2015, when an earthquake hit Nepal, killing 9 000 people, women started to disappear. The survivors, who thought themselves lucky, soon found themselves without much choice but to trust the promises of overseas work and education, turning many into victims of trafficking.
>
> — Adrija Bose

> ## Adapt or die, warns UN report
>
> *Climate change is undermining international efforts to combat poverty*
>
> The human rights of the world's poorest people will be violated unless developed countries accept the need for drastic and immediate steps to prevent global warming from triggering dangerous climate change, the United Nations warned this week.
>
> — *Larry Elliott & Ashley Seager*

> ## Climate change is also a health crisis
>
> The climate crisis is a health crisis. The same emissions that cause global warming are largely responsible for polluting the air we breathe, causing heart disease, stroke, lung cancer and infections.
>
> — *Maria Neira*

> ## Food insecurity rising in Africa
>
> *The continent's farmers have to become more resilient to survive changing climate patterns and extreme weather events*
>
> A third of all people living in sub-Saharan Africa face severe food insecurity. They do not have enough money, or the resources to grow food, and regularly go for more than a day without food.
>
> — *Sipho Kings*

> ## Water usage lessons from Namibia
>
> *In semi-arid Southern Africa, water supply in rural areas is precarious and climate change will make the situation more severe. In Namibia, the national government has piped water to many remote villages and put them in charge of distribution and payment.*
>
> Every morning, Maria Petrus* needs to be at the communal water tap in her village in Onesi constituency, in northern Namibia.
>
> — *Leonie Joubert*

Next

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Looking at the heading, sub-heading and lead paragraph you chose, what would you say is / are the main reason(s) for your choice?

Note: *You may select up to four options below (this does not mean, however, that it is necessary to choose four options - one is sufficient).*

☐ The heading, sub-heading and lead paragraph are related to my field of work/expertise

☐ The heading, sub-heading and lead paragraph are related to a specific topic that I am interested in
  - Kindly specify the topic in the space below

☐ The heading, sub-heading and lead paragraph are related to an issue that I and/or my community are directly affected by
  - Kindly specify the issue in the space below

☐ The heading, sub-heading and lead paragraph are related to an issue that I am not directly affected by, but which worries me
  - Kindly specify the issue in the space below

☐ The heading intrigued me
  - Kindly specify the idea, word, phrase etc. that was intriguing in the space below
    ----

☐ The sub-heading intrigued me
  - Kindly specify the idea, word, phrase etc. that was intriguing in the space below
    ----

☐ The lead paragraph intrigued me
  - Kindly specify the idea, word, phrase etc. that was intriguing in the space below
    ----

☐ Other
  - Please specify in the space below

> Next

Welcome to *Part Two* of the survey

Below is a list of headings and sub-headings of actual news articles.

Kindly **skim** through the list and then **select the heading and sub-heading** that corresponds to the news article you would be **most inclined to read in full**.

Once you have made your selection, proceed to the next page. There you shall find a new list of headings and sub-headings.

There will be 8 pages in total.

Please continue to **skim** through the text on each page and **select the heading and sub-heading** that corresponds to the article you would most likely want to read further.

Note: *the time spent on each page shall be recorded.*

Page 1

"The first undeniable climate change deaths"

"In Japan, in 2018, more than 1 000 people died during an unprecedented heat wave. In 2019, scientists proved it would have been impossible without global warming".

Daniel Merino

"Ministers to tighten their Gucci belts"

"New handbook cuts perks for travel, cars and other luxuries".

Qaanitah Hunter

"Middle class feels the pinch"

"Second and third jobs become common as living standard drops".

Graeme Hosken

"Nine oncologists for half of SA?"

"Limpopo and Mpumalanga are without radiation oncologists and a lone specialist in North West caters for 3.7 million people".

Joan van Dyk

"Five of the best hiking trails in Mpumalanga"

Bridget Langer

"Women harvest fruits of abuse"

"Violence against women on farms and in farming towns, usually by their partners, is under-reported…"

Lester Kiewit

"Mozambique's faceless insurgency "

"Rumours outweigh facts in beleaguered Cabo Delgado province".

Simon Allison

Page 2

"Climate change fuels conflict"

"Control of increasingly scarce water is being used by armed groups to challenge central governments, causing untold suffering to civilians".

Sipho Kings

"Fikile has a daring plan for taxis"

"The transport minister presented to the ANC's top body a proposal to establish a bank for taxi operators and to subsidise the industry".

Thanduxolo Jika & MG Correspondent

"SA banks battle it out for scarce IT skills"

Emma Rumney & Naledi Mashishi

"Less judgement through goggles?"

"South Africa's health nurses are infamous for having bad attitudes. Could a pair of goggles help change their ways?"

Nelisiwe Msomi

"Financially fit in eight months"

"Tumi's experience proves that it is possible to get into financial shape in less than a year. But it requires discipline…"

Maya Fisher-French

"Billions spent, and a boy has died, but Giyani's taps are still dry"

"It has been five years since a bulk water supply project was started in the Limpopo Bushveld but people living in more than 50 villages still don't have water…"

Athandiwe Saba

"Flashy façade hides abuse, poverty"

"Equatorial Guinea spends its oil revenue on prestige projects and not on health and education".

Tom Collins

Page 3

"Adapt or die, warns UN report"

"Climate change is undermining international efforts to combat poverty".

Larry Elliott & Ashley Seager

"An untold massacre"

"Thousands of women and girls have been murdered in Guatemala — and the toll is still rising. Yet the killers are rarely brought to justice…"

Jo Tuckman

"Twenty-three people live in a two-bedroom flat in Eldos"

Caroline Vakil & Govan Whittles

"Vegan friendly spots to dine"

Ondela Mlandu

"The gospel of shame and misinformation"

"Are faith-based NGOs breaking the law when they refuse to give women information on where to terminate their pregnancies?"

Pontsho Pilane

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"Vital flow of remittances plummets"

"Money sent home by migrant workers in SA fell about 80% in April after the hard lockdown".

Tshegofatso Mathe

"ANC starts up its engine for 2021 race"

"The party seems to have abandoned plans to delay municipal polls as branches shift to election mode".

Paddy Harper

Page 4

"Food insecurity rising in Africa"

"The continent's farmers have to become more resilient to survive changing climate patterns and extreme weather events".

Sipho Kings

"How the SAPS was captured for R100 mil"

"The family-run syndicate behind the alleged scam may have looted even more, as much as R1-billion".

Khaya Koko

"Crazy-rich Africans fear instability"

"The Standard Bank's wealth report for Africa for 2020 shows that the continent's wealthiest individuals worry about what impact volatile political environments will have on their wealth"

Thando Maeko

"Pandemic puts focus on universal healthcare"

"NHI seen as a critical, says Mkhize".

Amanda Khoza

"Republished"

"The 1980s anthology of ANC women's poetry has recently been reissued. Its initial publication spoke to the role of culture in fostering revolution".

Uhuru Phalafala

"Bridging SA's scarce skills gaps"

"Education needs to meet the skills shortages employers are grappling with".

