Reporting on Rhinos
Analysis of the Newspaper Coverage of Rhino Paoching

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Abstract

The media is instrumental in providing the public with environmental knowledge and increasing environmental awareness, and is a useful indicator of established public perceptions. Analysis of media representations of environmental issues can thus contribute to our understanding of public attitudes, behaviours and perceptions and the role of the media in environmental education more generally. It can also enhance support for effective environmental management. This research, based on a qualitative design, provides an analysis of a specific environmental issue- rhino poaching – as represented in The Mail & Guardian, *a prominent weekly English newspaper known for its environmental content. Fifty issues of* The Mail & Guardian, *published between January and December 2012 were reviewed to establish the types of articles, their size, placement and use of graphics; the actors in the articles; and the thematic framing. The majority of the articles categorised were solution-orientated, with mitigation being the most frequently coded theme. The study also indicated some limitations in the reporting of rhino poaching, both in terms of coverage of relevant issues and integrity of the content.*

Introduction

Environmental information is disseminated in a variety of ways form different sources including formal schooling, government programmes and NGOs. However, extrapolating from studies done elsewhere, much of the information which South Africans get about the environment comes through the news (Lawhon & Fincham, 2004). Despite the relevance of environmental stories in the media to environmental education and awareness, there is a limited understanding of the kinds of environmental stories that are in the news, and the framings used to communicate these stories in South Africa.

Even though readers do not believe everything in the news, the media can be seen both as shaping public opinion and as representing common framings of problems and solutions. Analysis of media information thus provides critical insights into the dominant frames in the public discourse as well as the kind of information being accessed by the public. An understanding of how the public learns about the environment can therefore be enhanced through analysis of environmental media. This article uses the case of rhino poaching to contribute to an understanding of the role of media in raising awareness about environmental issues in South Africa.

This study has practical implications in terms of understanding public action. Public awareness is imperative in addressing conservation issues such as rhino poaching mainly because public response is often necessary to prompt action by other stakeholders (Prasad, 1999; Schoenfield *et al.*, 1979; Slovic, 1986). As the media plays an important role in increasing public awareness, it is important to assess how specific issues are represented to the public to better understand public action. Thus far, no studies have explored the role of media in representing rhino poaching. A study of this nature will be beneficial both for making sense of rhino poaching specifically, as well as in contributing to the assessment of the broader connection between the media and environmental education in South Africa.

In this paper, we analyse how rhino poaching is represented in a South African newspaper known for its environmental reporting: *The Mail & Guardian*. In the next section, we provide a brief overview of rhino poaching in South Africa. This is followed by an explanation of the link between the media and environmental education. In the next section, we describe the methods used in our research. This includes documenting the type of articles, and the extent to which they focus on describing a news event, contextualising the problem, identifying key actors and solutions and mobilising public support against rhino poaching. The final section presents the key findings, and is followed by conclusions.

A Brief Overview of Rhino Poaching in South Africa

At the end of 2010, South Africa's rhino population represented approximately 93% and 35% of the total worldwide white rhino (*Ceratotherium simum simum*) and black rhino (*Diceros bicornis*) populations respectively (South African Government Online). According to Amin *et al*. (2006), these figures were achieved through good management practices in South Africa over the last thirty years. Sufficient protection coupled with enforcement measures undertaken by government-run national parks and privately owned reserves have resulted in a rebound of the rhino population. However, both species remain on the IUCN Red List Category as critically endangered and the conservation status remains uncertain (Emslie, 2011).

Poaching is the main threat to rhino population in South Africa. Rhinos are poached for their horn, which is sold on the black market and used for traditional medicines, particularly in Asian countries such a Vietnam. The horn is believed to cure a number of health problems, including fever, rheumatism, gout, hallucinations, food poisoning and vomiting. It is thought to have the power to cure 'devil possession' and is often prescribed as an aphrodisiac (Ellis, 2005).

