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REVIEW

MEDIA REPORTING ON THE PROTECTED AREAS IN MAHARASHTRA, INDIA: A THEMATIC ANALYSIS

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MEDIA REPORTING ON THE PROTECTED AREAS IN MAHARASHTRA, INDIA: A THEMATIC ANALYSIS

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Abstract: This research paper is an account and analysis of English media reporting on wildlife conservation and protected areas (PAs) in Maharashtra, India, between 1994 and 2015. It is based on 269 articles that first appeared in the media and were then edited for publication in the 'Protected Area Update'. The analysis attempts to draw out significant themes that the media deems important in matters of wildlife conservation. Themes that emerge prominently are related to issues of land, displacement of people, development projects, and tourism. We also discovered that some PAs like the Sanjay Gandhi National Park and the Tadoba-Andhari Tiger Reserve receive disproportionately large media space, while a third of the PAs were not reported on at all. This does not imply that these areas were not reported in the larger media that the newsletter draws upon, but points to the skewed coverage and (limited) importance these PAs get. We argue that media content analysis is a useful tool because the media is the first interface for the general public on issues of wildlife conservation and plays an important role in shaping public opinion. To our knowledge, this is the first such state-wide study of media reporting of wildlife conservation issues; it provides important insights into the wildlife conservation discourse in the country as well as the concerns, priorities, and challenges of the media.

Keywords: Conservation, media, media content analysis, protected areas, Protected Area Update, national parks, wildlife, wildlife sanctuaries.

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THE DULEEP MATTHAI NATURE CONSERVATION TRUST



INTRODUCTION

Reporting of wildlife conservation issues in India takes place at many scales — national, state, and regional — and in several languages. Many conservation news sites on the internet are also dedicated to reporting conservation issues and bringing them into the mainstream discourse. As one of the main sources of wildlife-related information for the public, conservation reporting in the media holds immense power in influencing not just the opinions of the public but also that of decision-makers and interest groups (Barua 2010). Reporting related to wildlife or conservation issues in mainstream papers and news-sites has to compete for space with several other topics such as politics, sports, and financial affairs; hence, news stories are filtered and only those that are considered relevant to the consuming population make it to print. This situation inevitably results in conscious and unconscious biases in the selection of conservation news for everyday consumption.

Studies show that issues involving conflict (negative interactions) and drama are considered more 'newsworthy' and are, therefore, more likely to be reported (Shoemaker & Reese 1991; Cook 1998). It was also shown that reporters often approach stories with unconscious biases to reinforce their views, such as interviewing sources who they know will confirm their opinions as opposed to more open-minded research (Shoemaker & Reese 1991). The media as an actor can also play a substantial role in the amplification or attenuation of perceptions of risk (Bhatia et al. 2013) and it becomes important, therefore, to understand and analyze themes in media coverage on issues relating to conservation.

Very few systematic analyses of conservation reporting in India have been carried out to understand the media portrayal of wildlife issues and their impact. The previous studies mainly focused on reporting of human-wildlife conflict/interactions in India — Barua (2010) looked at human-elephant conflict, while Bhatia et al. (2013) looked at human-leopard conflict and the disaster-framing approach. Others include an analysis of media reporting of the Kaziranga National Park in Assam based on reports in the 'Protected Area Update' (PAU) for the period 1996–2011 (Siddiqui & Reddi 2012) and a study that uses media reporting in the state of Karnataka to build a profile of leopard presence and range (Athreya et al. 2015).

This paper is an account and analysis of media reporting of issues related to wildlife conservation and protected areas (PA) in the state of Maharashtra, India,

as reported in the English media between 1994 and 2015. It presents, perhaps, the only such longitudinal study of its kind for the state and one among the very few for any region or theme in India.

The analysis is based on a set of 269 articles that were first reported in the media and then edited for publication in the PAU, a newsletter on wildlife and conservation that has been published six times a year for the last two decades by the environment action group, Kalpavriksh, India. The newsletter is brought out with funding support from a range of non-governmental organizations¹ and donations from individual readers. The focus of the newsletter is the geographic unit of wildlife conservation and management generically called PA.

Protected areas in India and in Maharashtra: an introduction

The main PA categories in the Indian context are national parks (NP) and the wildlife sanctuaries (WS), which were notified under the provisions of the Wildlife (Protection) Act, 1972 (WLP). Categories of conservation reserve and community reserve were added to the list of PAs in 2002, while the tiger reserve (TR) that existed as an administrative unit since 1973 (Project Tiger 1973) became a legally constituted category via amendments made to the WLP in 2006. A statutory body called the National Tiger Conservation Authority (NTCA) was also created via the same set of amendments in 2006 (Anonymous 1972; NTCA 2010).

A little less than 5% of the landmass of the country is included in the PA network today with the specific numbers being the following: national parks - 103, wildlife sanctuaries - 537, conservation reserves - 67, community reserves - 26 (Kutty & Kothari 2001; ENVIS Centre on Wildlife and Protected Areas 2017a). The number of tiger reserves, each one of which is constituted by multiple units that include NPs, WSs, and revenue and private lands, currently stands at 50 (Kutty & Kothari 2001; ENVIS Centre on Wildlife & Protected Areas 2016). The other important category relevant in the context of this paper is eco-sensitive zones (ESZ) or eco-sensitive areas (ESA) that is constituted under the provisions of the Environment Protection Act (EPA) 1986; the state of Maharashtra currently has four such ESZs (Environment Protection Act 1986; Kapoor et al. 2009).

¹The organisations include, among others, the Foundation for Ecological Security, the Duleep Matthai Nature Conservation Trust, the Bombay Natural History Society, Indian Bird Conservation Network, and the World Wide Fund for Nature - India.

Also relevant here, particularly in the context of more recent developments, is the Scheduled Tribes and Other Forest Dwellers (Recognition of Rights) Act (FRA), 2006. There are other legal frameworks such as the Coastal Regulation Zone (CRZ) under the EPA 1986 and the Biodiversity Heritage Sites under the provisions of the Biological Diversity Act (BDA) 2002 that are relevant for a larger discussion on conservation but are outside the purview of this paper.

It is also important to mention here that there exists a large body of research, analysis, discussion, and debate on a range of issues related to the protection of forests and different ecosystems, the relevance and impact of conservation laws to the goal of conservation itself, and the impact these legal frames and the PA network have on local human communities (cf. Pathak-Broome & Desor n.d.; Pande et al. 1991; Dowie 2009; Lasgorceix & Kothari 2009; Sekhsaria 2007; Bijoy 2011; Desor 2015). Going into the details of all these discussions and debates is beyond the scope of the current paper. It is important to note, however, that this larger legal and policy context and its implications and related debates form a crucial backdrop to the reporting in the media, to the news and information that is carried in the PAU, and to the discussion and analysis of PA-related news from the state of Maharashtra that is the focus of this paper.

Maharashtra

Maharashtra, one of the three largest states of India in terms of area and population (Pande & Pathak 2005b), has a high concentration of English media houses and also a large number of PAs ($n=42$; Fig. 1), second only to the Andaman & Nicobar Islands where the number stands at 105 (ENVIS Centre on Wildlife & Protected Areas 2017a; MFD 2017)² These PAs cover an area of about 10,000km², which is about 3.26% of the total area of the state. The largest of these is the Tadoba-Andhari Tiger Reserve (TATR) at 1,727 km² (ENVIS Centre on Wildlife & Protected Areas 2016), followed by the Great Indian Bustard Sanctuary at 1,222km² (Pinjarkar 2011). The state also has six tiger reserves: Bor, Melghat³, Nawegaon-Nagzira⁴, Pench⁵, Sahyadri⁶, and TATR⁷ (ENVIS Centre on Wildlife and Protected Areas 2016). There is also the Malvan Marine Sanctuary and the more recently created PAs like the Thane Creek Flamingo Sanctuary and the one in Mahul-Sewri (Anonymous 2015a; ENVIS Centre on Wildlife & Protected Areas 2017b). For a comprehensive account of the history, ecology, and management challenges related to the PAs in Maharashtra, see Pande & Pathak (2005a,b).

