

Indian media representations of climate change in a threatened journalistic ecosystem

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Received: 22 January 2010 / Accepted: 28 January 2010 / Published online: 9 February 2010
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1 Introduction: appraising media ecosystem services around the globe

As 2010 unfolds, environmental journalism around the world is fraught with capacity challenges to collectively cover complex and dynamic stories at the human–environment interface. Recent years have seen significant reductions in journalistic ecosystem services. Examples abound: CNN slashed their entire science, technology, and environment reporting unit; the *Seattle Post-Intelligencer* discontinued their print run; the *Los Angeles Times* had cut their newsroom staff in half in the last dozen years; the *Rocky Mountain News* shuttered their doors altogether. It has been estimated that approximately 25% of the news industry’s workforce has been cut since 2001 (Pew 2009; Boykoff 2009). Concurrently, the number of newspapers that featured weekly science sections atrophied, losing nearly two-thirds in the past two decades (Pew 2009; Carroll 2006). In many places in the Global South, journalists continue to lack the capacity and training to cover the intricacies of climate science and policy, as well as lack access to clear, timely and understandable climate-related resources and images (Harbison 2006; Shanahan 2009).

Journalists, editors, and organizations surviving newsroom cuts and shortfalls have been left to cover the contours of climate change along tighter deadlines, and with increased multi-platform demands (video, audio and text along with blogs, Twitter, Glogs (see www.getglogger.com), YouTube postings etc). Moreover, in the name of efficiency, reporters increasingly cover a vast range of beats, making it as difficult as ever to satisfactorily portray the complexities of climate change. Put simply, journalists and editors striving for fair and accurate reporting are getting swamped by these larger scale pressures (Boykoff 2007).

Yet in this perilous landscape, 2009 ended with soaring media coverage of climate change around the world. Climate news seemingly flooded the public arena. The

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much-hyped and highly-anticipated United Nations climate talks in Copenhagen, Denmark (COP15), along with news about the hacked emails of scientists from the University of East Anglia (UEA) Climate Research Unit (CRU) played key parts in this dramatic rise. These events also linked to ongoing stories of energy security, sustainability, carbon markets, and green economies and so on. Articles and segments ranged widely, from stories about what role humans play in climate change to questions about how to effectively govern the mitigation of GHG emissions through various cap-and-trade market mechanisms as well as other schemes for Reducing Emissions from Deforestation and Forest Degradation (REDD).

To appraise these trends, Maria Mansfield (Exeter University) and I have continued to track the quantity of media coverage of climate change or global warming through a selection of 50 newspapers around the world (Fig. 1).

The general increase across all regions to end 2009 is clear. The volume of coverage at the end of 2009 was about five times greater than that at the turn of the millennium. Of note, we examine newspapers here as indicators of larger media trends because newspapers have a particularly strong agenda-setting influence on policy action, and public engagement (Briggs and Burke 2005; Starr 2004). Also, newspapers are frequent sources for stories that cascade through other media such as television, internet, and radio outlets (Pérez-Peña 2010). It is also important to point out that the trends here over time carry more explanatory power than the absolute numbers of stories in each region. We based our decision regarding which newspapers to include on the key factors of their circulation and influence amongst policy makers and the public. Reliable access to the newspaper's archives was important too, influencing source selection as well as the January 2004 starting point.

The uptick in North American coverage (of which US newspapers are a part) is not as pronounced as the increases in the other regions. North American newspapers