Rhino poaching levels remained relatively low prior to 2008. Since then, the demand for rhino horns has increased drastically, with a total of 1 654 rhino poached between 2008 and 2012 in South Africa, and rates are expected to continue to increase. The count of poached rhinos for 2013 exceeded one thousand. Rhino poaching was elevated to a 'priority crime' by the National Joint Operations Centre, which resulted in concern and 'attracted international attention, including media coverage worldwide' (National Strategy for the Safety and Security of Rhinoceros Populations in South Africa, 2010:2). If poaching continues at this rate, the ongoing conservation efforts will have been futile (Lockwood, 2010). Both the number of poached rhinos as well as the level of sophistication used by the poachers is unprecedented

(Lockwood, 2010). Concern has been expressed by conservationists, land owners as well as politicians, and has resulted in numerous summits being hosted and strategies being developed aimed at combating rhino poaching.

The Relationship between the Media and Public Opinion

There are many different theories of the relationship between media information and public opinion. However, there is general consensus that the media shapes public opinion and can also be viewed as partially representative of public opinion. Schoenbach & Becker (1995) note that the media does not 'mirror' public opinion, but 'mold[s]' it by 'emphasising certain voices, highlighting particular views and generating discourse about certain issues' (cited in Zhou & Moy, 2007:4). Another metaphor often used is that of a window (Tuchman, 1978), which suggests that the media is not just a reflection, but shapes what we see and do not see. According to Callaghan (2001:5), the media's presentation can 'define and give meaning to issues', as well as connect them to a larger political environment. The media can influence the type and nature of information, as well as the amount of information accessible to the public (Waitt, 1995; Hessing, 2003).

Zucker (1978) proposed that not all issues are equally dependent on the media and that the impact of the media depends on the obtrusiveness of the issue. An issue is obtrusive based on the degree of direct experience people have with the issue. The less direct experience people have, the greater their reliance on the media to provide information and interpretation regarding the issue. This point is particularly relevant for rhino poaching and many other environmental issues that the public has little direct experience of. It can therefore be assumed that the public is significantly reliant on the media for information about rhino poaching.

Newspapers have been a dominant medium through which the public gather information about current events and issues for over a century (Korn & Efrat, 2004; Roshco, 1975; Benedict, 1992). Issues covered in newspapers need to be newsworthy; the phrase 'it's not news unless it's new' bears much truth in the selection of topics. Many different scholars have researched what makes an article newsworthy, and this differs across newspapers and contexts (Yang, 2004; Jamieson & Campbell, 1992). However, some of the key findings suggest that:

- Most news cover a specific event or occurrence (rather than be a chronic problem);
- Issues gain attention when an elite nation, group of people or prominent individual is involved;
- Photogenic, negative stories are most common; and
- Readers want stories which have relevance to their lives (Lester, 2010).

Some researchers argue that newspapers need to be accountable in their reporting and to take responsibility for educating the public (Ditton & Duffy, 1983), however, the role of the media in education generally, and environmental education specifically, is somewhat controversial. Certainly the media plays a role in raising public awareness of environmental issues and can provide social and educational opportunities (Prasad, 1999; Schoenfield *et al.*, 1979; Slovic,

1986); it may also provide technical information regarding environmental problems and possibilities, and potential improvements (Singhal & Rogers, 1989). However, newspapers often reinforce conventional traditions and the dominant thinking (Korn & Efrat, 2004). Newspaper content is primarily presented as factual representations, and articles are often considered by journalists and readers to be objective and true (Lamb & Koen, 1995; Markowitz, 2006). While newspapers are considered a credible media source, they often highlight one or two individuals' perceptions, rather than being representative of the population (Gregory & Williams, 1981). We return to this point further below.

