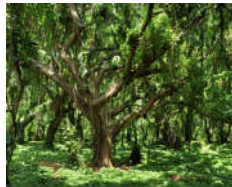


TRENDS IN SUSTAINABILITY



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The analysis of broadsheet newspaper coverage on sustainability-related issues can help to shed light on levels of public attention to specific issues such as climate change, human rights or poverty over time and across regions. This discussion paper presents an overview of key results emerging from a meta-analysis of sustainability-related media coverage in 115 broadsheet newspapers from 41 countries between 1990 and 2010.

The analysis shows that concepts such as sustainability, sustainable development and corporate social responsibility have risen in importance in the last 20 years, whereas a range of other concepts describing narrower areas of business responsibility still only receive marginal levels of coverage.

In the environmental domain, the focus has shifted from problems associated with end-of-pipe technological solutions in the 1990s to my recent issues that require more sophisticated remedies such as climate change. In the socioeconomic domain, coverage levels appear relatively stable over time. One marked exception is media coverage on HIV/AIDS, showing a 70 percent decline over the last 20 years. Furthermore, marked deviations occur from these aggregated sustainability-related media agendas at a regional level and the level of the nation state, with a potential North-South divide emerging from the analysis.

Introduction

Over recent decades sustainability and sustainable development have become key themes in both a policy context and the popular media. Influ-

ential events, initiatives and publications such as the 1987 Brundtland Report, the 1992 Earth Summit in Rio de Janeiro, the UN Millennium Development Goals, the 2005 'Make Poverty History' campaign or the decision to award the Nobel Peace Prize to Al Gore and the IPCC in 2007, have arguably contributed to an unprecedented rise of public attention drawn to the concept of sustainable development and related issues.

Several studies tracking the rise in media coverage of sustainability-related concerns have been conducted as part of an ongoing project by Queen's University Management School Belfast, the University of Leeds, the Institute for Futures Studies and Technology Assessment (IZT, Berlin), and Euromed Management School Marseille (e.g. Barkemeyer *et al*, 2009; 2010; Holt & Barkemeyer, 2010). The overall sample that formed the basis for these studies consists of 115 worldwide leading national newspapers published between January 1990 and May 2010. Based on this sample, media coverage on a set of 20 sustainability-related issues and 10 sustainability-related concepts has been tracked to identify sustainability-related media agendas over time and across countries and regions.

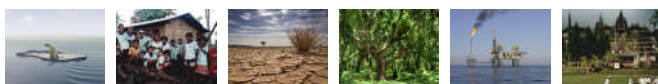
This discussion paper presents an overview of key results of the overall project in terms of longitudinal global and regional-level trends in sustainability-related newspaper cov-

erage that have emerged from the analysis.

The role of the Media in Agenda Setting and Public Awareness

The analysis of media coverage in a given societal context can provide insights into the level of public attention given to a specific issue, whilst also examining contextual and longitudinal shifts in coverage. The level of media coverage on issues in the field of sustainable development can serve as one indicator of public awareness and opinion. Whilst it cannot be argued that there is generally a direct correlation between levels of media coverage and public awareness or behaviour change (Neuman, 1990; Lewis 2000), it has been demonstrated that media coverage can reflect and influence the level of awareness and public attention given to particular issues (e.g. Benton & Frazier, 1976; Funkhauser, 1973a, b; Howlett, 1997). In other words, the media can play a role in the establishment and shaping of public agendas. The agenda-setting hypothesis was originally formulated by Cohen (1963, p.13), who suggested that the printed news media was highly successful in telling readers 'what to think about'.

In the context of public agenda setting, two general functions can be attributed to the media: first, to merely transmit or condense 'public opinion'; and second, to actively shape the



public agenda.¹ Irrespective of the exact nature of the relationship between media coverage and public opinion in a given context, a range of previous studies have built on the assumption that levels of media coverage can act as a general barometer of the contextual framing of and attention to concepts such as climate change, business ethics, sustainable development, or corporate social responsibility within society.²

Early examples of large-scale surveys of public attention measured through media salience have included the “Survey of World Attention” (Laswell, 1935), the “Greenfield Index” (Greenfield, 1961), and the “Trend Report” (Naisbitt, 1976). Generally, measuring media salience by the volume or frequency of media coverage has emerged as a relatively common method in agenda-setting research (Benton & Frazier, 1976; Funkhauser, 1973a, b; Howlett, 1997; for an overview and critique see e.g. Kiouisis, 2004). Examples in the context of sustainability include the coverage on EU environmental policies (Bijsmans & Altides, 2007), climate change (Boykoff, 2007; Brossard et al,

¹ For further discussion of media salience and media functions in agenda setting research in the context of sustainability see e.g. Bijsmans & Altides 2007, Boykoff 2007, Brossard et al. 2004, Dearing 1989, Lewis 2000, Valenti 2003.)