The Protected Area Update⁸

The PAU, published by the environment action group Kalpavriksh, was initiated as the 'Joint Protected Area Management Update' in 1994 (JPAM Update - 1 1994; Kothari 2012). The name was changed to the current Protected Area Update in 1999 (PA Update - 21 1999) in response to the kind of news that was being received and based on feedback from readers.

The newsletter is a collection of news stories related to PAs appearing in major English language dailies around the country that are collated and edited before being put together in a pre-determined format. Published once every two months, the PAU is a one-of-a-kind anthology of conservation reporting in India, including news reports and information from the pre-internet and pre-online newspaper era. It offers, on that count, an important resource to understand the nature of both conservation challenges and of the relationship between conservation issues and the media. That being said, there are a few caveats regarding the choice of news carried in the newsletter and, by implication, on the analysis and inferences drawn in this particular paper.

Firstly, the reporting in the PAU is almost entirely secondary — it publishes only a selection of news that has already appeared in English newspapers, magazines, and, increasingly, on online news sites. There is also a critical gate-keeping function performed by the editorial team, particularly by the editor, in the choice of news that goes into the newsletter. There is also a significant

² Other sources like the website of the Maharashtra Biodiversity Board suggest there are 46 PAs in the state.

³ Melghat TR is one of the first tiger reserves in India and was constituted in 1974. It was enlarged in 2007 by combining Gugamal NP, Narnala WS, Ambabarawa WS, Wan WS, and Melghat WS (ENVIS Centre of Wildlife & Protected Areas 2016).

⁴ The Nawegaon-Nagzira TR was constituted in 2013 and includes Tawegaon WS, Nawegaon NP, Nagzira WS, New Nagzira WS, and Toka WS. Stories from all these protected areas are clubbed together under the Nawegaon-Nagzira TR.

⁵ Pench TR was constituted in 2007 and includes Indira Priyadarshini Pench NP and Pench Mowgli Sanctuary.

⁶ The Sahyadri TR was created in 2012 and spreads over an area of 1,165km². The Chandoli WS, Chandoli NP, and Koyna WS are now included in the Sahyadri TR and all stories from these PAs are included in this section.

⁷ Tadoba-Andhari TR was constituted in 1955 and is spread over an area of 1,727km². It was comprised of the Andhari WS and Tadoba NP (ENVIS Centre on Wildlife & Protected Areas 2016a).

⁸ The print version of the newsletter is currently sent to about 2,000 individuals. It also goes out in a PDF format via a dedicated electronic mailing list: <https://groups.google.com/forum/#!forum/paupdate>. The newsletter is also hosted on a number of websites (e.g. www.wii.gov.in and www.kalpavriksh.org) and also has a dedicated Facebook page.

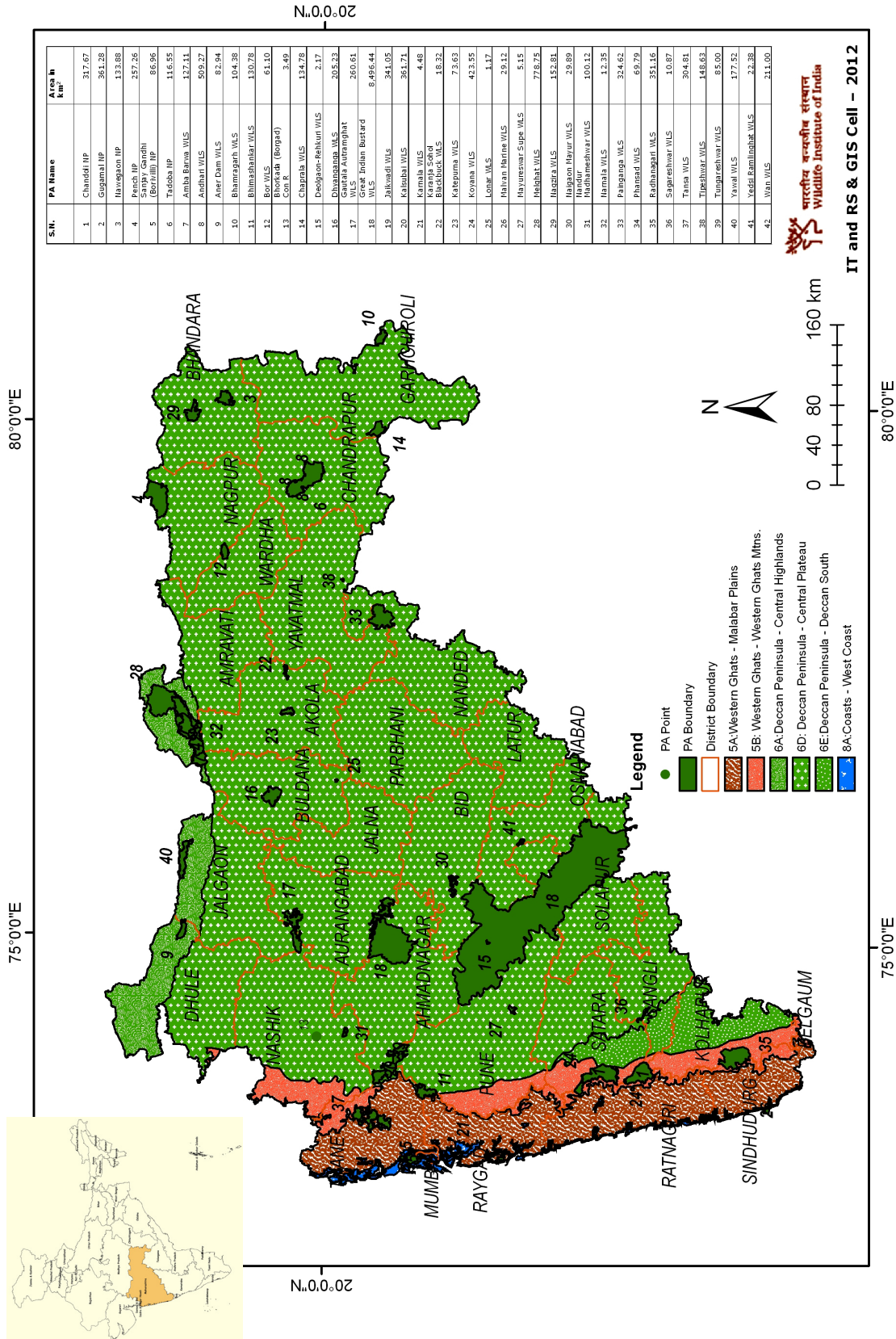


Figure 1. Protected areas in Maharashtra, India. Source: http://wiienviis.nic.in/WriteReadData/UserFiles/image/PAS_Map_Database/images/maharashtra.jpg (accessed on 21 February 2017). Source (inset India map): Foundation for Ecological Security.

amount of editing the stories go through before they are re-published. There is a broad set of unwritten criteria-of-relevance that influences the decision on the news to be included and on the editing carried out. This choice is made by the editor leading to, most certainly, selection biases. An effort was made to draw attention to the existence of this selection bias and its influence at relevant places in the analysis that appears in this paper.