Tracy Burrows

"EU and China in a race for Africa"

"There is much talk about co-operation and partnerships but, in reality, there are few concrete examples".

Tessa Fo

Page 5

"Ancient ways in deep water"

"Climate change is affecting the annual Kuomboka ceremony of the Lozi people of western Zambia - and their way of life..."

Nicole Johnston

"Sisulu evicts housing bosses"

"Two officials have been fired for not delivering adequate homes for the government's COVID-19 shack de-densification project".

Paddy Harper

"Covid caution infects investors"

"The pandemic has forced some companies to cancel or pause capital expenditure, jeopardising long-term economic growth".

Sarah Smit

"Stigma causes avoidable deaths"

"Donors are reluctant to give bone marrow because of the myth that regenerative stem cells are body parts".

Chris Bateman

"Rasta, father of Art Comedy"

"In theorising his oeuvre, it seems that the 'people's painter' is most likely working in a new mode".

Lehlohonolo Peega

"Sex workers: Shocking rate of assaults by the police"

"Workers tell of being tortured, including being forced to swallow used condoms and being beaten with sjamboks".

Pontsho Pilane

"UN dithers over Rohingya genocide"

"Such a definition would spark international action, but even refugee status is not being granted".

Michael Schmidt

Page 6

"Water usage lessons from Namibia"

"In semi-arid Southern Africa, water supply in rural areas is precarious and climate change will make the situation more severe…"

Leonie Joubert

"Fight over chief justice's Israel comments grows"

Niren Tolsi

"Streaming killed the Musica star"

"The rise of streaming music platforms spelled the end for the last music chain store standing, but music enthusiast say vinyl isn't dead yet"

Tshegofatso Mathe

"Healthy and under 60? You face longest wait for vaccine"

"Government still committed to phased rollout despite delays, says Mkhize".

Penwell Dlamini

"Musician at heart Msizi James just 'fell into radio'"

"Winning presenting competition got former Idols started, now he's on 947".

Emmanuel Tjiya

"Quit whining and work for racial diversity in sport"

Andy Capostagno

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"Bitcoin booms in Nigeria as naira flags"

Segun Olakoyenikan

"Intense heat will drive migration"

"Climate refugees are already a reality. In Syria, a climate-exacerbated drought led to the migration of thousands of farmers into cities. This largely drove that country's revolution and mass migration".

Sipho Kings

"Jobs issue plagues green energy"

"Unions say renewables will cause unemployment but the state disagrees and the mines will soon close".

Tebogo Tshwane

"New hope for 25% of HIV-exposed but uninfected children"

"Fresh study hopes to determine why these SA youngsters have poorer health outcomes than their unexposed peers".

Sipokazi Fokazi

"How local hip-hop artists are overtaking traditional media"

"Artist-run platforms are overtaking traditional media, but what does this mean for a critical approach?"

Sabelo Mkhabela

"NPA unravels corruption within its senior ranks"

"Provincial head charged with bribery, corruption".

Lindile Sifile

"Activists warn of Covid profiteering"

"Big Pharma is already showing signs of putting revenue ahead of saving lives, according to experts".

Pontsho Pilane

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"Kibera's 'flying toilets' flushed out"

Peepoo bags and drop-off points give those living in Nairobi's shacks a hygienic and safe solution to dealing with human waste

Cyrus Kinyungu

"Climate change cuts SA's GDP by 10%"

Sipho Kings

"Economy: Stuck in political mud"

"The ANC can't take hard decisions about the economy and other parties don't need to because they won't win".

Natasha Marrian

"Rollout plan needs shot(s) in the arm"

"Big business eager and itching to help state vaccinate 7 million by end of June as clock ticks towards year-end deadline to give 67% of the population the jab".

Isaac Mahlangu & Lindile Sifile

"Are DIY sugar waxes and chlorophyll drinks good for your skin?"

"Dermatologist talks on benefits and dangers of home beauty remedies".

Londiwe Dlomo

"ANC step-aside ultimatum on shaky ground"

"Backtracking on its rule could weaken battered ruling party".

Siviwe Feketha

"'Weapons' at strikes still a sticking point"

"An upcoming CCMA matter will consider whether workers carrying sticks during strike action is an act of intimidation or a call for unity".

Sarah Smit

"Nollywood demonises queer folk"

"Nigeria's legislation prohibits same-sex marriages and the film industry helps to fuel sometimes violent homophobic attacks".

Vincent Desmond

Next

Your response has been recorded.

Thank you for taking the time to participate in this study.

Please contact the principal researcher using the details below, should you:

- ❖ have any queries or suggestions
- ❖ wish to receive a summary of the findings of this study
- ❖ wish to receive a fully referenced list of the news articles used in this survey

Principal Researcher: Yajna Sewmohan
Email: ysewmohan@gmail.com / u15316913@tuks.co.za
Mobile: +27 79 363 2148
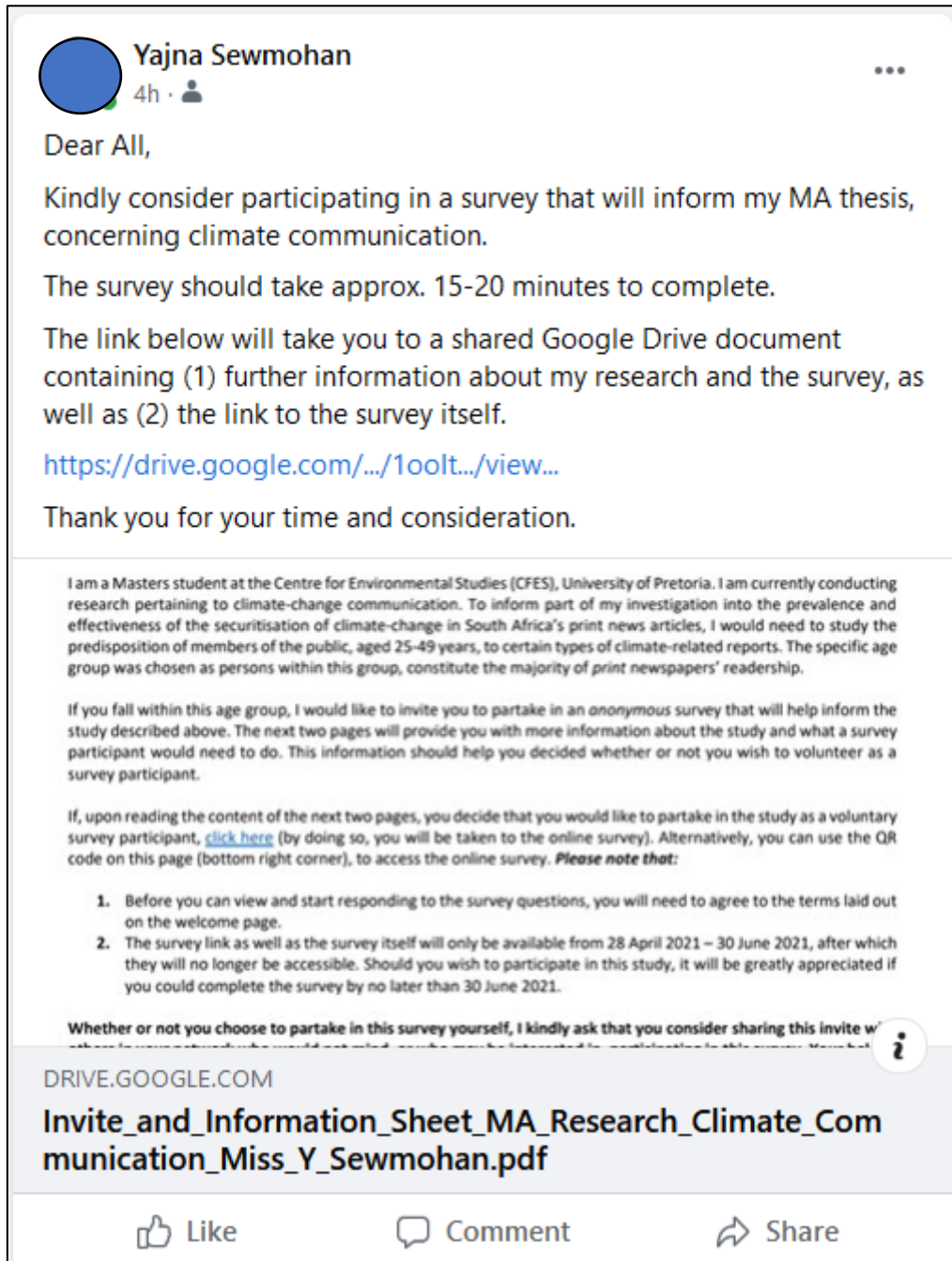
Thank you once more for your time.