Environmental issues and the media

Environmental issues, risks and crises are extensively reported in the media, particularly natural disasters (Adam *et al.*, 2003), making mass media significant players in the identification and interpretation of environmental issues (Schoenfield *et al.*, 1979) and putting environmental issues on the public agenda (Anderson, 1997). Numerous studies documenting media coverage of environmental issues and public reaction, including historical studies, which suggest that the media slowly responded to public interest in environmental issues (not that the media led the way in increasing awareness) during the 1960s and 1970s in the US and UK. Since then, however, the media has arguably had a greater agenda-setting role (Lester, 2010).

Brosius & Kepplinger (1990) found that coverage of environmental issues in the media stimulates attention to reported environmental problems. Public concern is reportedly proportional to the coverage of the environmental issue (Mazur & Lee, 1993). Due to the transience of the media, public concern about an environmental issue is expected to decline when the media attention shifts to a different issue (Stamm *et al.*, 2000). Persistent and growing environmental problems often do not make it into news coverage because it is focused on events, not chronic problems (Stocking & Leonard, 1990). Dunlap (2002:13) suggests that environment-related issues remain popular in media and high on the public agenda due to 'an endless variety of new problems'. Despite this extensive variety, continuous bombardment of news carrying similar messages will eventually lead to saturation (Hilgartner & Bosk, 1988). This could result in boredom with certain environmental issues and subsequently, the loss of public interest.

As with other kinds of news, expert perspectives are often sought in environmental news. Guedes' (2000) study on environmental issues in the Brazilian press suggests that issues become newsworthy when articulated by or through institutions which are regarded as legitimate sources, and are already present in the media. Hornmoen (2009) found that the presence of the public and other non-experts is 'as an implied audience' (cited in Jönsson, 2011:128); while Jönsson (2011:128) found that the citizens' voices were more or less 'invisible in the news'.

There are several limitations of the existing research. First, most of these studies of environmentalism in the media focus on cases in the global North. As Lawhon & Fincham asserted in this journal in 2006 (p.108), which remains true today, 'Despite these findings which indicate a general understanding of how environmental news rose in the global North, there remains a notable deficit of studies both on the details of current coverage and the history and current coverage of environmental issues in the media of the South.' Lawhon & Fincham (2006)

and Barnett (2002) are the only sources we were able to identify for such analysis in South Africa. Second, much of the research focuses on the text itself, leaving unclear how articles are produced and what their impact is on readers (Lester, 2010). A limitation of media analysis is that little can be told about how audiences interpret and understand media texts (Burgess, 1990). The ways in which the audience interpret and decipher messages disseminated by the media are poorly understood. Third, and a point we do not address here, the media is in a state of significant change, as social media, digital media and other non-traditional sources become prominent. The impact these have on shaping environmental awareness and education is certainly an area for future research.

The role of the media in environmental advocacy and education

The power of the news media in influencing public debate and shaping policy agendas has been acknowledged extensively in media studies (McGraw & Ling, 2003; Hurlimann & Dolnicar, 2012) and specifically in South Africa (McDonald & Jacobs, 2005; Gibbs, 2010). As discussed above, the media influences which environmental issues garner attention – and which do not. Media often cast environmental issues in a negative light, focusing primarily on stories of catastrophes and political shortcomings rather than solutions. Nevertheless, the media has been found to contribute positively to the understanding of environmental problems (Stamm *et al.*, 2000).

Explicit calls for advocacy or adoption of particular solutions are, arguably, controversial roles for the media to play. Environmental journalists often present different positions on their role. Following Barak (1999:97–98), the media may see themselves as 'carrying [an] educative role to the public'. Some suggest the need to remain neutral and objective, while others see their role as increasing awareness (Neuzil, 2008; Lester, 2010). The media is thus not merely a channel of information to the public, but also holds the power to inform and educate the public, and play a crucial role in environmental management. However, the normative position on what its role should be (information or advocacy) remains contentious.

Methodology

Our research analyses articles and editorials published from January 2012 to December 2012 in *The Mail & Guardian*. The one year period was selected to avoid seasonal bias. *The Mail & Guardian* had an average weekly circulation of 187 839 and a readership of 459 000 for the period January 2012 to December 2012 (SAARF, 2012), and most of the articles are available on its website (www.mg.co.za). Articles were identified by scanning hard copies of the newspaper. We included only articles that were complete stories, not advertisements or promotional references for a full story contained elsewhere.