It is important, in the general context, to bear in mind that relevance and criteria for selection of news is a hugely subjective process and this is discussed extensively in the literature in media studies (cf. Wahl-Jorgensen & Hanitzsch 2009). This subjectivity is difficult to explicate beyond a point, but some of its clearly identifiable dimensions in the case of this paper are listed below to make it more explicit:

a) The two main sources for news on Maharashtra in the context of the PAU (and, therefore, for this paper) are 'The Times of India' and 'The Indian Express'. This is not surprising because these are the most prominent and widely read English newspapers published from Pune, where the editorial office of the PAU is located. This is visible in the stories in this collection from the very beginning. The other publication that is prominently accessed, particularly for the latter half of the period covered in this paper, is 'DNA', another newspaper. This may be explained by the fact that a Mumbai edition of the newspaper was started in 2005 and there was a Pune edition as well in the period 2008–2014. The other newspapers (and their websites) that news was accessed from include 'The Hitavada', 'Hindustan Times', 'Business Line', 'The Pioneer', and 'The Hindu'. The number of reports accessed from these, however, are significantly lower as compared to the three newspapers mentioned earlier.

b) For about the first eight years (1994–2002) covered in this paper, news carried in the PAU was mainly sourced from two different types of sources, the first being the Pune print editions of two prominent newspapers, The Times of India and The Indian Express mentioned above, and the second being the informal network of researchers, NGOs, and forest officials who sent news to the PAU directly from the field.

c) This begins to change from 2003 onwards. Increased access and spread of the internet is reflected in the fact that a small but noticeable number of stories in the newsletter are accessed from the web editions of newspapers like The Times of India. There is also a considerable decline in the news accessed directly from the field and from the informal network referred to above.

d) The year 2007 marks the first set of stories accessed from the Hindustan Times and from DNA. This may be explained, perhaps, by the fact that both the papers started their Mumbai editions in 2005. This meant a larger coverage of issues in Maharashtra in these newspapers and also easier access to this content in Pune where the editorial office of the PAU is located.

e) This period also marks a near complete shift in accessing of news from the print versions of the newspapers to their online editions. What is worth noting, however, is that the sources remain virtually the same, with The Times of India being the most prominent followed by The Indian Express and the DNA.

The editor also makes, on lines discussed earlier, a choice of news that is considered more relevant and more important for inclusion in the newsletter. Some non-exhaustive, illustrative examples of the same are listed below:

i. An individual news item on poaching is generally not considered for inclusion in the newsletter unless it marks a new development (poaching in a new area or using a new method) or is part of a prominent trend that has larger policy or intervention implications (one more animal killed in the same area over a long period of time).

ii. Based on the experience of regularly compiling and editing the newsletter, individual PAs that received relatively less coverage in preceding years are picked up on a priority as and when this information is available.

iii. Stories about certain issues like encroachments in the Sanjay Gandhi NP (SGNP), human-tiger conflict in the TATR, or denotification in the case of the Great Indian Bustard Sanctuary, virtually auto-selected themselves because of the developing-story nature of their relevance. This was deemed important by the editor to give the reader a full and continued sense of the issue and has, in all probability, also contributed to their prominence in a retrospective analysis that is sought to be done in this particular paper.

What is important to note here, indeed to reiterate, is that the PAU does not cover the entire universe of media reportage of PAs, but offers only an important subset. Our primary contention and, indeed, the foundational assumption of this paper and analysis is that the PAU is a good proxy for reporting on PAs that is seen in the media. The subset that makes up the PAU is on that account a good representation of the full universe of media coverage because of the specific nature of this newsletter:

a) its uninterrupted publication over a substantially long period of more than 20 years,

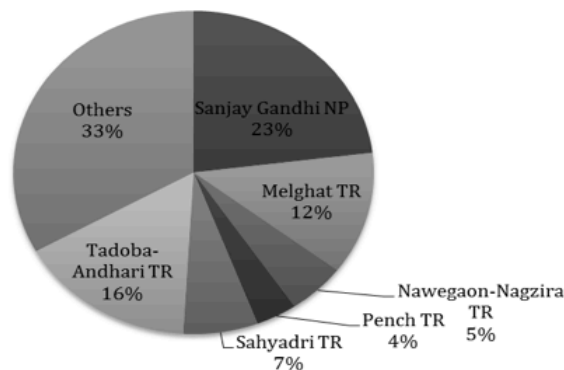


Figure 2. Share of news stories in Protected Area Update per protected area between 1994 and 2015 (total number of stories = 269).

- b) its regular publication every two months, and
- c) the focused nature of its news interest, the PAs.

The conclusions that we draw, therefore, are not (cannot) be definitive and conclusive. What we seek to present here is more in the nature of trends, patterns, and initial insights that can be the base for a larger engagement and understanding of both the nature of the media in general and of conservation-related reporting in particular.

METHODS

The database of press reports pertaining to Maharashtra that appeared in the PAU between 1994 and 2015 and upon which this paper is based number 269. This paper uses thematic analysis as its methodology for textual interpretation. This allows us to understand the underlying subjects within media content and is also exploratory while being realistic or fact-based (Vaismoradi et al. 2013). This method also lends itself to use across various kinds of data that may or may not have been collected explicitly for the purpose of analysis. Thematic analysis is a foundational, flexible, qualitative analytic method for identifying, analyzing, and reporting themes within data (Braun & Clarke 2006). It comprises the identification of patterns, themes, or 'categories' across an entire data set which, in this case, was the set of 269 media stories (Tuckett 2005; Fereday & Muir-Cochrane 2006).

'Themes' as they are described and identified in this study are the smallest units of data representation in the perspective of the researcher: "A theme captures something important about the data in relation to the research question, and represents some level of

patterned response or meaning within the data set" (Braun & Clarke 2006). It is defined as "a pattern in the information that at minimum describes and organises the possible observations and at maximum interprets aspects of the phenomenon" (Boyatzis 1998).

The data does not inherently 'contain' themes — it is the researcher that identifies and teases out themes from the data iteratively; hence qualitative analyses such as this are subjective and dependent on the individual researcher(s) (Braun & Clarke 2006). Inductive thematic analysis, the method chosen for this paper, is similar to grounded theory in that themes are allowed to arise out of the data by themselves — they are "data-driven" — without trying to fit the themes into pre-conceived baskets. This was also better suited to this research paper since the data items were not collected primarily for this project as may have been the case with, say, focused group discussions or interviews, or a retrospective effort at gathering data along particular themes or with a particular research question in mind.

The identification of themes is of two kinds, semantic or latent, the latter also being referred to as narratology (Boyatzis 1998). Semantic analysis would be purely text-based while latent analysis goes one step further in interpreting the data to pick out themes. Interpretation of the data was more useful in the case of this paper. For example, a story about the discovery of snares in the forest would be classified as poaching, even if the term 'poaching' did not appear anywhere in the story. Thematic analysis at the latent level "starts to identify or examine the underlying ideas, assumptions, and conceptualisations" (Braun & Clarke 2006).

The theme may be 'big' or 'small' in terms of size and may recur often or just appear in one or two instances. Prevalence of a theme is counted as the number of appearances that it makes through the data corpus. In this case, a theme could appear in a particular data item, i.e., news report, only once, while each news report could contain multiple themes.

For this paper, we first collated all the news stories and classified them according to the PA they referenced. As the first step, we familiarized ourselves with the data by getting a sense of the way headlines were constructed and the meta-data such as the coverage per PA and sources. We then went over the data multiple times, going back and forth each time, noting down the themes that seemed to emerge from the stories.

At the end of the first 'pass', these themes were coded and clusters emerged. Here, we define 'pass' as one round of examination of the entire data corpus of 269 stories resulting in a list of themes per data item or

news story. Multiple passes were made through the data to arrive at the deductions presented. We then went over the data repeatedly until 'new' themes stopped emerging and there was consistency in the themes identified across passes. We then curated the coded themes. We then also summed up and tabulated these themes in an attempt to showcase them graphically. Within thematic analysis, the frequency of themes may be used as a 'proxy for significance' but with plenty of caution (Vaismoradi et al. 2013). In this study, while the most 'important' themes are the ones that occur most frequently, themes are also significant for their absence or rarity. We see a range of patterns emerging that are elaborated upon further.