Have a great week further.

Appendix 4: Researcher's Facebook post, asking friends and colleagues to consider partaking in a survey for research purposes.

Appendix 5: Survey invite and information sheet.

Good day,

I am a Masters student at the Centre for Environmental Studies (CFES), University of Pretoria. I am currently conducting research pertaining to climate-change communication. To inform part of my investigation into the prevalence and effectiveness of the securitisation of climate-change in South Africa's print news articles, I would need to study the predisposition of members of the public, aged 25-49 years, to certain types of climate-related reports. The specific age group was chosen as persons within this group, constitute the majority of *print* newspapers' readership.

If you fall within this age group, I would like to invite you to partake in an *anonymous* survey that will help inform the study described above. The next two pages will provide you with more information about the study and what a survey participant would need to do. This information should help you decided whether or not you wish to volunteer as a survey participant.

If, upon reading the content of the next two pages, you decide that you would like to partake in the study as a voluntary survey participant, click here (by doing so, you will be taken to the online survey). Alternatively, you can use the QR code on this page (bottom right corner), to access the online survey. ***Please note that:***

1. Before you can view and start responding to the survey questions, you will need to agree to the terms laid out on the welcome page.
2. The survey link as well as the survey itself will only be available from 28 April 2021 – 30 June 2021, after which they will no longer be accessible. Should you wish to participate in this study, it will be greatly appreciated if you could complete the survey by no later than 30 June 2021.

Whether or not you choose to partake in this survey yourself, I kindly ask that you consider sharing this invite with others in your network who would not mind, or who may be interested in, participating in this survey. Your help in this regard would be invaluable.

Thank you for your time and consideration.

Kind regards,

Yajna Sewmohan
MA Candidate | Environment & Society
University of Pretoria

Mobile: +27 79 363 2148
Email: ysewmohan@gmail.com OR
u15316913@tuks.co.za

Information Sheet

Project Title: The Prevalence and Possible Policy Implications of the use of National and Human Security Frames in Climate-Change-Related Reports in South Africa's Print Newspapers
Researcher: Miss Y Sewmohan
Supervisor: Dr NC Davis
Degree: MA (Environment & Society)

The nature and purpose of the study

The survey you will be asked to complete will help inform a Masters research project concerned with climate change communication. One of the aims of the project is to investigate the type of climate-change-related newspaper articles that are most likely to be read by persons aged 25-49 years. Such information may help shed a light on the type(s) of climate-related articles that are most likely to encourage pro-environmental behaviour and climate action.

Given the above, it goes to say that, although you will *not* receive any compensation for your participation in this study, the information you voluntarily provide could help the principal researcher gain valuable insight into the type of climate change reporting that is needed to:

- help raise (further) awareness about climate change, and
- mobilise public support for climate action and green policies.

Description of the survey and what will be expected from participants

The survey you will be asked to complete will take a maximum of 20 minutes. The survey consists of two parts.

In *Part one*:
- You will be shown a list of headings, sub-headings and lead paragraphs from actual news articles pertaining to climate change.
- You will be asked to skim through the list and select the heading, sub-heading and lead paragraph that corresponds to the article that you will be most inclined to read in full.
- Following this, you will be asked a couple of questions regarding your choice of article.

In *Part two*:
- You will be presented with the heading and sub-heading of numerous articles.
- You will be asked to skim through and select the heading and sub-heading that correspond to the article that you will be most inclined to read in full.

[Proceed to the next page]

Yajna Sewmohan | +27 79 363 2148
MA Candidate | Environment & Society
ysewmohan@gmail.com | u15316913@tuks.co.za

Additional Information

You will not incur any costs whilst partaking in this study. Moreover, there is no foreseeable discomfort or risk associated with this study. If for any reason, you feel that any of the questions are too sensitive for you to answer, you may skip them. Should you find any question offensive in anyway or experience any discomfort as a direct result of the survey, you may withdraw from the survey session and/or the study as a whole, without any consequences. In this event, you are also urged to contact the researcher and/or her supervisor immediately using the details provided below:

Yajna Sewmohan *(Principal Researcher)*
Mobile: +27 79 363 2148
Email: ysewmohan@gmail.com OR
u15316913@tuks.co.za

Nerhene Davis *(Supervisor)*
Tel: +27 12 420 2882
*Email: Nerhene.Davis@up.ac.za*

Finally, apart from confirming that you are between the ages of 25-49 years, you will not be asked to provide *any* personal information; this survey is completely anonymous. Therefore, in no way will the researcher be able to identify you as a participant in any publication that comes from this study.