² For a discussion of these issues see Hester & Gonzenbach 1997, Mazur & Lee 1993.

2004), or HIV/AIDS (Dearing, 1989).

The remainder of the discussion paper is structured as follows: the next section focuses on the presentation and justification of the methodology applied for the analysis. Subsequently, key results of the analysis are presented regarding (a) global patterns and trends of newspaper coverage on sustainability-related concepts and issues; and (b) regional and country-level variations in coverage, reporting on the results of different countries and country-clusters. The discussion paper concludes with a discussion of the emerging patterns and trends as well as suggested avenues for future research.

Methodology

Selection of concepts & issues

The method of data collection is basic text/data mining or knowledge discovery from

prising of approximately 69,000,000 articles from 410,000 issues of leading newspapers between January 1990 and May 2010.

Whilst there has been considerable controversy around definitions of sustainable development (Luke, 2005; Redclift, 2005) or corporate social responsibility (Epstein, 1989; Moon et al, 2003), it is generally possible to identify specific issues that are commonly associated with these concepts, and with commonly acknowledged normative guidelines in this context. The selection of sustainability-related issues was based on a desk study of major international agreements and initiatives, as well as scholarly work linked to normative corporate guidelines in this context (e.g. Frederick, 1991; Konrad et al., 2006; Steurer et al., 2005). Core documents were Agenda 21, UN Millennium Development Goals, UN Millennium Ecosystem assessment and the UN Global Compact.

Table 1: Concepts and issues selected for content analysis

SUSTAINABILITY-RELATED CONCEPTS	ENVIRONMENTAL ISSUES	SOCIOECONOMIC ISSUES
Sustainable development Sustainability Bottom of the pyramid Business ethics Corporate accountability Corporate citizenship Corporate governance Corporate social responsibility Corporate sustainability Triple bottom line	Acid rain/Acidification Air pollution Biodiversity Cleaner technologies Climate change Ozone layer/Ground-level ozone Precautionary principle Soil erosion	Child labour Child mortality Corruption Discrimination HIV/AIDS Human rights Human rights violations Labour rights Malaria Malnutrition Maternal mortality Poverty

textual databases, based on the search for specific words contained in the sample of documents (cf. Barkemeyer et al., 2009; 2010). The sample consists of 115 national newspapers from 41 countries, com-

The selection of key terms was restricted by practical issues such as ambiguities of terms in a number of languages, or difficulties in translating a key term into a number of languages. The desk study re-



sulted in the selection of 20 sustainability-related issues (Table 1).

Whilst this set of 20 issues is not meant to represent a conclusive list of sustainability-related issues, it nevertheless provides insight into attention given to issues that are commonly associated with sustainability. In addition, media coverage of 10 concepts commonly associated with the area of sustainability (including the term sustainability) was analysed. On the level of sustainability-related concepts, the analysis was restricted to 62 English-language newspapers for reasons of comparability.

Selection of newspapers

The selection criteria for newspapers included circulation, area of circulation and, if possible, private ownership, with priority given to national broadsheets. In terms of area of circulation, newspapers that were not predominantly local or regional in scope were selected in an attempt to reflect the national public agenda as far as possible. When newspapers were not accessible through the databases over the full period of analysis, they were included in the sample from the first full month in which they became available. The selection process aimed to create a sample that was as geographically diverse as possible, particularly with regard to countries in the global South. It was not possible to include any African newspapers except those from South Africa. A total of eight languages were included in the sample: English, French, German, Spanish, Portuguese, Dutch, Danish and Italian, however in cases such as Russia, Japan, China (Hong Kong) or South Africa, the

analysis was restricted to national newspapers published in the English language. Whilst the scope and content of these newspapers is likely to be affected by this restriction, these newspapers are still likely to reflect national deviations from the 'global mainstream'. It could also be argued that in countries such as Russia or China, English publications may remain more independent with a greater freedom of press,