Our analysis reveals three key points: a) unequal attention—certain PAs and issues get more news coverage while others get very little or no media attention at all, b) unique themes—certain themes occur frequently only in the case of certain PAs, indicating the local factors that may be most important to that PA, and c) emergence of broad key themes as well as actors across the full data set.

These are discussed in detail in the following sections followed by a case-study style detailed analysis of the two PAs in the state that were most frequently covered in PAU, the SGNP and the TATR.

ARGUMENTS

Unequal attention

News from 33 PAs⁹ in Maharashtra was carried in the PAU between 1994 and 2015. That some PAs get greater media attention while most others are ignored by the press, tourists, and policy-makers alike would come as no surprise to those who follow conservation reporting. It is similar in Maharashtra with the SGNP in Mumbai accounting for about a quarter of all stories in the state (n=62). A reasonable conjecture is that the proximity of the park to a city of high population density, media outlets, and the urban English language news-reading public is primarily responsible for this. The other notable factor is the coverage that is accorded to the tiger reserves in the state.

Tiger reserves in focus

Apart from the SGNP, it is the state's six tiger reserves¹⁰ that attract maximum media attention. TATR, located in Chandrapur District, is the largest and oldest tiger reserve in Maharashtra and accounts for 16% (n=43) of all news stories, second only to SGNP. Melghat (n=33), Pench (n=10), and Nawegaon-Nagzira (n=14), which lie along the state's northeastern boundaries and

form an important contiguous tiger habitat in the central Indian landscape, are also reported on more than the others. Bor TR was a wildlife sanctuary until 2014 and was recently accorded the status of a tiger reserve. It provides important habitat connectivity between the northeastern tiger belt and the TATR. The Sahyadri TR (n=18) is Maharashtra's only tiger reserve in the Western Ghats. It was formed by combining the Koyna and Chandoli NPs, so the media stories pertaining to this reserve also combine the older stories related to these two parks.

These six tiger reserves in Maharashtra account for a significant 45% of all news stories over the last 20 years. It is also significant to note that although several tiger reserves are composed of wildlife sanctuaries and national parks, many of the individual PAs did not attract much media attention until they were accorded the status of tiger reserves. Tigers and tiger reserves attract the bulk of conservation funding and research attention. The charismatic large cat is also the main draw for a large number of local and international tourists, and this appears to allow (or perhaps even necessitates) more media coverage (Patra 2010; Anonymous 2015b; Menon 2016).

Unequal coverage

Around 15 PAs were not reported on at all or were covered very marginally in the PAU. Even 40-year-old parks such as the Gugamal NP¹¹ in Amaravati District did not find a single mention, nor did the Malvan Marine Sanctuary. Other PAs in this under-reported category were the Amba Barwa WS, Aner Dam WS, Bhamragarh WS, Chaprala WS, Karanjasohol WS, Katepurna WS, Mayureswar Supe WS, Naigaon Mayur WS, Narnala WS, Painganga WS, Phansad WS, Wan WS, and Yedsi Ramlinghat WS. These PAs are, in a sense, conspicuous by their absence. While understanding or analyzing the reasons for this is beyond the scope of this particular paper, the absence needs to be understood; an explanation of the dynamics involved would be as important as it would be instructive.

⁹The master list of protected areas used for this analysis was accessed from the website of the Wildlife Institute of India (ENVIS Centre on Wildlife & Protected Areas 2017).

¹⁰TRs often comprise one or more PAs. In the case of this paper, we clubbed news items of individual PAs under the TR that these PAs constitute; this partly explains why TRs show a larger number of news reports against their names (also see footnotes 3–7).

¹¹Melghat TR, of which Gugamal NP is a part, does get considerable media coverage, as was noted already. The point here is that Gugamal as an independent entity has received little, if any, attention.

Table 1. Protected areas with four or more news reports in Protected Area Update along with the most recurrent themes in order of frequency.

Protected area	No. of stories	Top themes
Sanjay Gandhi NP	62	Encroachment, tourism, human-wildlife interaction
Tadoba-Andhari TR	43	Local communities, displacement, human-wildlife interaction, zoning, funding
Melghat TR	33	Local communities, poaching, research
Sahyadri TR	18	Displacement, local communities, development activities
Nawegaon-Nagzira TR	14	Local communities, administration
Bhimashankar WS	13	Religion, tourism, pollution, awareness
Great Indian Bustard Sanctuary	11	Denotification of land, conservation, awareness
Pench TR	10	Displacement, local communities, animal relocation
Matheran ESZ	7	Land (declaration as ESZ), zoning, tourism, pollution
Tungreshwar WS	6	Animal relocation, encroachment, institutional non-cooperation, religion
Karnala WS	5	Linear intrusion (widening of NH17), encroachment
Mahabaleshwar ESZ	5	Zoning, administration, tourism
Mansingdeo WS	5	Land (notification), institutional non-cooperation
Radhanagari WS	4	Mining, animal relocation
Sewri Wetlands	4	Development activity (sea link), land

PA-centric unique themes

The thematic analysis shows further that most PAs were associated with themes and issues that were unique to them. While PAs like the SGNP and the TATR that get wider coverage do have more multi-faceted reporting, each individual PA is characterized by a few themes that run through most of the stories related to them (see Table 1 for prominent themes associated with specific PAs).

Understanding the associations

Our analysis suggests that specific PA-related issues exist at two broad levels. While it is clear on the one hand that themes with a sociopolitical dimension such as conflict, displacement, and tourism get more traction in the media, individual PAs do have unique issues related to the human dimensions and cultural forces at play in that space.

In the case of the Bhimashankar WS, for example, the presence of the Shiva temple inside the sanctuary and the resulting pilgrimages and religious tourism appear to be one of the prime management issues (cf. Mavinkurve 1999; Shinde 2009), while in the Great Indian Bustard

Sanctuary, issues of denotification attracted maximum reportage (Pinjarkar 2011). In the case of Matheran, the positioning of the hill station as an attractive tourist destination, the resulting development pressures, and its conservation status as an ESZ were the issues most relevant in the reporting (Balaram 2002; Vyas 2012). In the case of the Melghat TR, as with all other tiger reserves in the state, the displacement of local people and ensuing discord emerge repeatedly in the media as the tropes that are most significantly associated with them (cf. Anonymous 1999b; Negi 2011).

The Melghat and Nawegaon-Nagzira TRs also reported the highest incidences of poaching of tigers over the past 20 years (cf. Pinjarkar 2014; Deshpande 2015). It would be interesting to co-relate these features with actual incidences of poaching in these tiger reserves to see whether media reporting is reflective of the actual proportion of these incidents.

Themes were also seen to have an important temporal dimension, appearing as they did in several consecutive stories about respective PAs before fading away and being replaced by another thematic focus. Possibly, the media follows a case until its resolution before the next issue crops up. This was seen most prominently in the case of the SGNP with the reportage moving from issues of land, encroachment, and relocation in the first few years to issues of development threats, linear intrusions, and human-wildlife conflict for the period 2010–2015. Significantly, issues of encroachment and relocation were conspicuous by their absence in this period (see Table 2 for the changing focus and theme of reporting in the case of SGNP). As the vast majority of the stories are event- or conflict-based, these trends in media reporting may actually follow the current threats faced by particular PAs.