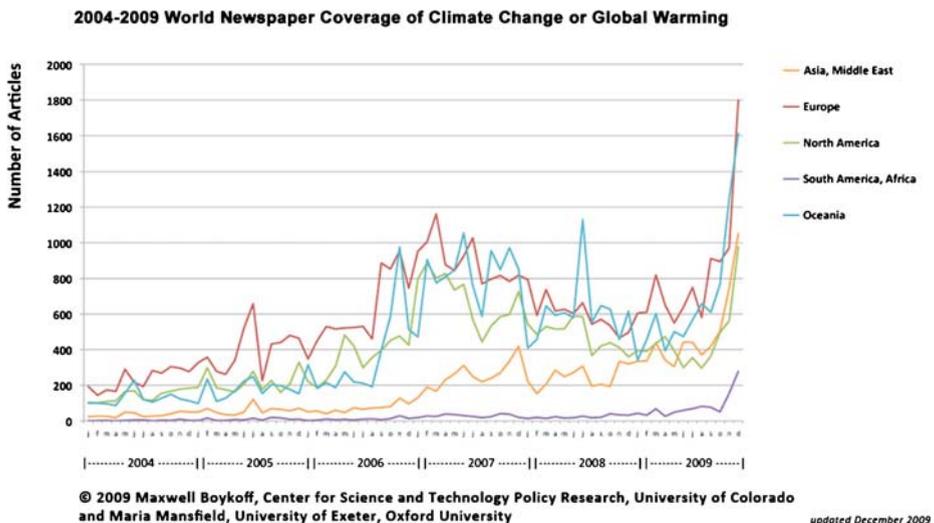


Fig. 1 2004–2009 world newspaper coverage of climate change of global warming (see http://sciencepolicy.colorado.edu/media_coverage/)

had a rise of just 59% from the start of the year, as contrasted with 85%, 79%, 68%, and 67% increases in South America/Africa, Oceania, Asia/Middle East, and Europe respectively. Possible reasons for this include the facts that COP15 and the UEA CRU email hacking both took place in Europe, thereby lowering transaction costs for European environment and science journalists to cover the issue. Also, COP15 provided news hooks aplenty for journalists—covering the environment, science, politics, business, society—from all around the globe to cover the talks involving nearly every nation on the globe represented. But, the dominance of the ongoing US Congressional debates around health care ‘reform’ served as a contextual factor limiting the ‘news hole’ for climate stories during this time. Nonetheless, these increases are dramatic. However, if tragedies in Haiti evidenced by the trigger event of the January 12 earthquake instead were on December 12 (during the COP15 talks), that surely would have reduced this steeply rising slope.

The previous peak over this period occurred in early 2007. This increase can be attributed to the highly influential IPCC Fourth Assessment Reports, released in stages over the first half of the year amidst a backdrop of highly fluctuating oil and gasoline prices. In addition, continued discussions of the influence of Al Gore’s film provided news hooks into climate change-related stories in Europe, North America and Oceania. However, this intensified media attention in 2007 was greatly surpassed by the news attention to climate change that closed out this past year.

As we collectively move into 2010, it will be worthwhile to continue to track how ongoing climate science, policy and public considerations permeate media discourses. Will this increase in coverage be sustained? Will it drop off just as steeply? In the meantime, it is useful to ponder: what might these trends indicate? Do they offer a flicker of hope in an otherwise worrying time for environmental journalism, and traditional media more generally? How might trends differ between traditional media and new/social media?

To the extent that elected officials, (climate) policy negotiators and rank-and-file policy actors view amplified media attention to climate change as a proxy for public pressure and concern, these trends have the potential to catalyze climate mitigation and adaptation actions. Furthermore, these trends may indicate that newsrooms are adapting to the critical capacity issues and barriers mentioned previously. Also, these trends may show that more information on the vital issue of climate change is becoming available to the citizen-consumer. Walter Lippman classically wrote about how information has the potential to help citizens make more informed decisions, and can contribute to common interests emerging from the ‘complex unseen environment’ (Lippman 1922).

Yet, these more promising interpretations might need to be reined in. This figure notes the trends in coverage of climate change or global warming, relative to the amount of coverage of climate change or global warming at other times. More generally, stories tracking issues, events and information on ‘environmental issues’ (of which climate change is a subset) have continued to occupy a small nook in news overall. In other words, relative to other issues like health, medicine, business, crime and government, media attention to climate change remains a mere blip. Precise data on these trends remain difficult to collect across countries and regions. However, taking a look just at US coverage in 2009, Sartor and Page found that just 1.5% of news coverage was devoted to all environmental issues (Sartor and Page 2009). This varied slightly, where newspaper coverage of the environment occupied 2.7% of the

overall news hole, while it was 1.6% on radio, 1.3% on network television news, 1% on the internet, and 0.8% on cable television news.