Canada / United States	
CA	The Globe and Mail (Canada)
CA	National Post
CA	The Toronto Star
CA	The Vancouver Sun
CA	Toronto Sun

US	Washington Post
US	New York Times
US	Los Angeles Times
US	The Boston Globe
US	USA Today
US	The Philadelphia Inquirer
US	The Daily News

UK / Ireland	
UK	Daily Telegraph
UK	Guardian
UK	Independent
UK	The Herald
UK	The Observer
UK	Financial Times
UK	Times
UK	Belfast Telegraph
UK	Irish News

IE	Irish Independent
IE	The Irish Times
IE	Irish Examiner

Australia / New Zealand	
AU	The Sydney Morning Herald
AU	The Age
AU	The Australian
AU	The Courier Mail
AU	Daily Telegraph
AU	The Canberra Times
AU	Herald Sun
NZ	The Press (Christchurch)
NZ	The Dominion Post (Wellington)
NZ	The New Zealand Herald

Germany	
DE	Frankfurter Rundschau
DE	Hamburger Abendblatt
DE	Berliner Zeitung
DE	Stuttgarter Zeitung
DE	Sueddeutsche
DE	die tageszeitung
DE	Die Welt

Spain	
ES	El Mundo
ES	El Pais
ES	ABC
ES	El Correo
ES	Diario Montañés
ES	La Verdad
ES	Diario Vasco

South Africa	
ZA	Business Day
ZA	The Star
ZA	Cape Argus
ZA	Cape Times
ZA	Daily News
ZA	The Mercury
ZA	Pretoria News
ZA	Financial Mail

France	
FR	La Tribune
FR	Le Figaro
FR	Le Monde
FR	Le Parisien
FR	L'Humanité
FR	Libération
FR	Ouest-France
FR	Sud Ouest

Southeast Asia	
CN	South China Morning Post
KR	Korea Times
KR	Korea Herald
MY	New Straits Times
PH	Manila Times
SG	The Business Times Singapore
SG	The Straits Times
TH	The Nation (Thailand)

thereby reflecting public opinion in these countries to a higher degree. In order to minimise bias towards countries in the global North, the number of newspapers from countries such as the United States, the UK or Germany has been limited to a maximum of eight.³

Table 2 shows a selection of newspapers that have been included in the sample. The base unit of analysis is the monthly average number of articles containing the search term per newspaper issue. This

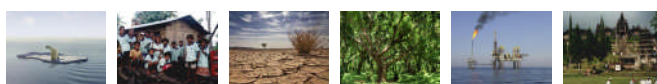
³ A list of the newspapers that have been included in the analysis can be found at www.trendsinsustainability.com/sources/index.php.

allows for the comparison of different newspapers irrespective of whether they are released daily or weekly. Therefore a sample frequency of 0.1 for *climate change* represents a probability of 10% for that month that any newspaper bought would contain at least one article that mentions the term *climate change*.

Table 2: Newspaper sample (selection)

There were minor issues regarding the accuracy of search terms, in particular to general terms such as *poverty*, which carry significantly broader meanings than terms such as *soil erosion*, and may be used in a range of contexts that are only remotely related to sustainability.

This in turn has implications for the total level of word frequencies. Errors were significantly reduced through random sampling and subsequent reiterative adjustment of the text mining tool, and the longitudinal analysis allows for the identification of long-term trends and deviations, which are not affected by these characteristics of the search used. Irregularities such as the misspelling



TRENDS IN SUSTAINABILITY

of terms or the title of a publication, or changes in date format led to slight errors in data transformation. An error of 1% was tolerated; larger errors were corrected through reiterative adjustment of the text-mining tool.

Finally it is important to note that this analysis focuses on the quantification of general levels of media attention towards specific issue-areas, rather than the specific tone taken within each article or the identification of positions on the issue in question. This recognises that even when articles take opposing stances on an issue, such as pro-climate change or climate change denial, it is the total level of discourse that increases.

Global patterns in sustainability-related issues

Figure 1 shows the overall global level of coverage of sustainability-related and corporate responsibility-related concepts in 62 leading English-language newspapers between 1990 and 2010.