Themes in the reportage

Press coverage of PAs in Maharashtra touched on a number of themes over the years. Our analysis suggests 39 themes, the most common of which in order of frequency were local people, land, tourism, displacement, research and development activity, zoning, human-wildlife conflict, and encroachment. We reiterate, due to the latent nature of this analysis, that the identification of themes is subjective. A 'theme' was considered to be the smallest unit of a subject that was touched upon in the news report. Several of the 39 themes 'overlap' or are inter-related.

We see, for example, that although most of the stories about local people were related to their displacement, 'displacement' is still a unique theme

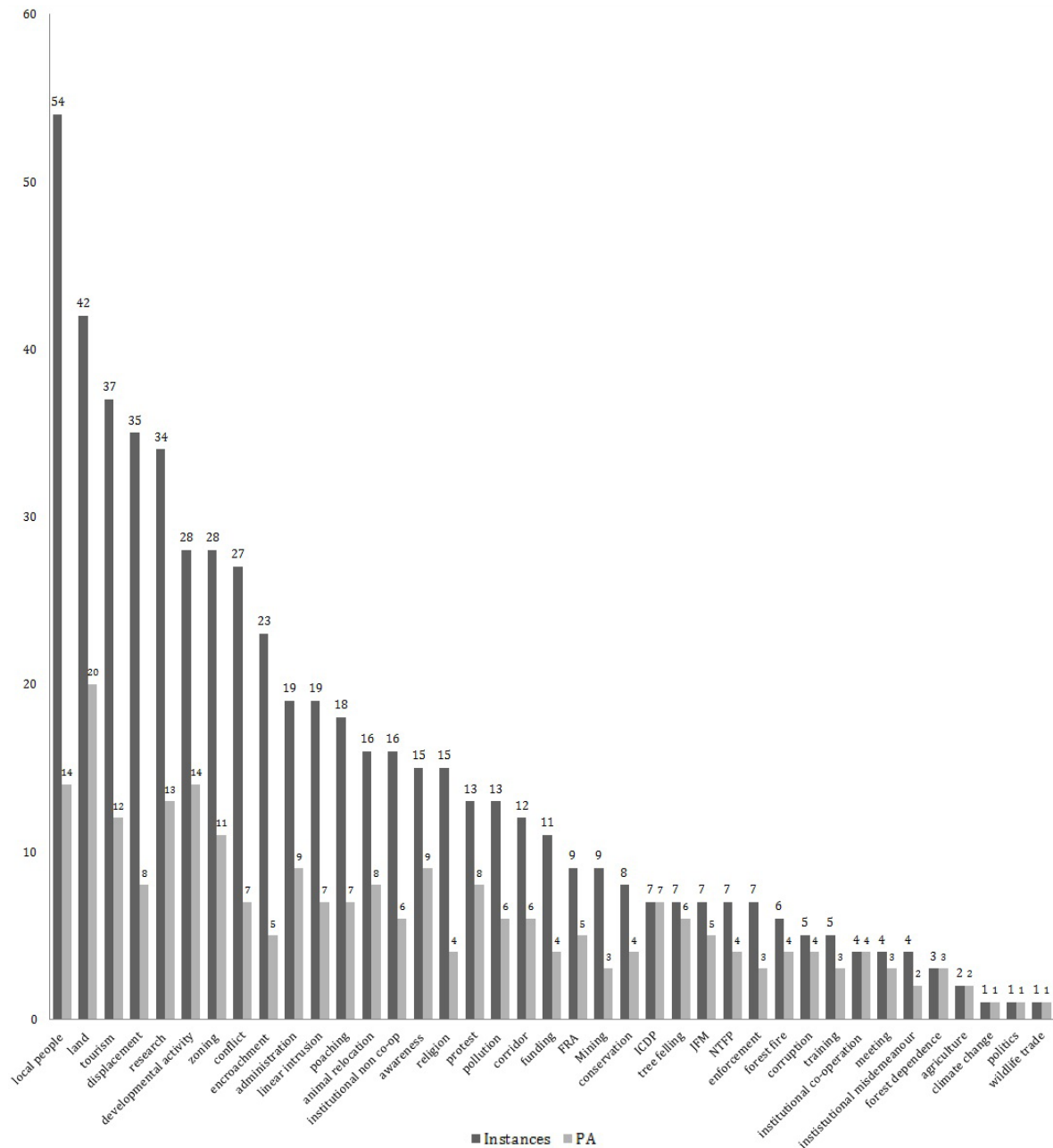


Figure 3. Themes in media reporting of protected areas and the number of stories in which they appear (instances) in Protected Area Update.

Table 2. Evolution of themes in time in the reporting on Sanjay Gandhi National Park in Maharashtra, India, in Protected Area Update. Themes are listed in order of frequency of appearance.

Period	1997–2000	2001–2005	2006–2010	2011–2015
No. of stories	14	13	19	16
Themes	<ul style="list-style-type: none"> - Encroachment - Tourism - Local people - Displacement 	<ul style="list-style-type: none"> - Displacement - Human-wildlife interaction - Local people 	<ul style="list-style-type: none"> - Encroachment - Tourism - Human-wildlife interaction 	<ul style="list-style-type: none"> - Linear Intrusion - Research - Zoning - Human-wildlife interaction

in itself as it is distinct from the topic of 'local people', although associated with it in nearly all instances. Therefore, news reports discussing the displacement of local people would be tagged under both these themes. 'Zoning' is closely related to the theme of 'land', yet we tried to make a subtle distinction between, for example, stories about the declaration of buffer zones or disputes on mining in core or buffer areas of reserves and reports that were more distinctly land-related such as notification of new sanctuaries. The attempt was to remain consistent throughout our data analysis.

The number of stories in which a particular theme occurred as well as the number of PAs from which these themes were reported are shown in Fig. 3. For example, 'encroachment' was a highly concentrated theme, while 'land' was distributed across PAs. The details of all the themes emerging as important in the course of this analysis of media reporting of PAs in Maharashtra are shown in Fig. 4.

In the section that follows, we go into further details of key themes, 'local people', 'land', 'tourism', 'displacement', 'research', 'development projects', and 'conflict', that appeared in our analysis.

Local People

The most common theme that emerges in this analysis is that of 'local people', featuring as it does in 20% of the entire reportage. These stories were mainly concerned with the displacement of tribal people and villagers from within PAs. The reports speak of traditional forest-dwellers and inhabitants of villages inside or in the fringes of parks being relocated and recount the negotiations, protests, and legal consultations that were an inevitable part of this process. We see this most obviously in the case of the SGNP and in TRs such as Melghat and TATR. The tone of the reportage is heavily biased in favour of local people. Several of these stories also feature political parties, NGOs, and the courts, and present their roles in the displacement debate. It is also noteworthy that two-thirds of these stories about local people were related to the tiger reserves.

Other stories relating to 'local people' reported incidents of human-wildlife conflict, joint forest management practices, and poaching. Here we must mention that 'encroachment' as a theme is separate in our analysis. 'Encroachment' was used mostly to describe (as reported in the stories) "slum-dwellers" (cf.