This expansive exploration of the trends in the amount of coverage still, however, does not delve into analyses of the *content* of this coverage of climate change or global warming. Academic research has been increasingly addressing aspects of questions around content, and implications for public attitudes, intentions, perceptions and behaviors (e.g. Anderson 2009; Boykoff 2009; Carvalho and Burgess 2005; Liu et al. 2008; Russill and Nyssa 2009). Such a focus leads more specifically then into a review of the findings by Billett (2010) in this issue.

2 Indian media portrayals of climate change

Billett's paper 'Dividing Climate Change' advances ongoing considerations of media representations of climate change in a number of important ways. In particular, he maps out how these English-language, nationally circulated papers may have actually fortified rather than broken down barriers stemming from framing climate change along a 'risk–responsibility divide' during the study period of January 2002 through June 2007. He also notes how the demonization of the US position on climate mitigation action has contributed to insider–outsider discourses evidenced in these media representations.

Billett does well to situate these contemporary trends historically, through attention paid to factors such as India's growing population, urban–rural demographics, and per capita as well as country-level greenhouse gas (GHG) emissions profiles. He also effectively makes connections between how differentiated per capita emissions and colonial legacies link to current conceptions of moral responsibilities and perceptions of 'fairness' in India.

Discussions regarding 'common but differentiated responsibility' gained traction in the early 1990s through the seminal work of Anil Agarwal and Sunita Narain at the Center for Science and Environment (CSE), where they made distinctions between what constituted 'survival' and 'luxury' emissions (Agarwal and Narain 1991). These interventions shaped UN negotiations in the years that followed, and similar distinctions permeated codified policy declarations such as the 1995 Berlin Mandate and the 1997 Kyoto Protocol (Schroeder 2009). Early work from CSE also opened up space for more textured considerations of equity, justice and differentiated vulnerability to climate change (e.g. Baer et al. 2000; Müller et al. 2007; Parks and Roberts 2009).

Valuably, Billett also provides needed texture to ongoing considerations of the Indian citizenry. In so doing, he also illustrates the complexities involved in dealing both domestically and internationally with mitigation of GHG emissions. Rather than treating India simply as a homogeneous and singular entity of interests, he points out clear distinctions on consumption patterns between impoverished Indians (with negligible GHG emissions) and Indian middle and upper classes. Billett notes "a citizen from the highest income group in India—comprising just 1% of the population—emits four-and-a-half times more CO₂ than a citizen within the poorest 38% of the population...the richest 14% of citizens emit 24% of India's CO₂ emissions (Ananthapadmanabhan et al. 2007)" (2010, 1–2). These comments

are reminiscent of points made by Michael Thompson and Steve Rayner a decade earlier:

India has a middle class larger than the entire population of many Northern countries... if we make the conservative assumptions that the affluent middle class is only twice the size of India's MTV audience (around 31 million) and is as energy efficient as the average Japanese citizen (2.5 tonnes of carbon per capita per annum), the carbon dioxide emissions of the Indian middle class alone would exceed the total emissions of Australia... From this standpoint, it seems that the vast numbers close to destitution rescue the middle classes (the "local North" as they are sometime called) of many less industrialized countries from the same accusations of per capita overconsumption that they themselves level at industrialized countries (1998, 313)

In addition, Billett's work here draws out how there have been differences emergent in Indian and US press coverage of anthropogenic climate change over time: remarkably 98% of coverage in the sample set accurately attributed climate change to anthropogenic causes. His findings also reveal that Indian media have actually under reported the aforementioned issues of intra-national inequity of GHG emissions. In so doing, Billett perceptively notes that these tropes might seem to be useful domestically among the elite readership of the *Hindu*, *Times of India*, *Hindustan Times*, and *Indian Express*, but do not seem to ultimately aid progress over the chasm of ongoing North–South debates and discussions. Ultimately, he argues that the depoliticization of the scientific question of 'whether humans contribute to climate change' is supplanted by a strong normative and political frame around (Indian) risk and (Global North) responsibility. Billett does not delve much into the implications of this bifurcated discourse (see Putnam 1988 for more), but he opens the space for many productive discussions that can and should follow.