The data collection focused on three keys aspects. First, we sought to establish the primacy of the articles through an evaluation of article size, placement and the use of graphics. A point score system was used to code each article, similar to that of McManus (2000).[1] Second, we sought to establish the types of actors in the articles. To do so, we considered 'quoted' and 'other' sources/actors by role, parties responsible for proposed solutions and source/sources of statistics (see Einsiedel & Coughlan, 1993; Guedes 2000; Liu *et al.*, 2008). 'Quoted' sources/actors refer

to those actually quoted while 'other' sources/actors refer to those merely mentioned in the article. Government sources were divided to distinguish between conservation officials working for the government (such as employees of national parks) and other government officials. We also documented the statistical and scientific information sources in the coding process, using the following categories: academic, government, environmental group, industry or other.

Finally, we sought to understand the broad framing of the articles. The categories determined were based on a literature review, and a pilot study of three articles from the same newspaper in 2011. This included the following theme categories: effects, economics, policy, opportunities, behaviours, science, mitigation, adaptation, management, fundraising or other. Mitigation refers to strategies which will decrease poaching, such as increasing patrolling at game reserves; and adaptation refers to measures which could be put in place in order to deal with the current rate of rhino poaching, such as increasing breeding.

Certainly other approaches could have been taken into consideration, for example, website content including online comments, examination of public response to the articles, or consideration of other forms of media such as television or social media. However, any study must delimit its boundaries and we see this as but one contribution towards a broader effort to understand the complex relationship between media and environmental education.

Results

In this section, we provide the results of our analysis based on the methodology described above. In total, there were fifty issues during the period covered, which contained 21 relevant articles and editorials.

Primacy of rhino poaching

The primary type of article was news, with two articles coded as editorial/opinion. The majority of articles covered 1–20% of the page. Almost half of the articles and editorials had a colour photograph accompanying it; one contained a graphic. No news article on rhino poaching appeared on the front page. The fact that news articles were by far the most common type of article which featured rhino poaching suggests that rhino poaching had become a recognised and established item in *The Mail & Guardian*.

The total number of articles suggests that the issue has some prominence in *The Mail & Guardian*, even though the absence of such articles on the front page could suggest that rhino poaching is not deemed a very important issue or front page news or, alternatively, that it's not very newsworthy given the repeated incidents. The press coverage of rhino poaching is heavily dependent on visual effects, as evidenced by the large number of colour photographs included with the articles. The lack of letters to the editor could be attributed to the fact that, the editors do not consider the issue of rhino poaching to be of interest to the readers (if there were letters received by the editors but which were not published), or to the lack of letters being submitted altogether.

Key terms in article titles

The use of keywords in headings draws attention to the different ways of approaching the topic. As expected, rhino/rhinos were the most popular keyword in the headings (see Table 1). The data shows that emphasis was placed on rhino horn, and terms that referred to rhino deaths. Terms which implicitly label the activity as illegal including poaching/poacher, arrested/arrest/ charged/caught and smuggling/black market/illegal were used infrequently although more so than trade/trading and hunt/hunting. Other provocative words were occasionally used in the titles, including reference to 'rhino lovers' (13 January 2012), 'slaughter' (2 March 2012; 30 March 2012; 3 August 2012), and the 'war on rhinos' (9 November 2012).

Table 1. Frequency of keywords

Key term	Frequency
Rhino death	5
Smuggling/black market/illegal	4
Rhino horn	3
Arrest/arrested/charged/caught	2
Poaching/poacher	1
Trade/trading	1
Hunt/hunting	1

Sources and actors by role

The analysis of the sources and actors in *The Mail & Guardian* gives an indication of who articulates the narratives about rhino poaching (see Table 2). Environment/conservation spokespersons were the main quoted actors, particularly representatives of national parks or conservation agencies. Scientists or experts were the least frequently quoted source (although there may be some overlap between environment/conservation practitioners and scientists, we coded the actors based on the identity emphasised in the articles). Six articles did not contain any direct information from a source. Eight articles contained no indirect sources or actors. Other government or government spokespersons was the most indirectly mentioned source in the rhino poaching articles, having been mentioned in seven articles.