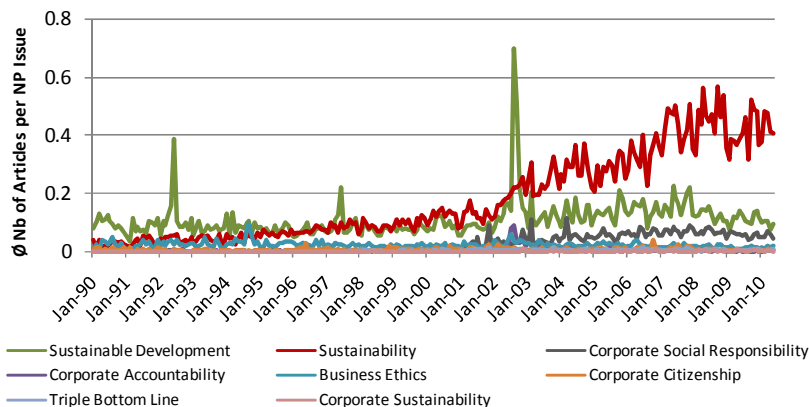
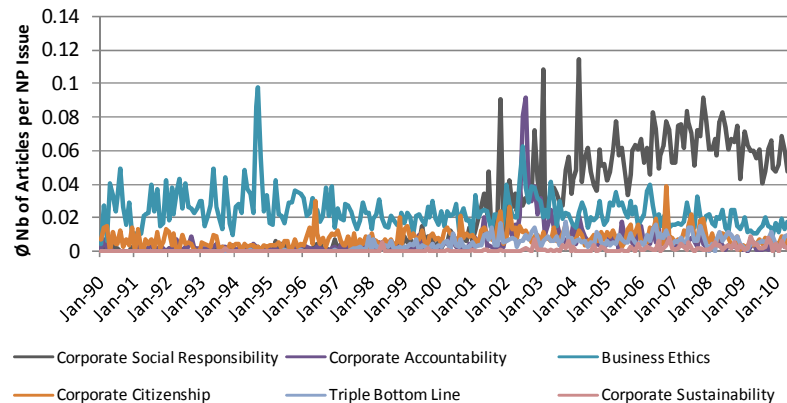


Figure 1: Overall coverage of various sustainability-related concepts (62 newspapers)

A marked increase in the level of coverage of sustainability-related news can be identified.

The probability of the terms *sustainability* or *sustainable development* appearing in an article of one newspaper issue rose from roughly 10 percent in the 1990s to approximately 30 percent for *sustainable development*, and 50 percent for *sustainability* towards the end of the period under review. *Sustainable development* was



with approximately 0.05 articles per issue. These concepts are narrower in scope and refer only to corporations as one specific actor in the field of sustainability. However, a closer look at concepts related to Corporate Responsibility (Figure 2) also reveals significant changes in the levels of coverage of these.

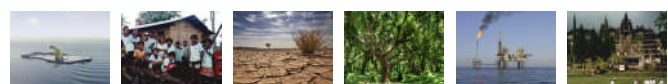
the most widely used term up until the mid-1990s. Beyond this point the less technical term *sustainability* began to be more commonly used, although there are notable exceptions at the time of the World Summits in Rio de Janeiro 1992, Kyoto 1997, and Johannesburg 2002, triggering

Figure 2: Overall coverage of various corporate responsibility-related concepts (62 English-language newspapers)

The two concepts *business ethics* and *corporate social responsibility* have the highest overall number of articles per issue. *Corporate social responsibility* can only be identified in the latter half of the period under review, but it shows the highest increase of all concepts analysed, with frequencies of between 0.04 and 0.06 since the year 2006. Two earlier peaks in the level of coverage of *corporate social responsibility* in November 2001 and February 2003 are linked to the publication of special supplements on corporate social responsibility by the UK Observer. Apart from occasional peaks in coverage, the frequency of *business ethics* seems to decrease slightly within the period under review and coverage of the remaining four concepts is largely marginal throughout with several

clearly identifiable peaks in coverage of *sustainable development*.