The bulk of research to date on media coverage of climate change has focused on countries in the Group of Eight and other countries of the Global North. Mike Shanahan has recently catalogued the scant studies and projects which examine media coverage of climate change in the Global South (Shanahan 2009). Such a lack of understanding of media representations in these places is an ongoing challenge for accountability regarding climate change. Peter Newell has pointed out that tragically those in the Global South who are often at the frontlines of climate impacts are also those who often have no voice in ongoing policy discussions (Newell 2008). This is certainly also the case with research to understand how media representations from these countries play a role in how (un)authorized voices may or may not shape negotiations of truth claims, and considerations of management of the conditions of lives and livelihoods in the face of climate change. Billett's work helps to illustrate why such research matters to the high-stakes, high-profile and highly-contentious ongoing negotiations about the causes and consequences of climate change in the international, national and sub-national arena.

That said, these contexts are rapidly changing and shifting. Indian English-language national newspaper coverage of climate change has risen sharply in the past 18 months (Fig. 2), and work must be done to see how these frames Billett identifies have played out since 2007. Moreover, an updated assessment of the 'international othering' is needed. Billett noted that the US were "framed overwhelmingly negatively" (2010, 1–2). His Fig. 4 shows this divide, with ire focused clearly on the

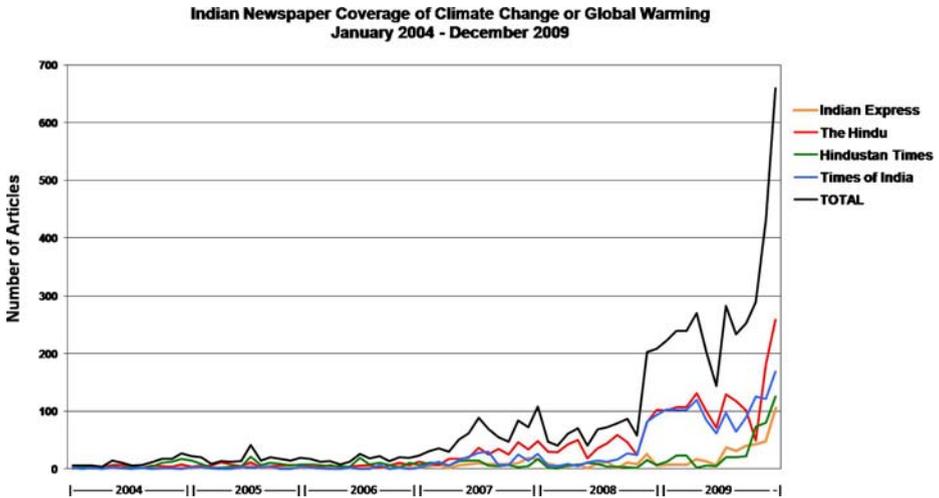


Fig. 2 Indian newspaper coverage of climate change of global warming January 2004–December 2009

US. However, Billett’s analyses only cover the period of the US George W. Bush administration, found to be vilified by the Indian press.

A year now into the US Obama Administration, it would be fascinating to see how these discourses may have shifted, particularly following COP15 negotiations as well as the bi-lateral climate talks between Obama and Indian Prime Minister Manmohan Singh that took place during his official state visit to the US in November 2009. This first official state visit extended to the Indian Prime Minister may have been seen domestically as a sign of significant difference between the stances of the Bush and Obama administrations. International media coverage of the visit noted that, “President Obama has underlined his country’s strong ties with India, describing their relationship as one of the defining partnerships of the 21st Century. Speaking after talks in Washington with visiting Prime Minister Singh, President Obama said the two countries were natural allies and had agreed to strengthen cooperation on issues including trade, terrorism and climate change” (Thomas 2009). Moreover, after the visit Obama and Singh released a joint statement of cooperation, mentioning a ‘Green Partnership’ and a ‘Clean Energy and Climate Change Initiative’, to “improve the lives of people in both countries by developing and improving access to technologies that make energy cleaner, affordable and more efficient. The initiative will include cooperation in wind and solar energy, second generation bio-fuels, unconventional gas, energy efficiency and clean coal technologies, including carbon capture and storage” (Dhar 2009).