Table 2. Summary of the sources/actors by role

Sources/actors by role	Quoted (Frequency)	Other (Frequency)
Government/government spokesperson	5	7
Scientist/expert	1	0
Public	4	4
Environment/conservation spokesperson	9	4
Other	6	3
None	6	8

Findings concerning the frequency of government or government spokespersons support Guedes's (2000:546) views where the government is seen as a key source of information, however, in the South African case it is possible that others are seen as more legitimate sources of information given the prominence of environment/conservation spokespersons on this issue. The absence of the public as a source of information in the news supports the idea that this is a topic that the public has limited direct engagement with; there is therefore a high likelihood that the media is their primary source of information. News media portrayed the government and non-government organisations as the main stakeholders responsible for developing and implementing strategies and solutions. This is indicative that both government and non-government are perceived as being the most responsible for rhino poaching solutions.

Those responsible for rhino deaths were never interviewed in the articles, despite their regular presence. The tone and description of these actors varied significantly across the articles. One highly sympathetic quote was given by the 'the head of the Kruger's anti-poaching special operations team' (3 August 2012). 'Leslie has a great deal of respect for his adversaries. "These poachers have grown up in this type of terrain and they have spent their lives hunting and trapping smaller animals for subsistence. So when their crops fail and a syndicate offers them money to shoot an animal, they are going to take that. This is about them looking after their families, so it's an economic issue," he said.'

This contrasts significantly with another description of rhino hunting, in which two white male hunters are described as 'repeatedly shooting a rhino in what appears to have been an illegal "pseudo hunt", carried out at the behest of an international wildlife-trafficking syndicate' (9 November 2012). The word 'poaching' is not used here, but the tone is clearly critical of these actors. Other parties drawn into the narratives include veterinarians who supply materials used in hunting and poaching. According to an anti-poaching NGO employee, 'Poachers and Asian nationals involved in the illegal rhino trade are starting to get meaty court sentences ... Only when we see the high-profile white guys in the game industry end up with similar penalties will they realise it's not worthwhile getting involved' (2 March 2012). These quotes show very different interpretations of who is responsible for the growing death of rhinos, who they are connected to – small scale local poachers, or wealthy conglomerates – and how to respond to the growing problem.

Parties responsible for proposed solutions
Parties considered responsible for rhino poaching solutions were coded as: government, non-government, government and joint effort. Government parties and non-government parties (industry and individuals) are almost equally considered to be the main holders of solution strategies (coded six and four times each respectively). A joint effort between the government parties and non-government parties was also mentioned four times. The use of the courts emerged as a key theme, as was cooperation between various government actors. For example, in an article on the conviction of a Thai national: 'The investigation had required the Hawks, SARS customs officials, the Department of Environmental Affairs, Sanparks and the National Prosecuting Authority to work together closely to find and present credible evidence

before the courts, he said, paving the way for future collaborations' (9 November 2012). Rarely were the impacts on the public, or the possibilities for public engagement, discussed.

Source(s) of statistics
The vast majority of the articles contained some kind of statistic, most commonly regarding the number of deaths. The most cited source for statistics was unknown. Many articles quoted the number of rhinos killed thus far in the year without citing where this information came from. This could potentially result in readers being suspicious about the statistics, and questioning the authenticity and legitimacy of the sources.

Environmental groups, including various national parks and conservation organisations, were the second most cited actor in the rhino poaching debate. This is possibly because journalists and readers deem these sources the most accurate. The government was rarely cited as a reference for statistics. It is possible that government sources are used less frequently as they are not as abundant as environmental group sources, or because numbers from the government are provided by other actors who do not specify their source. Supporting the findings of Jönsson (2011), industry sources were invisible, with no statistical or scientific information being provided by this source.