In comparison concepts which are more business-specific (for instance triple bottom line) remain marginal and mostly appear as background noise,



notable exceptions. In late 1994 *business ethics* is linked to increased international coverage of three separate incidents regarding accusations of corporate malpractice and corruption in the UK, involving Harrods, the Body Shop, and high-level UK government officials. Secondly there is a peak in coverage of both *corporate accountability* and *business ethics* in July to September 2002 linked to media coverage on U.S. corporate accountability regulation in the aftermath of the Enron scandal.

albeit on a significantly lower level is *biodiversity*. There are occasional peaks commonly triggered by specific events such as the Rio Summit in 1992, which caused increased levels of coverage on topics such as *biodiversity* and *air pollution*. In the early 1990's there are generally high levels of coverage on *ozone*, *acidification* and *air pollution*. However, coverage on these three issues has steadily decreased throughout the period, pointing towards decreasing media attention given to these issues which

The 12 socioeconomic issues presented in **Figure 4** show an uneven pattern similar to that identified in the analysis of environmental issues. Three issues (*corruption*, *human rights* and *poverty*) reach average levels of above 1.5-2.5 articles per issue throughout most of the review period. Of these three most visible socioeconomic issues, *corruption* shows comparatively high levels of fluctuation dropping below a value of 1.0 twice; in 1991 and in the immediate aftermath of the terrorist attacks on the World Trade Centre; however, coverage levels quickly return to levels similar to those of *human rights* and *poverty*. *Corruption* shows an overall increase throughout the review period, reaching its highest levels of coverage in the year 2006. Coverage on *poverty* shows similar levels to *corruption*, but a slightly steadier development. On average, *human rights* shows the highest levels of newspaper coverage throughout the review period, continuously reaching average levels of above 1.5 articles per newspaper issue, while occasionally peaking at

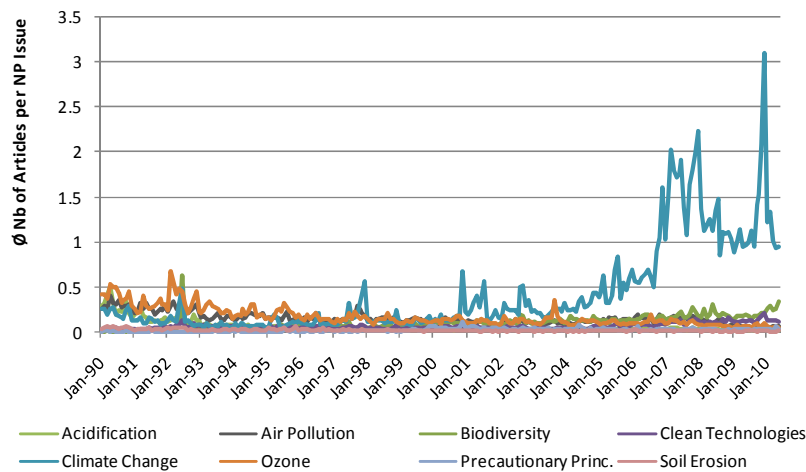


Figure 3: Global newspaper coverage on environmental issues (115 newspapers)

With regards to global patterns and trends in environmental issues, **Figure 3** shows the development of coverage of eight environmental issues for the same period. There is an unprecedented rise in coverage based around the term *climate change* increasing from below 0.3 articles per issue on average in the 1990's to a maximum of 2.3 articles per newspaper issue in recent years.

In contrast the other seven issue-areas show coverage levels predominantly below 0.2 articles throughout the period, and the only other environmental issue that showed increasing overall coverage,

possibly reflects a decreasing level of urgency regarding their underlying threat as environmental problems.

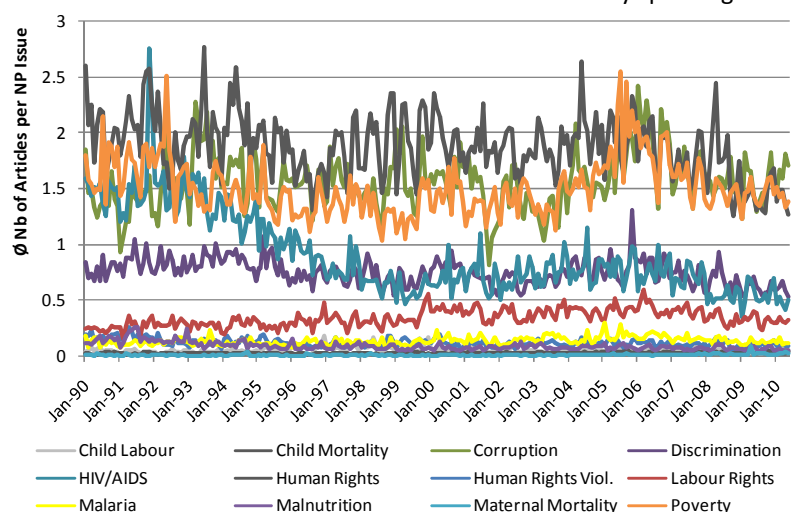
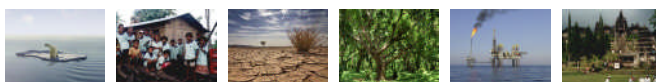


Figure 4: Global newspaper coverage on various socioeconomic issues (115 newspapers)

levels of up to 2.7.