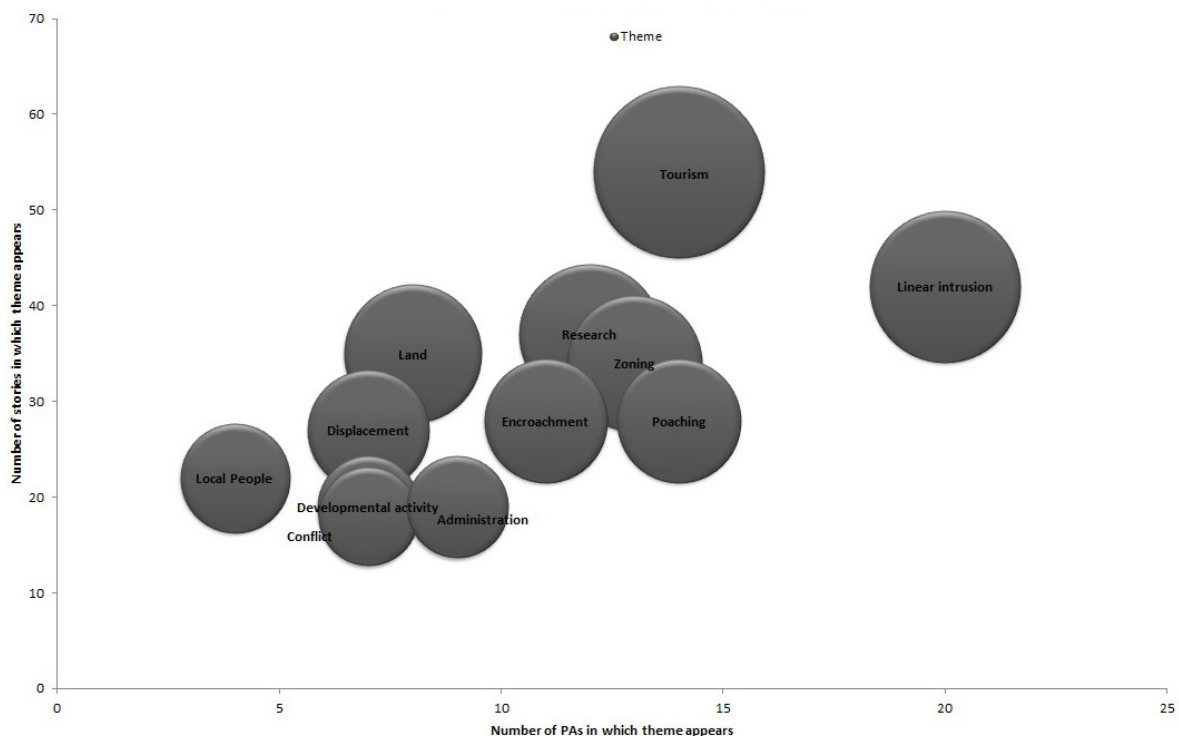


Figure 4. Most frequently occurring themes in Protected Area Update, with the X-axis indicating how 'widespread' the theme was across protected areas and the Y-axis indicating the frequency of appearance of the theme.

Anonymous 1999b; Singh 2000) “squatting” inside SGNP or other illegal structures that unlawfully utilized forest land.

Some other themes that emerge as closely related to the theme of ‘local people’ include the Forest Rights Act (FRA), dealing mainly with the interactions between the local people and authorities with regard to settlement of rights and land titles (Pinjarkar 2013; Upadhyay 2013) and joint forest management (JFM), and describe meetings and workshops for integrated forest management.

Land

With India’s PA network being a dynamic, evolving scene of negotiations, protests, and legal interventions, ‘land’ emerged as the second most important theme in our analysis. The theme of ‘land’ cropped up in 42 of the 269 stories and was the single most common theme across PAs, featuring in stories related to 20 PAs in the state. Most of the reporting detailed the notification (n=26) and denotification (n=10) of PAs or parts of the PAs. This is mainly due to the denotification of large parts of the Great Indian Bustard Sanctuary from 8,496km² to 1,222km²; (Pinjarkar 2011) and the notification of several new PAs, for example, in Vidarbha, in lieu of this denotification (Anonymous 2012)

Other ‘land’-related stories discussed the encroachment of forest land, ‘go’ and ‘no-go’ areas for development activities, and the declaration of buffer areas. ‘Zoning’ as a theme overlapped considerably with ‘land’ in that the declaration of buffer or eco-sensitive zones or even the boundaries of PAs were crucial to the discourse on land usage. Several of the other themes can be seen as related to these contentions over space — ‘displacement’, ‘encroachment’, ‘zoning’, ‘human-wildlife conflict’, ‘linear intrusions’, and ‘development activities’ are all themes concerning the various approaches to land use in the country and this can even be seen influencing and being influenced by other themes.

Development projects

A major debate in India is one that pitches conservation against development and development projects. Such activities proposed or implemented inside PAs include, mostly, dams or power plants but also airports (Thane Creek Sanctuary, Karnala WS), the sea link (Sewri Wetlands), pipelines (SGNP), or irrigation projects. Their impacts and related concerns were reported widely and ‘development projects’ was one of the three most widespread themes reported from

across PAs.

The narrative followed a similar trajectory in all the cases — proposal of the infrastructure/project, the opposition to it from environmentalists and local people, and the legal battles. The resulting institutional confrontation also garnered considerable notice with the courts and National Green Tribunal featuring often. Here, again, the tone was largely biased against the development activity.

A breakdown of this theme reveals that about half the reports on development activities were related to water-related infrastructure including dams and irrigation projects, numbering 13 out of the total 24 reports. The other topics included the sea link off the coast of Mumbai, windmills, airports, and pipelines.

We would like to note that the theme of ‘linear intrusions’ that includes roads, highways, and electric lines (n=19) was listed independently because of its particular impact on the landscape and the PA. If clubbed together with ‘development projects’ and also those related to ‘mining’ (n=9), this issue could be considered as one of the biggest challenges before the PAs in Maharashtra and, by extension, across the country.

Displacement

‘Displacement’ was the fourth most frequently reported theme with 35 reports discussing displacement-related issues. As noted earlier, the theme of ‘displacement’ is closely related to the themes of ‘land’ and ‘local people’ since it is the local people that are displaced from PAs. Perhaps the human-interest angle of this topic affords greater interest for the media. Another closely related theme is ‘protest’, with several media reports describing the clash between the local people and authorities over displacement from their settlements. Twenty-two of the 35 stories (63%) with the theme ‘displacement’ were from the tiger reserves. This raises some important questions that we would like to flag for further research and analysis: Do tiger reserves get wider news coverage, thus skewing the statistics just because of their status as tiger reserves? Is there greater engagement with local people within tiger reserves due to greater scrutiny and better funding? Is it possible that there is greater pressure on authorities to move local people out because of greater prestige and visibility associated with a tiger reserve?

Conflict

Twenty-seven news reports from Maharashtra were related to human-wildlife conflict and these came from

just seven PAs, making this one of the most concentrated themes¹². More than 80% (n=22) of these reports came from just two PAs, SGNP and TATR. In SGNP, this was related to the presence and/or sighting of leopards in human habitations in and around the park, while in TATR this was related to attacks on humans by tigers.

While there is some analysis and understanding now on the genesis of these conflicts, full knowledge of the reasons and the patterns of these are not available. In the case of leopard-related conflicts in and around SGNP, it has been established, for example, that capture of leopards and their relocation to areas that they are not familiar with results in an increase of conflict incidents. Media advocacy and awareness work by researchers in association with authorities has had a significant impact in SGNP and could be a model to be followed in other parts of the country too (Athreya & Belsare 2007; Keddie 2014).

Research

Although 'research' features as one of the more commonly appearing themes in the analysis, it is important to note that most of the reports about research are from just three PAs, SGNP, TATR, and Melghat TR. These PAs account for nearly 75% of all news stories pertaining to this theme. This is in spite of a clear editorial bias in the PAU in favour of publishing reports about research that feature in the media, particularly those on less charismatic species such as insects and plants. Most of the research-related reports deal with the results of the census conducted in the PAs.

Other themes

Apart from the themes discussed above, we would also like to point to the topic of institutional relationships, particularly with and between government actors. The media appeared to be keen on highlighting the perceived inefficiency of the bureaucratic machinery, with several stories featuring squabbles amongst the forest, revenue, railways, tribal development, and even irrigation departments. Topics related to administration including themes such as corruption, training, institutional non-cooperation or cooperation, and institutional

misdemeanours accounted for about a tenth of the news coverage.