Interestingly, one article noted a controversy over statistics provided by the government (13 January 2012). 'International Animal Rescue Foundation … questions the government statistics that there are about 22 000 rhinos in South Africa and says 'reputable wildlife conservationists' estimate the number to be between 9 500 and 11 000'. Such contestation indicates the level of uncertainty regarding statistics, although this uncertainty is rarely mentioned in other articles.

Theme category
From the data, we see that the proportions for the mitigation and adaptation strategies are vastly dissimilar. Mitigation articles made the biggest contribution in terms of theme categories. Mitigation was coded 13 times, in comparison to adaptation which was coded once. These findings correspond to Liu *et al.*'s (2008) study, where newspapers had a strong tendency to focus on mitigation as opposed to adaptation. This could be indicative of news media not acknowledging the current levels of rhino poaching, with the belief that more needs to be done to curtail the present rhino poaching levels. However, there may be a need for news media to focus more on adaptation strategies. While mitigation is indeed necessary to reduce further depletion of the rhino population in South Africa, the population has significantly depleted, which may warrant current and future adaptation strategies. Similar to Ahchong and Dodds' (2012) findings regarding climate change, a combination of the two types of strategies is necessary and should be reflected in media representation of rhino poaching solution strategies.

The policy theme was almost equally as common as the economics theme, with policy referring to specific policy proposals, rhino poaching laws, trade and the penalties poachers face when caught (coded a total of nine times). The articles often suggested that better law enforcement and stricter penalties for offenders is a step in the right direction. For example, a global Rhino Ultimatum has threatened both agricultural and tourism boycotts if the government does not meet the demands to 'halt the imminent extinction of the rhino species'

(13 January 2012). One of the demands of the Ultimatum is for the 'immediate destruction of all stockpiles of horn'. The Ultimatum states that the government 'is seen to be contradicting the proven fact that rhino horn has no medicine value to human beings by stockpiling horns. It directly and knowingly reinforces the value that criminal syndicates place on it'. Opportunities and behaviours were coded five times each. Opportunities were concerned with possible breaks and optimistic future prospects in the fight against rhino poaching, while behaviours represented changes the public could make in terms of their attitudes and their actions.

Economics was also a common theme category (coded seven times), with articles often referring to the financial implications of rhino poaching. A provocative quote was given by a rhino horn farmer, who claimed that 'my financial advisers tell me not to sell my rhino horn because its value is increasing more than any other investment' (30 March 2012). This and other articles include commentaries on the benefits of legalising the trade of rhino horn on the economy. For example, one researcher argues that 'A controlled legal trade in the private sector would bring the market out into the open so that it could be monitored and managed' (30 March 2012).

Conclusion

There has been a limited analysis of environmental media in South Africa despite its importance to environmental education, public awareness and environmental management. This study is a first effort in understanding the role of the media in covering and framing the issue of rhino poaching, and is meant to both demonstrate the importance of such research as well as provide some important insights into the specific issue of rhino poaching.

This study certainly has methodological limitations, including a focus on the text only, leaving out the production process by journalists and editors and the reception by readers, and the fact that it focuses on only the printed version of a single newspaper, a traditional form of media which may be declining in its significance. Certainly there is more work to be done, particularly regarding the relationships between text and readers as well as actors and journalists, and explorations of the content and impact of new media. Nonetheless, we believe that it is a much needed first step into broadening this under-researched area of study.