Three other issues (*discrimination*, *HIV/AIDS* and *labour rights*) show coverage levels



TRENDS IN SUSTAINABILITY

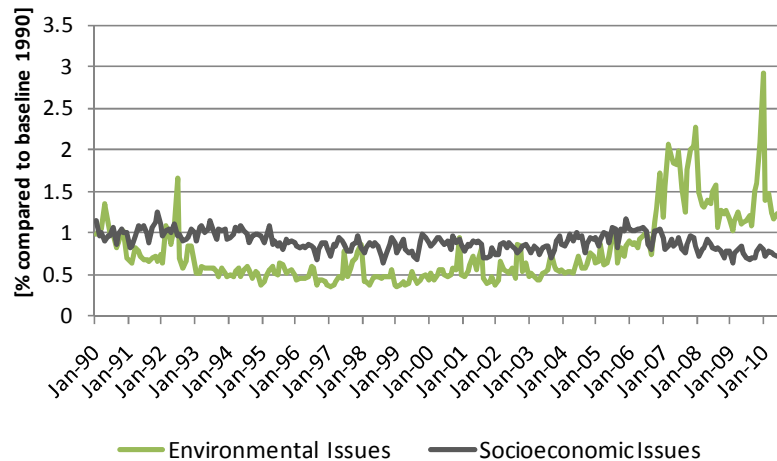
between 0.3 and 1.5 articles per issue. There is a visible downward trend of coverage on *HIV/AIDS*, which peaked at the end of 1991, after which coverage then dropped to values between 0.5-1.0 articles per issue from the late 1990's onwards - roughly one third of the levels of coverage observed in the early 1990's. This suggests that *HIV/AIDS* is the only issue among the set of 20 sustainability-related issues that has experienced a substantial reduction in levels of public attention throughout the last 20 years. In contrast, coverage levels of *discrimination* and *labour rights* show a steadier development, with *discrimination* showing a slight increase over time.

In comparison coverage of the other six issues; *child labour*, *child mortality*, *human rights violations*, *malaria*, *malnutrition* and *maternal mortality* remains marginal, showing significantly lower levels of up to 0.25 articles per issue. However different trends, albeit on the relatively lower levels of coverage, can also be identified in these supposed minor issue-areas. Coverage on *malnutrition* and *human rights violations* slightly decreases over time, whilst coverage on *malaria* increases from around 0.1 articles per issue in the early 1990s to around 0.15-0.2 articles in the second half of the review period, reaching maximum values of around 0.3 in 2005. Coverage on *child labour*, *child mortality* and *maternal mortality* remains relatively constant over time, with the latter two showing the lowest levels of coverage in the total sample.

Figure 5 provides a general overview of the development of environmental and socio-

economic media coverage over time. Compared to the baseline

by climate change-related coverage.



of 1990, coverage of socioeconomic issues has remained relatively stable over time, revolving around 1990 coverage levels throughout the review period. However, towards the end of the review period a decrease in coverage can be identified, with coverage levels dropping to around 75% of the levels observed in 1990. As seen above in **Figure 4**, this decrease can to a certain extent be attributed to the drop in *HIV/AIDS*-related coverage.

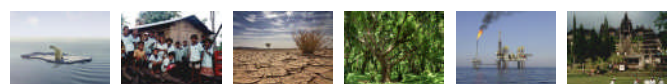
In stark contrast, aggregated coverage on the eight environmental issues included in the analysis shows visible fluctuations over time. Coverage drops to levels of around 50% of 1990 levels throughout most of the 1990s. Two marked exceptions are a marked peak in 1992, coinciding with the Rio Summit, and a prolonged phase of relatively high coverage in 1997. However, in the latter half of the 2000s, a stark increase of coverage levels can be observed, culminating in a peak in December 2009, coinciding with the UN Climate Change Conference (COP15) in Copenhagen. As can be seen in **Figure 3** above, the increase in coverage on environmental issues has largely been driven

Figure 5: Global coverage: aggregated environmental & socioeconomic issues (indexed; baseline Ø1990)

One important difference between coverage on socioeconomic and environmental issues is that while three socioeconomic issues dominate coverage throughout the period under review (*corruption*, *human rights* and *poverty*), in the environmental domain a shift takes place from coverage on *air pollution*, *acidification* and *ozone* towards *climate change* in the second half of the review period.