- END -

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ysewmohan@gmail.com | u15316913@tuks.co.za

Appendix 6: Researcher's WhatsApp status in which friends and colleagues were asked to consider partaking in a survey for research purposes.
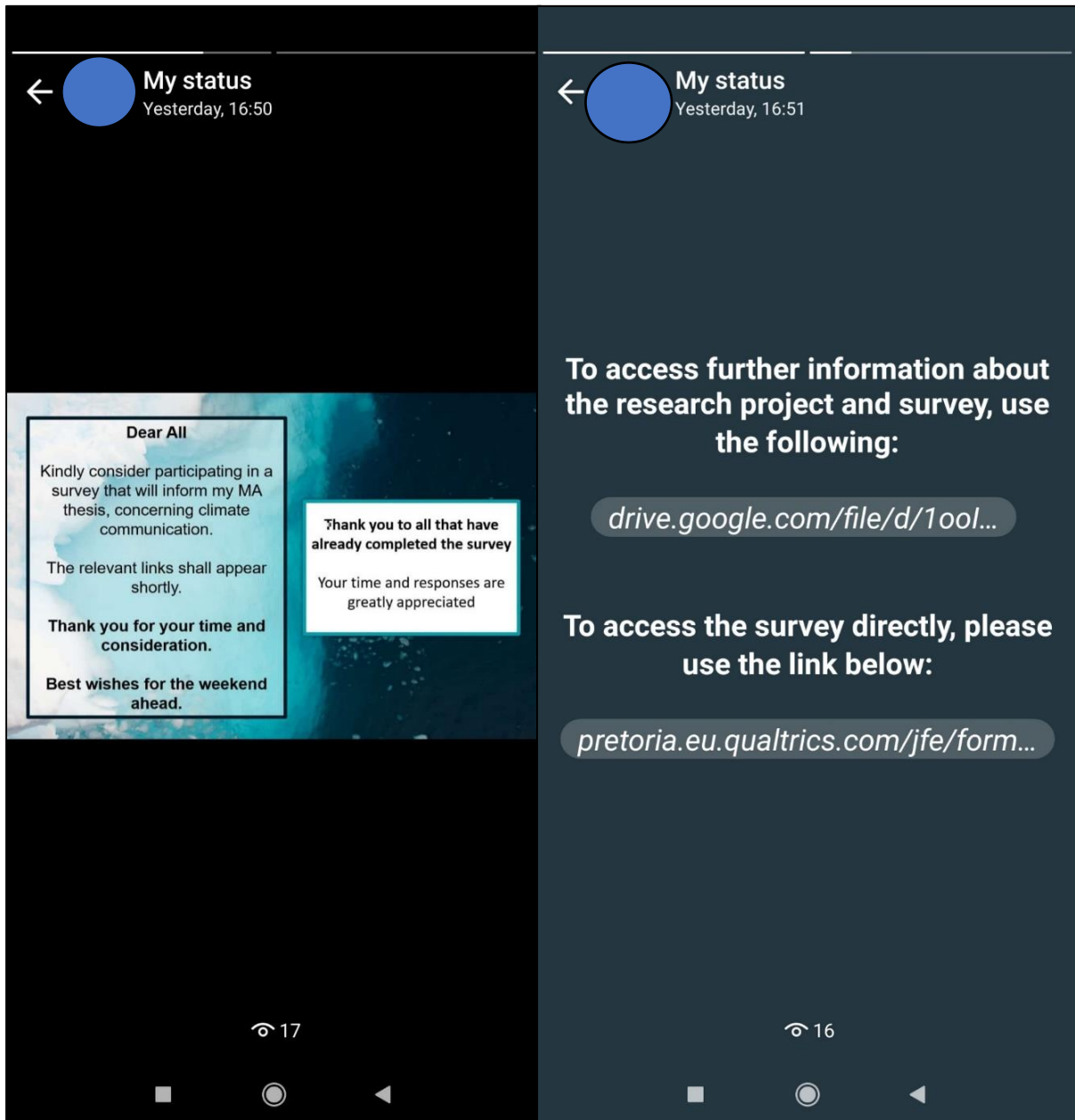
Appendix 7: Consent form.

Consent Form

If, having read the information sheet, you agree to participate voluntarily in the study described, kindly click 'I agree, take me to the survey' to proceed to the survey.

Note that by clicking 'I agree, take me to the survey' you confirm that:

- You have been provided with information pertaining to the nature and purpose of the study as well as the risks and benefits of participating in the study.
- You have been provided with the contact details of the principal researcher.
- You are aware that you can contact the principal researcher should you have any queries or concerns in relation to the study, in general, and this survey, in particular.
- **You are between the ages of 25-49 years.**
- You are aware that any information derived from your responses (which will be wholly anonymous) might be used in an academic publication.
- You understand that you would need to finish the survey in a single seating.
- You know that you can withdraw from the study at any time.
- You understand that you will not be penalised in any way should you wish to withdraw from the study.
- You are participating willingly in this study.

Thank you for your time.

Yajna Sewmohan *(Principal Researcher)*
Email: ysewmohan@gmail.com / u15316913@tuks.co.za
Mobile: +27 79 363 2148

Nerhene Davis *(Supervisor)*
Tel: +27 12 420 2882
Email: Nerhene.Davis@up.ac.za

☐ I agree, take me to the survey   Next

Appendix 8:   Predefined variables in SPSS – informed by the designed survey – to make data capturing easier.

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	Survey_ID	Numeric	8	2	Survey Number	None	None	8	Right	Nominal	Input
2	Survey_Compl	Numeric	8	0	Was the survey completed	{0, No}...	None	11	Right	Nominal	Input
3	Date_Compl	Date	10	0	What was the date on which the survey was completed?	None	None	10	Right	Scale	Input
4	Time_Start	Date	8	0	At what time did the respondent access the survey?	None	None	12	Right	Scale	Input
5	Time_Spent	Numeric	8	2	How long (sec) did the respondent take to complete the survey?	None	None	10	Right	Scale	Input
6	P1_Q1a	Numeric	8	2	Frame chosen for Part 1 Q1	{1.00, Enviro...	None	8	Right	Nominal	Input
7	P1_Q1b	Numeric	8	2	Reason for choosing article in Q1	{1.00, Field ...	None	8	Right	Nominal	Input
8	P1_Q1c	String	8	0	Elaboration or Comment	None	None	8	Left	Nominal	Input
9	P1_Q2a	Numeric	8	2	Frame chosen for Part 1 Q2	{1.00, Enviro...	None	8	Right	Nominal	Input
10	P1_Q2b	Numeric	8	2	Reason for choosing article in Q1	{1.00, Field ...	None	8	Right	Nominal	Input
11	P1_Q2c	String	8	0	Elaboration or Comment	None	None	8	Left	Nominal	Input
12	P2_Q1a	Numeric	8	2	What was the topic of the article the participant selected?	{1.00, Clima...	None	8	Right	Nominal	Input
13	P2_Q1b	Numeric	8	2	How long (sec) did the respondent spend on the page?	None	None	8	Right	Scale	Input
14	P2_Q2a	Numeric	8	2	What was the topic of the article the participant selected?	{1.00, Clima...	None	8	Right	Nominal	Input
15	P2_Q2b	Numeric	8	2	How long (sec) did the respondent spend on the page?	None	None	8	Right	Scale	Input
16	P2_Q3a	Numeric	8	2	What was the topic of the article the participant selected?	{1.00, Clima...	None	8	Right	Nominal	Input
17	P2_Q3b	Numeric	8	2	How long (sec) did the respondent spend on the page?	None	None	8	Right	Scale	Input
18	P2_Q4a	Numeric	8	2	What was the topic of the article the participant selected?	{1.00, Clima...	None	8	Right	Nominal	Input
19	P2_Q4b	Numeric	8	2	How long (sec) did the respondent spend on the page?	None	None	8	Right	Scale	Input
20	P2_Q5a	Numeric	8	2	What was the topic of the article the participant selected?	{1.00, Clima...	None	8	Right	Nominal	Input
21	P2_Q5b	Numeric	8	2	How long (sec) did the respondent spend on the page?	None	None	8	Right	Scale	Input
22	P2_Q6a	Numeric	8	2	What was the topic of the article the participant selected?	{1.00, Clima...	None	8	Right	Nominal	Input
23	P2_Q6b	Numeric	8	2	How long (sec) did the respondent spend on the page?	None	None	8	Right	Scale	Input
24	P2_Q7a	Numeric	8	2	What was the topic of the article the participant selected?	{1.00, Clima...	None	8	Right	Nominal	Input
25	P2_Q7b	Numeric	8	2	How long (sec) did the respondent spend on the page?	None	None	8	Right	Scale	Input
26	P2_Q8a	Numeric	8	2	What was the topic of the article the participant selected?	{1.00, Clima...	None	8	Right	Nominal	Input
27	P2_Q8b	Numeric	8	2	How long (sec) did the respondent spend on the page?	None	None	8	Right	Scale	Input