A number of important points raised above suggest the need for follow-up studies. There is a low number of articles covering the effects of rhino poaching, particularly the effects on the lives of the public. This could result in the public feeling disconnected from, and impervious to, the issue. This raises important questions regarding responsibility; fewer associations made about rhino poaching to the lives of citizens may consequently result in inaction and feelings of disconnection and apathy. In addition, this could lead to the public believing that they are not responsible for rhino poaching solutions. More generally, this raises questions regarding who is represented in media accounts of environmental issues, who are the 'good guys' (in this case, conservationists) and 'bad guys' (in this case, poachers), and how well this accords with public perceptions (poachers of all types are not necessarily always considered bad in public opinion; impoverished people hunting for food may garner more sympathy). The presentation of statistics with limited sources and contested information makes it necessary to trace these

sources. Following up with individual journalists to explain where the information came from would provide better insights into the production and circulation of such 'facts'.

Most importantly, our research indicates that there are a number of different framings regarding rhino poaching in particular, and most likely other environmental issues. There is a clear need for studies such as this one, which document the different framings, to be followed up with studies that firstly explore in detail the production of such frames by journalists and editors and secondly examine the public response to particular articles and frames. This is important because the frames are likely to influence the way people respond to public awareness and education on environmental issues. Environmental educators would benefit from better understanding what the public already thinks about environmental issues in order to better direct their messages. Further, a better understanding of the media could encourage environmental educators to use news outlets to reach a broad audience. It is hoped that this paper has provided some motivation and direction for these and other future research efforts.

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Endnotes

1. Article headline size relative to the article will be given 15 points for a large heading, 10 points for a medium heading and 5 points for a small heading. Measuring headlines in centimetres as done by Waitt (1995) would not necessarily provide an accurate measure of significance, as text font and size may differ between the two newspapers. A score of 25 points will be given for an article length that covers between 81–100% of the page, 20 points for between 61–80% of the page, 15 points for between 41–60% of the page, 10 points for between 21–40% of the page and 5 points for between 1–20% of the page. To score the primacy of the article within the newspaper, five points will be given for articles that appear exclusively on the front page. Four points will be given for articles that begin on the first page, but continue on another page. Articles appearing in pages 2 and 3 will be given three points, while articles appearing on page 4 onwards will be given two points. 15 points will be given for each photograph or graphic included with an article. In addition, 5 points will be given if the photographs or graphics are in printed in colour.

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Appendix. List of articles analysed

Date of publication	Author	Article title	Page no.
13/01/2012	Fiona Macleod	Rhino lovers issue ultimatum ahead of poaching hearings	9
13/01/2012	Fiona Macleod	Illegal hunts 'the worst'	9
13/01/2012	Fiona Macleod	Experts split over rhino horn sales	6
13/01/2012	Fiona Macleod	Calls to monitor 'leakages' from stockpiles	6
27/01/2012	Caroline Southey	Human deaths are not fair game	12
10/02/2012	Fiona Macleod	Arrest of wildlife butchers boosts anti-trafficking efforts	23
17/02/2012	Sipho Kings	Rhinos killed as rangers strike	12
02/03/2012	Fiona Macleod	Vets charged for illegal use of tranquillisers	18
02/03/2012	Fiona Macleod	Slaughter despite assurances	18
09/03/2012	Mary Rice	Legalised trade is a cover for laundering wildlife	33
30/03/2012	Fiona Macleod	The horn ultimatum: 'Lift the ban on trade or slaughter continues'	26–27
30/03/2012	Fiona Macleod	Legalising market 'like pulling at tail of a snake'	26
30/03/2012	Fiona Macleod	Orphan gets a second chance	27
30/03/2012	Fiona Macleod	Medical claims amount to fraud	27
03/08/2012	Sipho Kings	Kruger races to end the slaughter	16
03/08/2012	Sipho Kings	Rangers make major busts	16
03/08/2012	Sipho Kings	Rhino facts	16
28/09/2012	Fiona Macleod	Tiger man 'Varty issues rhino horn challenge	13
02/11/2012	Fiona Macleod	Rhino deal on the cards	45
09/11/2012	Julian Rademeyer	Rhino butchers caught on film	3
09/11/2012	Julian Rademeyer	Deep in the trenches of the war on rhinos	14–15