Regional Variations in Coverage

Whilst interesting trends and patterns in global-level coverage across the overall sample of 115 newspapers from 41 countries have emerged, it is important to note that sustainability-related media coverage has been far from homogeneous across the globe. Both on the level of sustainability-related concepts and issues, stark regional and country-level deviations from the global trends presented above can be observed. In the following section, examples of regional and country-level deviations



will be provided, focusing on coverage on corporate social responsibility, climate change and HIV/AIDS in selected countries and regions, as well as a generic comparison of coverage on environmental and socioeconomic issues in the global North and South.

Figure 6 illustrates the development of coverage of *corporate social responsibility* in European, North American and

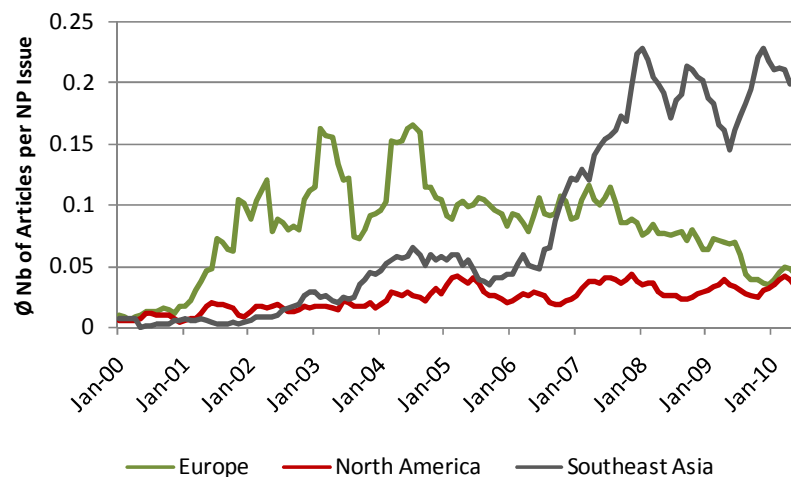
than their North American counterparts.

Whilst all three subsamples show an increase of coverage compared to the year 2000, in North American newspapers levels only increase to around 0.04 articles per newspaper issue, thus amounting to one article containing the term *corporate social responsibility* in approximately every 25 newspaper issues.

levels similar to those observed in their North American counterparts. Southeast Asian newspapers peak at a later stage than observed in the European sample, but eventually reach the highest levels of coverage across the three subsamples in the years 2008 to 2010, with one article in approximately every 5-7 newspaper issues.

Further analysis highlights demonstrable regional and country-level differences in the coverage of sustainability-related issues. **Figure 7** shows levels of coverage on *climate change* in six country subsamples. As can be seen, all six country subsamples show a marked increase in coverage over time, culminating in peaks in late 2007/early 2008 as well as a peak in December 2009. Apart from this overall trend, however, a range of interesting country-level peculiarities emerges from the analysis.

The UK subsample shows a notably earlier increase in coverage than the other five country subsamples. A first peak in coverage can be observed as early as mid-2001.