Appendix 9: The code sheet used to code individual newspaper articles.

Code Sheet
General Information

1. NEWSPAPER (*choose one*):
   a. City Press
   b. Daily Sun
   c. Sunday Times

2. SECTION THAT THE ARTICLE APPEARS IN:
   a. General News
   b. Business Supplement
   c. Other (*please specify*)

3. TYPE OF ARTICLE:
   a. News
   b. Editorial
   c. Opinion
   d. Other (*please specify*)

4. HEADING: _____

5. SUB-HEADING: _____

6. DATE OF PUBLICATION: _____

7. AUTHOR: _____

8. AUTHOR DESCRIPTION (*if opinion piece*): _____

9. SECOND-PARTY CONTENT:
   A) Yes _____ B) No _____

10. IF THE RESPONSE TO Q9 IS 'YES', FROM WHERE DID THE ARTICLE ORIGINATE?
    a. Reuters
    b. The Guardian
    c. Other (*please specify*)

Frames

11. *HAS SECURITISATION LANGUAGE BEEN EMPLOYED? (Y/N)*

12. WHICH OF THE FOLLOWING FRAMES ARE EMPLOYED IN THE ARTICLE?

   a. National Security
   b. Human Security
      i. Economic Security
      ii. Personal Security
      iii. Political Security
      iv. Environmental Security
      v. Food Security
      vi. Health Security
      vii. Community Security

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Appendix 10: The codebook referenced whilst completing the code sheet for each newspaper article.

Code Book

1. NEWSPAPER

Select **A** from the drop-down menu if the article came from **City Press**
Select **B** from the drop-down menu if the article came from the **Daily Sun**
Select **C** from the drop-down menu if the article came from the **Sunday Times**

2. SECTION THAT THE ARTICLE APPEARS IN

Select **A** from the drop-down menu if the article came from the **General News Section**
Select **B** from the drop-down menu if the article came from the **Business Supplement**
Select **C** from the drop-down menu if the article came from a **different section** of the newspaper, and specify the section's name.

3. TYPE OF ARTICLE

Select **A** from the drop-down menu if the article is a **News Article**
Select **B** from the drop-down menu if the article is an **Editorial**
Select **C** from the drop-down menu if the article is an **Opinion piece / Op-Ed**
Note: Some op-eds can be identified by the fact that a sentence is provided at the beginning/end of the article, describing the background of the article's author.

Select **D** from the drop-down menu if none of the options above apply, and then specify the type of article you have read.

4. HEADING

Copy and paste the *entire* heading of the article
Identifying the heading: the heading is usually distinguishable from the rest of the article. The heading is often in bold and/or the font is larger than the text in the article's main body.

5. SUB-HEADING

Copy and paste the *entire* heading of the article
Identifying the sub-heading: the sub-heading is usually distinguishable from the rest of the article and the heading. Most times, the sub-heading is in bold and/or the font is larger than the text in the article's main body, but not as big as that of the heading. Assuming a sub-heading is present, it should be noted that it is often followed by the name of the author of the article.

6. DATE OF PUBLICATION

Indicate the date that the article was published using the following format **YYYY/MM/DD**

7. AUTHOR

Copy and paste the *full* name(s) of the author(s); these are usually found after the (sub)heading or at the end of the article.
Note: Sometimes, the author is listed generically, such as "Staff Reporter". Please copy and paste this as is. If there is no author, please type "Unknown".
*If the article is **second-party content** and the author is cited as "the Guardian", for instance, do not fill out this section. Instead, add the appropriate information in your response to Q9 and Q10.*

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8. AUTHOR DESCRIPTION (*if opinion piece*)

Copy and paste the sentence/paragraph describing the background of the article's author
Note: a sentence/paragraph to this effect is usually provided at the beginning/end of the article.

9. SECOND-PARTY CONTENT

Please indicate if the article originally appeared in another Newspaper/Magazine
Note: if this is the case, the name of the Newspaper/Magazine that the article was sourced from usually appears at the end of the article.

1= Yes
2=No

10. IF THE RESPONSE TO Q9 is 'YES', FROM WHERE DID THE ARTICLE ORIGINATE

Copy and paste the name of the Newspaper/Magazine that the article was sourced from.

11.HAS SECURITISATION LANGUAGE BEEN EMPLOYED?

Select 'Yes' if securitisation language is present, i.e., if one or more of the following words have been used in close proximity to the phrases 'climate change' or 'global warming':

- "armed, (armies OR army), attacks, clash*, (conflict OR conflicts), confrontation, danger*, (fear OR feared OR fears), fighting, frightening, militar*, (risk OR risks), security, soldier*, tension, threat*, (violence OR violent), (war OR wars)" (Schäfer *et al.*, 2016: 91). **Annihilation, apocalypse, Armageddon, battle*, calamity, cataclysm, catastrophe, chaos, crisis, destroy*, destruction, disaster*, disastrous, dread, struggle, suffer*, surviv*, victim* (added by the researcher).**

12.WHICH OF THE FOLLOWING FRAMES ARE EMPLOYED IN THE ARTICLE?

National Security Frame
A national security frame is present if:
i. The main unit of analysis of the article is the nation/state, i.e., the article focuses on the nation/state.
AND
ii. The article implicitly or explicitly mentions that climate change and/or its effects may threaten the state's/nation's: • Territorial integrity (control of territory and borders)   • Political independence / self-determination   • Sovereignty   • Resources / Infrastructure   • Economic wealth   • National interests   • National Identity and/or Values   • Military/military operations

OR
iii. The article states that the military or defence sector has a role to play in tackling climate change and/or its effects (directly or indirectly)

OR
iv. The article speaks of climate change as a threat multiplier, i.e., that which amplifies existing issues – such as poverty, scarcity, infectious diseases, terrorism and refugee crises. Moreover, the article presents these amplified issues as factors that can cause or exacerbate external or internal conflict and so pose a physical threat to the state (and its borders) or a threat to its resources, wealth, identity, values, military capacity or operations, and interests (national/economic).