Finally, the narrative focused largely on sociopolitical issues with the issue of scientific matters being conspicuous by its absence. While there was plenty of newsprint dedicated to the opposition to development activities, the impacts of these projects were described rather superficially. The importance of corridors, for instance, was stressed in numerous reports without explaining their ecologic significance.

The main types of 'animal-centric' stories that were reported, apart from poaching, were those concerned with the results of wildlife surveys, followed by those reporting wild animal relocations, whether due to overcrowding in zoos or due to human-conflict (see Fig. 3 for a full breakdown and details of the themes in reports in the PAU).

Most important actors

An analysis of the key actors involved in the issues reveals the FD and local communities as being the most significant. NGOs were also frequently mentioned. It will be interesting to study whether this is because of the proportionate involvement of the NGOs in conservation issues, an editorial bias of the PAU in the choice of stories (that the newsletter itself is an NGO publication), or because NGOs often partner with the media in order to amplify their concerns and actions, thereby getting more publicity in spite of limited resources. We need to emphasize here that we use the term 'actor' to indicate that an entity is 'involved'; it is not a use of the term to show a hierarchy as in the power to cause an action. A situation where a "villager kills a leopard" is treated

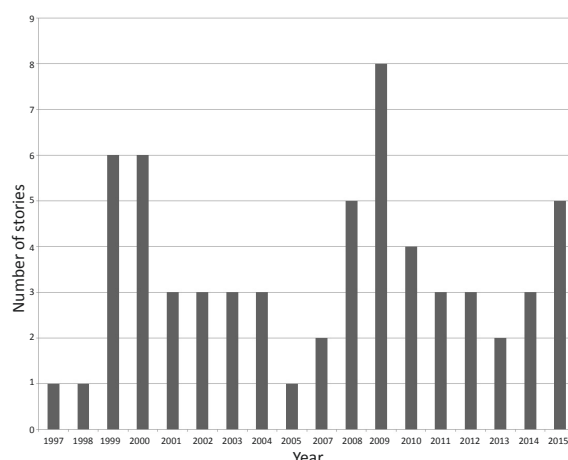


Figure 5. Coverage of Sanjay Gandhi National Park in Maharashtra in Protected Area Update by year.

¹² It is likely that a negative editorial bias in the matter of human-wildlife conflict reflects a lesser focus on this issue in the PA Update than would be seen in the media in general. The negative bias here is related to non-inclusion in the newsletter of stories of individual instances of conflict. The editorial focus was on reporting stories when they show existing or emerging trends or where incidents and events, even if solitary or isolated, are significant on account of new information, new kind of development, or a new trend.

symmetrically as one where a “leopard kills a villager”.

The tiger was undoubtedly the most-featured ‘wildlife actor’, and was mentioned in about 15% (n=41) of all the news reports. It was followed by the leopard, with 23 instances. These two charismatic cats featured in half of all the stories that mentioned animal species, validating, one might argue, the discourse on charismatic mega fauna. Another prominent issue is that of tiger-poaching while the poaching of other wildlife goes largely ignored.

Having presented a broad overview of the reportage and the themes that (do not) appear, we now shift our focus to a detailed analysis of the two most reported PAs in Maharashtra, the SGNP and the TATR.

CASE STUDIES

Sanjay Gandhi National Park

The SGNP has been an important and, indeed, a contested landscape element for the city of Mumbai for a long time. Located in the suburbs of the sprawling metropolis, its forests have been an important water source for the city since the 19th Century. It was later expanded by the erstwhile Bombay Municipal Corporation when it came to be known first as the Krishnagiri National Park, then the Borivili National Park, before finally being christened the Sanjay Gandhi National Park in 1981, with a total area of about 103km². The 2000-year-old Kanheri Buddhist caves are also

situated within the park (Pande & Pathak 2005a).

The park is at the centre of interactions amongst many actors — the local communities living in or around the park, NGOs, the courts, real estate dealers, leopards venturing outside its boundaries, and the many tourists who visit the park.

Changing focus of the coverage

Press coverage of the SGNP over the last couple of decades describes the various issues associated with the park and also how these evolved over the years. In the mid-1990s, the main narrative, as revealed through the news reports, was about the displacement of those living within the park boundaries. Other stories narrated cases of encroachment of the park for construction or diversion for other uses. Mumbai has one of the highest real estate prices in the country and land, therefore, is a highly contentious topic. The first phase of reporting from the SGNP discusses politicians and political parties getting involved along with the real estate mafia. The high court (HC) and the supreme court (SC) too played a major role in these cases, which also came to the notice of the human rights tribunal.

The next phase of reporting (2001–2005) focused on human-wildlife conflict and tourism, presumably once the issue of rehabilitation of slum-dwellers reached a steady state. There were several disagreements on the

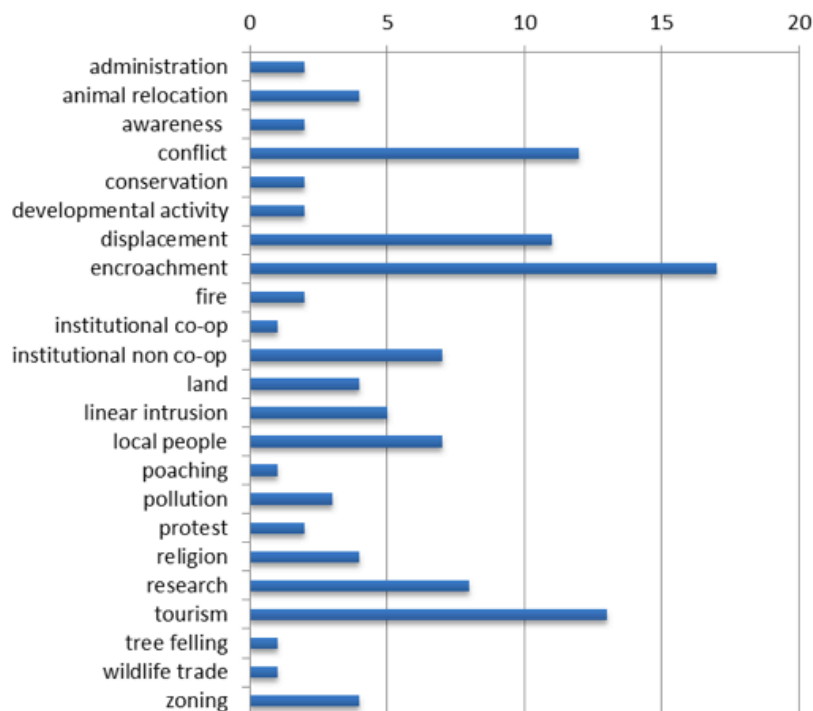
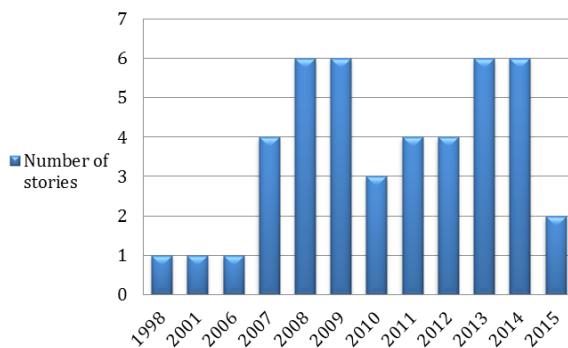


Figure 6. Prominent themes in reporting on Sanjay Gandhi National Park in Protected Area Update.

Table 3. Evolution of themes in time in the reporting on Tadoba-Andhari Tiger Reserve in Maharashtra, India¹³, in Protected Area Update.