3 Conclusions: a light in the attic?

Billett’s work here is a great catalyst for further needed investigations in India, in other countries as well as in comparisons across countries and media platforms. His

insights prompt further explorations regarding how mass media communicate and frame complex climate-related issues, and what influences these activities may have for public engagement and policy action. These are burgeoning spaces of activity, filled with compelling and enduring research questions that I hope others will continue to take up. As one example, Emily Boyd (Leeds University) and I have drawn from Billett's research in examining how media representations of climate change in India may be shaping perspectives on market-based, privatized, and technologically-focused climate mitigation and adaptation initiatives. We also explore how these media representations, along with Bollywood celebrity interventions (Ians 2009), bridge formal climate science-policy negotiations and everyday culture and society in India (see Jha 2009; Boykoff et al. 2009 for related research).

Furthermore, ongoing research must expand on work that compares and contrasts climate coverage in traditional media with 'new' and 'social' media (e.g. Gavin 2009; O'Neill and Boykoff 2010). In the case of India, *Internews Europe* have engaged both rural farmers and urban slum dwellers through mobile phone technologies as a media communications platform for users through both text and images (West 2008). The cost to purchase a SIM card and/or mobile handset has dropped significantly in India, and mobile phone ownership estimates range from 250 million to 400 million, while "it is believed that 10,000 mobile phones are sold every hour" (West 2008; 68). As an outgrowth of this trend, up to the minute commercial weather forecasting and crop pricing services have become increasingly available through mobile phone communications for Indian farmers. The commodification and privatization of information associated with climate and agriculture (see Pollard et al. 2006) has been endorsed by institutions such as Indian Meteorological Department the United Nations International Fund for Agricultural Development (IFAD), amid shrinking public services. IFAD Technical Advisor Jamie Anderson has enthused about these developments, claiming, "commercialisation is inevitable and is not necessarily hurting the farmers" (Ghosh 2009; 14).

However, there are other spatial and temporal dimensions to these developments (and their implications) that must be taken up through ongoing research. Among them, can these new media tools work to inform a broader Indian citizenry? How might particular trends privilege certain ways of knowing, while marginalizing others? And how might various dominant discursive frames shape the perceived need in the heterogeneous Indian public for collective action in the face of anthropogenic climate change? Speaking to Aditya Ghosh from the *Hindustan Times*, India farmer Ramesh Shantaram Pawde remarked, "I can't afford to suffer due to such frantic climate changes. I can't predict yields any more as my forefathers could. I have to depend on the SMS (short message service)" communications, received from private weather forecasting firms (Ghosh 2009; 14). Does the fact that he now looks to his mobile phone rather than to his environmental surroundings, and that the weakening of state support is 'normalized' in this way, provide signs of further entrenchment of divisions on climate action, or do they signify ways over the divide? The challenges and opportunities that this neo-millennial 'farmer Pawde' faces pose many compelling and ongoing questions for media representations and communications of climate change.

Mass media translations of climate change predicaments and progress remain key influences that shape discourses and bound considerations for possible climate mitigation and adaptation actions. To the extent that ongoing research fails to

examine ‘*how*’ these representations and symbols are produced in mass media, and negotiated through relations of dominance, subordination, inequalities of access and resources, we effectively constrict the spectrum of possibilities appropriate climate action (Boykoff 2007; Rosati 2007). But the Billett paper takes a critical step toward better recognizing how the re-configuration (or re-organization) of media discourses can open up new possibilities for international (and particularly N–S) climate governance (see Swyngeduow 2007).

“There’s a light on in the attic.
 Though the house is dark and shuttered,
 I can see a flickerin’ flutter,
 And I know what it’s about.
 There’s a light on in the attic.
 I can see it from outside,
 And I know you’re on the inside... looking out”
 ~ Shel Silverstein (1981)

Assessments of Indian media representational practices against this backdrop of global trends may provide mixed feelings of both hope and despair. While Fig. 2 has shown a steady increase in the amount of Indian English-language national newspaper coverage of climate change, Billett’s research finds largely hackneyed and arguably unproductive discourses along a risk-responsibility divide. While the ‘light’ may be on in this space, separations (inside and outside) and communication difficulties remain. Shifts in media discourses in the India—planet Earth’s largest democracy—may be a harbinger of the shape and scale of the ongoing challenges of N–S relations, perceptions of risk, questions of responsibility, and issues of mitigation, adaptation, justice and equality. While multi-scale political economic forces may cause this media light to flicker and flutter, it continues to illuminate possibilities for our collective future.

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