Example articles (these are the articles found and used to construct the survey that informs part of this project).

> **Water wars**
>
> *When it comes to the Nile, it's not just climate change that Egypt is worried about — it's also conflict.*
>
> *The construction of the enormous Grand Ethiopian Renaissance Dam has heightened tensions between Egypt and Ethiopia, with Egypt repeatedly threatening to go to war if Ethiopia interferes with its precious Nile water.*
>
> — Simon Allison

> **Climate change cuts SA's GDP by 10%**
>
> Floods. Droughts. Wildfires. Cyclones. Extreme weather events are making life for everyone more difficult, expensive and dangerous. This is the reality of a world where carbon emissions are driving climate breakdown. But it is a reality that is not being fairly shared.
>
> — Sipho Kings

Human Security Frame

A human security frame is present if:

i. The main unit of analysis of the article is the individual or a group of individuals below the level of the nation. In other words, the article is people-centred and/or places (in)direct emphasis on individuals or groups thereof in discussions of what needs to be safeguarded from climate change and its effects.

AND
ii. the article speaks directly or indirectly of any one or more of the seven components of human security listed and summarised below, as per their descriptions in the UNDP Human Development Report (1994).

Components of a human security frame (UNDP, 1994: 25 - 33)	How components can be identified in climate-related news articles & example articles (these are the articles found and used to construct the survey that informs part of this project).
A) Personal security Being secure from physical violence or threat including threats from the state, threats from other states, threats from other groups, threats from individuals or gangs (crime, threats to the self (suicide/self-harm), gender-based violence, physical threats (abuse/neglect) directed at the vulnerable (children/elderly).	• The article indicates how climate change's (in)direct effects can or have increased the physical threats faced by persons. **'Kung fu' nuns cycle for change** *After facing the consequences of climate crisis in their own villages, the nuns started travelling across Nepal and India with two strong messages: Protect the environment and empower women.* In 2015, when an earthquake hit Nepal, killing 9 000 people, women started to disappear. The survivors, who thought themselves lucky, soon found themselves without much choice but to trust the promises of overseas work and education, turning many into victims of trafficking. — Adrija Bose **Climate change fuels conflict** *Control of increasingly scarce water is being used by armed groups to challenge central governments, causing untold suffering to civilians.* The Tabqa Dam in northern Syria brings green and life to an area that would otherwise be a desert. Its water supplies about five million people and 20% of that country's electricity. Six times the size of the Vaal Dam, Tabqa is also at the heart of a new type of warfare. — Sipho Kings
B) Food security Being able to access nutritious food. Food should be both physically available, and one should be able to afford it.	• The article portrays climate change as that which threatens the supply of food. • The article focuses on the higher price of food resulting from climate change (i.e., it discusses how climate change threatens the supply of food and how a lower supply relative to demand increases prices). **No fertile land means no food** *Sparse resources could result in global food crisis* Climate change and an increasing population could trigger a global food crisis in the next half century as countries struggle for fertile land to grow crops and rear animals, scientists warned this week. — Ian Sample **Food insecurity rising in Africa** *The continent's farmers have to become more resilient to survive changing climate patterns and extreme weather events* A third of all people living in sub-Saharan Africa face severe food insecurity. They do not have enough money, or the resources to grow food, and regularly go for more than a day without food. — Sipho Kings

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C) Community security Community security is the sense of belonging and the sense of identity derived from being a part of a group.	• The article may present climate change as a threat to the values or practices of a particular group, e.g., indigenous persons or tribes. **Ancient ways in deep water** *Climate change is affecting the annual Kuomboka ceremony of the Lozi people of western Zambia - and their way of life, writes Nicole Johnston* As the temperature dips and we slip into winter, most of us adapt by putting on an extra jersey, stocking upon soup and carrying on as usual. — Nicole Johnston **Under the weather** *As the conflict in Darfur spreads, Julian Borger investigates the origins of what is being seen as the world's first climate change war* In the relief camps scattered around the Chad-Sudan border, the refugees from Darfur tell the same story of an ancient, shared way of life catastrophically lost. — Julian Borger
D) Political security One should have their fundamental human rights respected and should be able to exercise their fundamental human rights (e.g., the right to the freedom of speech) within a society.	• The article may represent climate change and/or its effects as that which fuels the collapse of a state and/or the emergence of totalitarian regimes. • The article may portray climate change as that which fuels civil unrest (which could call forth repression and violent acts by the state/police) **Intense heat will drive migration** Climate refugees are already a reality. In Syria, a climate-exacerbated drought led to the migration of thousands of farmers into cities. This largely drove that country's revolution and mass migration. — Simon Allison **Violence increases as climate heats up** Minor changes in temperature and climate are strongly linked to increases in violence and conflict, according to a new study. — Larry Elliott & Ashley Seager
E) Economic security Having a basic income, being able to find a steady job, being able to earn an income under safe working conditions.	• The article portrays climate change as a threat to job security and (basic) income. • The article portrays climate change as that which will cause higher levels of unemployment and poverty. **Drought drives Karoo to collapse** *Farms abandoned, jobs lost in parched Northern Cape.* Commercial agriculture is collapsing in the Karoo due to a severe and prolonged drought, leaving some farmers with no option but to abandon their farms. — Delme Cupido & Tristen Taylor **Adapt or die, warns UN report** *Climate change is undermining international efforts to combat poverty* The human rights of the world's poorest people will be violated unless developed countries accept the need for drastic and immediate steps to prevent global warming from triggering dangerous climate change, the United Nations warned this week. — Larry Elliott & Ashley Seager

F) Environmental security Having and being able to benefit (materially or otherwise) from healthy, functioning ecosystems. Having access to water resources. In other words, being safe from natural disasters, water scarcity, desertification, desalination, and the effects of the loss of biodiversity.	• The article indicates that climate change threatens biodiversity, water security, or air quality. • The article may represent more frequent natural disasters as a direct consequence of climate change. **" Water usage lessons from Namibia** *In semi-arid Southern Africa, water supply in rural areas is precarious and climate change will make the situation more severe. In Namibia, the national government has piped water to many remote villages and put them in charge of distribution and payment.* Every morning, Maria Petrus* needs to be at the communal water tap in her village in Onesi constituency, in northern Namibia. **"** — Leonie Joubert **" Evolve or die: Time is running out for plants and animals** *Conservationists focus on elephant and rhino poaching, but there's a far greater threat to all species and it's also caused by people* The temperature this summer regularly hovered above 40°C in Skukuza, the main camp in Kruger National Park, which is emerging from two years of drought. Hundreds of animals died in what park authorities say is an insight into the sorts of problems that will be brought on by climate change. That change could wipe out 60% of the species in the park. **"** — Sipho Kings
G) Health Security Having access to health services. Being safe from polluted water or air, which is linked to several diseases and infections.	• The article talks of climate change as a threat to the health of persons, i.e., it talks of climate change as a cause or exacerbator of diseases/death/illness. **" Climate change is also a health crisis** The climate crisis is a health crisis. The same emissions that cause global warming are largely responsible for polluting the air we breathe, causing heart disease, stroke, lung cancer and infections. **"** — Maria Neira **" The first undeniable climate change deaths** *In Japan, in 2018, more than 1 000 people died during an unprecedented heat wave. In 2019, scientists proved it would have been impossible without global warming* Temperatures were more than unusual. They were unprecedented. In fact, without climate change, they would have been impossible. **"** — Daniel Merino

Appendix 11: Ethical clearance.