Period	1998–2006	2007–2009	2010–2012	2013–2015
No. of stories	2	15	11	14
Themes	- Enforcement - Poaching	- Displacement - Local people	- Local people - Corridor - Zoning	- Human-wildlife interaction - Administration - Funding - Zoning

¹³ Breakdown in 2007–2009: administration, conflict (3), corruption, displacement (5), funding (3), institutional misdemeanour (3), local people (5), mining (3), NTFP, poaching, protest (2), research, tourism (3), training, tree felling, and zoning. Breakdown in 2010–2012: administration (2), human-wildlife interaction, conservation (2), corridor (3), development activity (dam), displacement (2), funding, fire, FRA (2), land (diversion), linear intrusion (highway), local people (5), mining (2), NTFP, politics, poaching, protest, zoning (3).

**Figure 7. Coverage of Tadoba-Andhari Tiger Reserve in Protected Area Update by year.**

kinds of tourism and tourist infrastructure that should be built in the park, ranging from information centres, zoo, safari, and a new entry gate. Reporting also highlighted the adverse impacts of high tourist numbers particularly with regard to littering. Conflict issues were mostly to do with leopards straying into human habitation or attacking dogs.

The more recent (2011–2015) years of reporting from SGNP were largely about other kinds of threats to the park in the form of development activities mainly as linear intrusions — railway lines, electric lines, highways, and even the metro — staking claim over the land that constitutes the national park.

Another interesting aspect is that of research. Going by the reporting in the PAU, research in the SGNP seemed to have taken off only in the last few years. Seven of the eight stories that discussed research were published after 2009. Topics of research varied widely from soil-testing to bird counts, but the leopard seemed to be the focus of most projects.

It is noteworthy that only one case of poaching was reported from the SGNP over the last 20 years, and this was in the early 90s. This may be on account of an editorial bias of the PAU against reporting individual

cases of poaching, as was mentioned, but it is also possible that considerable focus on the park results in poaching rates being lower. In any case, the larger analysis seems to indicate that the media in general usually focus on poaching of large carnivores such as the tiger and that it is likely, therefore, that poaching of deer or other smaller animals goes unreported.

A variety of actors

The SGNP has the most varied set of actors mentioned in its reports. The most ‘active’ actor was the forest department, featuring in more than half the stories. The second most commonly mentioned actors were NGOs, featuring in 23 of the 62 stories. This was followed by the Mumbai HC, with many of the stories being related to the relocation of “slum-dwellers”. The other participants were varied and included, among others, the state government and several individual ministers, the municipal corporation, the public works department, politicians, citizen groups, the urban development department, several central and state-level committees, and even the film industry — the last one more because the film city in Goregaon lies on land abutting the forests of the national park.

Tadoba Andhari Tiger Reserve

The TATR is one of the largest as well as oldest PAs in Maharashtra. Tadoba along with Kanha NP in adjoining Madhya Pradesh were established as the first sanctuaries of the Central Provinces and Berar in 1935. The tiger reserve was notified in 1995 by combining the Tadoba NP and the Andhari WS. It is located in the Chandrapur District in central India and is a popular tourist destination. This tiger reserve largely comprises dry deciduous forest and is home to several large mammals that include the Tiger, Leopard, Dhole, Muntjac, Sloth Bear, Nilgai, and Rusty-spotted Cat (Pande & Pathak 2005a).

The TATR features most often in the PAU after the SGNP with a total of 44 stories, and this is in spite of

the fact that there were very few stories before 2006.

Key themes

The overarching narrative about TATR that emerges from an analysis of the reports in the PAU is of the displacement of local communities and that of human-wildlife conflicts. The political nature of this issue clearly influenced its newsworthiness. The tone of the reporting appears to be largely neutral, but the political actors outside the government in each story appeared to play up the “tiger versus tribal” debate and were painted negatively by the media.

Unlike in the case of SGNP, the press reports pertaining to TATR are not as clearly thematic or ‘phased’, and cover a broader range of topics as seen in the thematic analysis of coverage of the reserve.

Stories of tiger-poaching found significant mention, but the media was largely silent on poaching of species other than the big cats. Enforcement measures taken by the forest department also caught the media’s attention, by consequence.

From 2008 onwards, the issue of coal mining in and around the TATR started featuring regularly in the news stories. Significantly, the framing of the stories is strongly biased against the mining activities and mining companies. Zoning around the park also gets a significant mention and is pitched as an effective solution to prevent mining and other destructive activities in the area surrounding the park.

Key actors

We also looked at the human actors featuring in the news stories — the forest department has the highest number of mentions and is featured in 31 of the 44 stories. Local communities are next, followed by NGOs and the National Tiger Conservation Authority (NTCA). Academia features in only three stories. Unlike the overall trend, fewer cases pertaining to the TATR are referred to the courts, with the HC just finding one mention and an SC-appointed committee being the only other legal actor mentioned. From an overview perspective, it emerges that certain broad themes such as sociopolitical issues occupy centre-stage while others, science in particular, are conspicuous by its absence. This is in spite of greater research activity in the tiger reserve and the inordinate attention that large charismatic carnivores attract amongst the scientific community. All of the science-based stories mentioned pertain to radio-collaring of large cats or the reportage of survey results in the park. There is also a clear underdog bias in the reporting, with the hierarchy resembling something

like tribal, tiger, development, and, finally, politics, with politicians getting the tough end of the stick.

The tiger

The tiger, quite expectedly, is one of the main ‘actors’ in the TATR, appearing in nearly half (n=20) of the 44 stories about the reserve. Leopards are next with six mentions. Apart from a cursory mention of the sloth bear, no other animal features in the news reports. On the whole, TATR has several more stories related to the general administration of the park including enforcement efforts to control poaching and details about funding. Tiger reserves also have a significantly larger number of stories related to funding.

CONCLUSION

Media content analysis is no doubt a powerful tool that can be utilized to understand the evolution of an issue over time or, conversely, to guide the discourse over an issue of public interest. There are inherent biases in reporting, whether positive or negative, and taking cognizance of this is essential to understanding the impact of the media.

Our study provides interesting insights and raises some important questions about conservation reporting in India. The main findings, as discussed, point to an unequal coverage given to PAs in the state, the emergence of broad key themes as well as actors across the full data set, and the also the association of certain themes more prominently with specific PAs.

There are, however, a number of key issues and questions this study highlights and which remain to be answered. These are presented here both as conclusions and as pointers and questions for further research and studies:

- Does the media represent issues on the ground accurately? What might be the metrics/methodologies of making such an assessment?
- What are the sources of media reporting of conservation issues in India? Are all voices in the debate given a platform?
- Why is there such a strong emphasis on sociopolitical dimensions of conservation while science-based reporting is largely missing?
- Is conservation reporting, as with reporting in general, a function of proximity (or distance) from ‘power centres’ such as Mumbai or Pune?
- An interesting question would be related to the coverage in the English media as represented in this

analysis as against reporting that is seen in the local, Marathi press. What might one find if this comparison was to be made?

- One notable development in the last decade or so is the proliferation of online news sources dedicated to wildlife and the environment as also the wider and easier access to regular news sites. This has its own compulsions and dynamics and one interesting comparison and analysis would be of a pre- and post-internet era.

We reiterate that as the primary and, often, only source of information about nature and wildlife conservation for the public, the media plays an extremely important role in awareness, understanding, and participation of people in conservation. We believe more analyses such as this one will help to understand the larger patterns and trends in what the media reports about wildlife and conservation, of what issues are considered important as also the larger political economy of the media itself, and how perceptions such as those of threat, importance, and rarity which are important tropes in the conservation issues actually mobilize the media as the media mobilizes them.

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