Faculty of Humanities

Fakulteit Geesteswetenskappe
Lefapha la Bomotho

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

23 April 2021

Dear Miss Y Sewmohan

Project Title:	The Prevalence and Possible Policy Implications of the use of National and Human Security Frames in Climate-Change-Related Reports, in South Africa's Print Newspapers
Researcher:	Miss Y Sewmohan
Supervisor(s):	Dr NC Davis
Department:	External department
Reference number:	15316913 (HUM041/1120)
Degree:	Masters

I have pleasure in informing you that the above application was **approved** by the Research Ethics Committee on 23 April 2021. Data collection may therefore commence.

Please note that this approval is based on the assumption that the research will be carried out along the lines laid out in the proposal. Should the actual research depart significantly from the proposed research, it will be necessary to apply for a new research approval and ethical clearance.

We wish you success with the project.

Sincerely,

Prof Innocent Pikirayi
Deputy Dean: Postgraduate Studies and Research Ethics
Faculty of Humanities
UNIVERSITY OF PRETORIA
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Fakulteit Geesteswetenskappe
Lefapha la Bomotho

Research Ethics Committee Members: Prof I Pikirayi (Deputy Dean); Prof KL Harris; Mr A Bizos; Dr A-M de Beer; Dr A dos Santos; Ms KT Govinder Andrew; Dr P Gutura; Dr E Johnson; Prof D Maree; Mr A Mohamed; Dr I Noomè; Dr C Puttergill; Prof D Reyburn; Prof M Soer; Prof E Taljard; Prof V Thebe; Ms B Tsebe; Ms D Mokalapa

Appendix 12: Summary of the findings discussed in Chapter 5 relative to the objectives and targets of this research project.

Research Objectives	Research Tasks/Targets

RO1 — To assess the prevalence of a broad securitisation frame, national security frame and human security frame in climate-related articles published by South Africa's print newspapers between 2012 and 2020.	**T1:** *to explore the number of climate-related articles (i.e., those articles that either mention or are directly concerned with climate change) published by South African print newspapers between 2012 and 2020.*
	
	• Finding(s):
	  ▪ climate-related articles have not been prevalently published in South African print newspapers.
	  ▪ only 0,367% of all articles published between 2012 and 2020 were climate-related; only 0,118% were directly concerned with climate change.
	• Possible reason(s):
	  ▪ micro-scale factors (journalists' training and skills-set, newsroom culture and practices, editors' preferences).
	  ▪ macro-scale factors (social context within which journalists are embedded).
	• Implication(s):
	  ▪ the public has low exposure to climate change stories.
	  ▪ the effect that the newspapers' reporting may have on behaviour, action and policy support/preferences is questionable.
	• Limitation(s):
	  ▪ the publication habits of only three national newspaper outlets were analysed – results are not representative of the entire print-newspaper-landscape in South Africa in terms of climate reporting.
	  ▪ articles published by the *Daily Sun* for the period 2012-2015 were not available.
	  ▪ the two databases used might not have captured all the articles published.
	• Other noteworthy findings:
	  ▪ the *Daily Sun* published fewer climate-related articles than the other two newspaper outlets, even though it published more articles in general, given that it is a daily newspaper and others are weeklies.

		T2: *to explore the temporal development of the publication of climate-related articles in South African newspapers.*
		• Finding(s): ▪ reporting of climate change in South Africa occurs in waves or cycles. ▪ out of the 183 climate-related articles published, 40 (21.858%) were published in 2019. ▪ the number of climate-related articles published by South African newspaper outlets fell dramatically between 2019 and 2020. • Possible reason(s): ▪ newspapers must cover what members of the public are interested in to keep readership figures up (something that their advertising revenue is linked to). Given public interest in a host of other issues, including corruption, political scandals, current affairs, it is only feasible to cover climate change during and in the run-up to noteworthy events. ▪ climate change was at the fore of the global consciousness following the rise of youth climate activists and activism between 2018 and 2019. ▪ COVID-19 shifted South African newspaper outlets' attention away from the issue of climate change. • Limitation(s): ▪ same as those in T1. • Other noteworthy findings: ▪ troughs in the graph depicting the temporal development of the publication of climate-related articles can be explained by noteworthy events which likely detracted attention from climate change.

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T3: *to investigate the prevalence of various security frames in climate-related articles published by South African print newspapers between 2012 and 2020.*

- Finding(s):
  - ≈60% of climate-related articles employed a broad securitisation frame – of these, 44% just mentioned climate change and 56% were directly concerned with climate change.
  - the sub-securitisation frame that was most often used in climate-related articles was that of human security.
  - the sub-human-security frame most frequently employed in climate-related articles was an environmental security frame with a specific focus on water security.
- Possible reason(s):
  - climate change has become a more prominent issue over recent years, thus prompting newspaper outlets to cover the issue in such a way that captures readers' attention and/or gets them to act.
  - a human security frame might have been more personal, relatable, and immediate. It was, therefore, more likely to resonate with readers.
  - South Africa is a water-scarce country; the focus on water security may reflect that South African newspaper outlets focus on the local context when discussing climate change and its threats.
- Implication(s):
  - assuming that framing climate change as a threat to human security calls forth policies centred around sustainable development, the prominence of a human security frame in climate-related articles gives one reason to believe that the media's framing could usher in policies geared towards sustainable development. Such policies could help tackle the underlying drivers of climate change and vulnerability.
- Limitation(s):
  - the publication habits of only three national newspaper outlets were analysed – results are not representative of the entire print-newspaper-landscape in South Africa in terms of climate reporting.
  - the effects of a human security frame on public perceptions, action and behaviour – and hence the policy-making-process – is contingent upon the climate-related articles being read. There is no guarantee of this. This is especially true since persons usually pay more attention to the frame that resonates with them and are, subsequently, more likely to be affected by those frames.
  - other factors, apart from frames, may influence the effects of an article or the internalisation of an article's message. These factors – including the use of technical devices (language, stylistic devices, sources cited, photos/images used) – were not investigated.
- Other noteworthy findings:
  - when climate change is presented as a threat to national security, it is most often done so as a threat to the nation's economic security.
  - multiple sub-human-security frames are employed together in climate-related articles.
  - sub-human-security frames are employed in conjunction with some sub-national-security frames.

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		T4: *to explore the temporal development of the use of various security frames in climate-related articles that were published by South African print newspapers between 2012 and 2020.*
		
		• Finding(s):
		   ▪ the use of a broad securitisation frame and human and national security sub-frames were increasing .
		   ▪ the increase in the use of a human security frame over time was more pronounced than that of a national security frame.
		   ▪ a human security frame, in particular, was most often employed at times when noteworthy events occurred.
		• Possible reason(s):
		   ▪ climate change has become a more prominent issue over recent years, thus prompting newspaper outlets to cover the issue in such a way that captures readers' attention and/or gets them to act.
		   ▪ a human security frame is more personal, relatable, and immediate; therefore, it resonates more with members of the public.
		   ▪ newspaper outlets might have adopted a strategic framing technique.
		• Limitations:
		   ▪ same as in T1
		• Other noteworthy findings:
		   ▪ a human security frame, in particular, was most often employed at times when noteworthy events occurred.

RO2	To investigate and evaluate South African readers' preferences for articles that framed climate change as a threat to national security versus ones that framed climate change as a threat to human security (including economic, food, health, environmental, personal, community and/or political security).	**T5:** *to investigate if members of the public are likely to select an article that discussed climate change using a human security frame over one using a national security frame.*
		
		• Finding(s):
		   ▪ members of the public are more likely to select an article employing a human security frame vis-à-vis a national security frame.
		• Possible reason(s):
		   ▪ a human security frame is more personal, relatable, and immediate; therefore, it resonates more with members of the public.
		• Limitation(s):
		   ▪ there were more articles employing a human security frame to choose from.
		   ▪ the participant pool was relatively small (N=20).
		   ▪ the participant pool was probably not diverse enough, i.e. it was likely that participants shared similar characteristics.

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T6: *to document which, if any, human security sub-frame (i.e., personal, political, community, food, health, economic, environmental security frames) members of the public are inclined to select.*

- Finding(s):
  - members of the public are likely to select multiple human security frames; multiple frames resonate with them.
  - that being said, a personal and environmental frame are selected marginally more often than other sub-human security frames.
- Possible reason(s):
  - there are a variety of issues that are prevalent in a South African context, one or more of which a particular person may be more affected by and/or concerned about. Thereby, as a whole, South Africans may be predisposed to various human-security frames when it comes to climate reporting.
- Limitation(s):
  - the participant pool was relatively small (N=20).
  - the participant pool was probably not diverse enough.

T7: *to investigate if there is some consistency in individual persons' choice of frame.*

- Finding(s):
  - 18/20 participants selected different frames on two separate occasions, indicating that members of the public are inconsistent in their frame choice/preference.
- Possible reason(s):
  - there could be more than one frame that resonated with participants.
- Limitation(s):
  - this part of the survey (part 1) only had two rounds.
  - the participant pool was likely not diverse enough, i.e. representative of the South African population.
  - findings may be due to multiple frame preferences or the fact that the participants all shared similar characteristics.

| RO3 | To gauge the extent to which South African readers show a preference for climate-related articles (employing either a national security or human security frame) over articles concerning other topics. | **T8:** *to investigate the extent to which members of the public select a climate-related article that employs a securitisation frame when confronted with articles considering other matters of interest.*

• Finding(s):
  ▪ participants chose a climate-related article more often than they chose articles concerning other topics.
• Possible reason(s):
  ▪ despite being in a pandemic context and surrounded by a range of other issues, members of the public still accord some primacy to the issue of climate change.
  ▪ all the climate-related articles used a broad securitisation frame; the securitisation of climate change in print newspapers may draw the attention of readers.
• Limitation(s):
  ▪ the participants knew what the project was concerned with before taking the survey.
  ▪ the participant pool was relatively small (N=20).
  ▪ the participant pool was likely not diverse enough, i.e. it was not representative of the South African population. |
| | | **T9:** *to investigate the specific security frame corresponding to the climate-related article that members of the public most often select, if at all, when confronted with articles considering other matters of interest.*

• Finding(s):
  ▪ participants are more likely to choose articles employing a human security frame.
  ▪ participants are more likely to choose articles employing one or more of the following sub-human-security frames: personal, food, environmental and national security (economy) frames.
• Possible reason(s):
  ▪ despite being in a pandemic context and surrounded by a range of other issues, members of the public still accord some primacy to the issue of climate change.
  ▪ all the climate-related articles used a broad securitisation frame – securitising climate change in print newspapers may draw the attention of readers.
• Limitation(s):
  ▪ the participant pool was relatively small (N=20).
  ▪ the participant pool was likely not diverse enough, i.e. representative of the South African population.
  ▪ sub-human-security frames were employed in articles that appeared in seven of the eight rounds of this part of the survey. |

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RO4	To consider the possible policy implications of the identified trends in the use of various securitisation frames in climate-related articles together with readers' responses to such articles.	**T10:** *to investigate the policy implications of securitising climate change with reference to theory and previous studies.*
		
		• Finding(s):
		  ▪ framing climate change as a national security threat could give rise to perverse and "counterproductive outcomes" (Oels, 2012: 195).
		  ▪ "once security is redefined as human security…[it] propels sustainable development policies to the top of the policy agenda" (ibid., 190).
		• Implication(s):
		  ▪ given the policies it could call forth, framing climate change as a threat to human security is more desirable than framing it as a threat to national security.
		• Limitation(s):
		  ▪ Trombetta (2008) and Rodrigues De Brito (2012) found that the framing of climate change as a national security threat in the EU did not give rise to perverse policies. Instead, policies were geared towards sustainable development, mitigation and adaptation.
		  ▪ the findings under this target were informed by empirical studies conducted in the EU and North America.

		T11: *to combine findings from the literature review with the results of the frame and content analyses (RO1) and survey (RO2 & 3), to make inferences about the possible future policy implications of South African newspapers' securitisation of climate change and to make recommendations to help print newspapers become (more) effective climate change communicators.*
		
		• Inference(s):
		  ▪ the way climate change has been framed by three of South Africa's newspaper outlets is desirable.
		  ▪ the three newspaper outlets' frequent use of a human security frame in climate-related articles could help usher in policies that shift South Africa towards a more sustainable pathway and towards realising its aspirations highlighted in its NDP.
		  ▪ given that a human security frame was the frame that resonated most with survey participants and the frame most often employed by climate-related articles published in print newspapers, it was inferred that the effects of the newspapers' use of a human security frame on policy-making could, indeed, materialise.
		• Limitation(s):
		  ▪ the inferences were based on the assumption that framing climate change as a threat to human security calls forth policies geared towards sustainable development, whereas framing climate change as a threat to national security calls forth perverse policies (these assumptions were based on studies conducted in the EU and North America – see Target 10)
		  ▪ the inferences were based on several assumptions regarding the link between the media, the public, and the policy-making process (see Ch. 5).

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