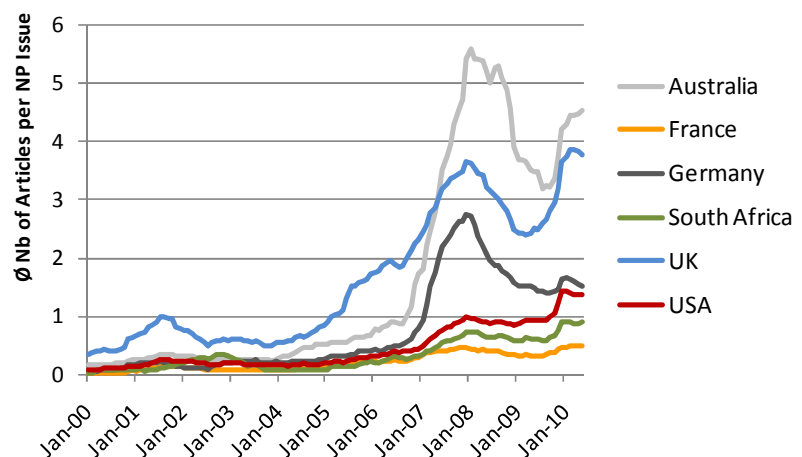


Southeast Asian newspapers. For reasons of comparability, only English-language newspapers are included in the analysis of sustainability-related concepts. Hence, the European subsample mainly consists of publications from the UK and Ireland, while the Southeast Asian sample consists of five English-language publications from Malaysia, the Philippines, Singapore (2) and Thailand.

The data is displayed as a 12-month moving average of articles per newspaper issue, thus facilitating the identification of general trends at the expense of detail. As can be seen, coverage levels differ significantly among these three regional samples, with European and Southeast Asian newspapers showing significantly higher levels of coverage

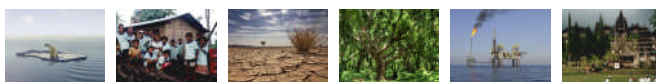
Figure 6: Frequency of corporate social responsibility (three regional subsamples, 2000-2010)

In stark contrast, European newspapers follow a convex curve, with two peak reaching around 0.15 articles per news-



paper issue in 2003 and 2004. Towards the end of the review period, coverage in European newspapers drops back to

Figure 7: Coverage of climate change (six countries, 2000-2010; 12-month-averages)

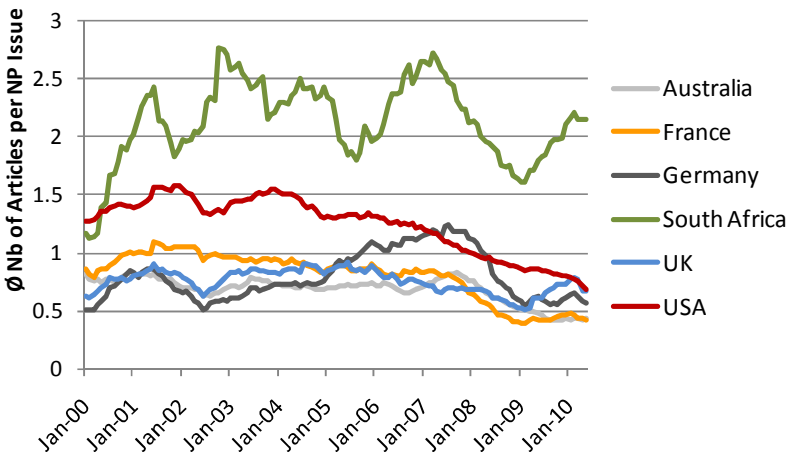


TRENDS IN SUSTAINABILITY

Coverage levels show a continuous increase as of 2005.

issues between 1990 and May 2010.

roughly 0.7 articles per newspaper issue in 2010, respectively.



Only the Australian subsample shows a likewise relatively early increase in coverage, albeit at a significantly lower rate. All four other country subsamples show low levels of coverage throughout 2000 to 2006, before coverage picks up triggered by coverage on the fourth assessment report of the Intergovernmental Panel on Climate Change (IPCC) and the Nobel peace prize awarded to Al Gore and the IPCC. However, only three country subsamples (Australia, Germany and UK) show distinct peaks around these events.

In contrast, French, South African and US-based newspapers only show a moderate increase over time compared to coverage in Australia, Germany and the UK. In Australia and Germany, coverage reaches its highest levels in 2007; in contrast, all other four subsamples reach their maxima in December 2009 alongside COP15. Australian newspapers reach highest overall coverage levels with 12-month-moving averages of above 5 articles per newspaper issue. This also represents the highest coverage levels identified in any country across the overall set of 20 sustainability-related

Figure 8: Coverage of HIV/AIDS (six countries, 2000-2010; 12-month-averages)

A very different pattern to the one in Figure 7 emerges from the analysis of HIV/AIDS-related coverage as shown in Figure 8. Here, South African newspapers show the clearly highest coverage levels throughout mid-2000 to 2010, ranging from 1.5 to 2.7 articles per newspaper issue. Furthermore, South Africa is the only of the six country subsamples that does not show a marked downward trend over time. This decrease in coverage over

The Australian, French and US-based newspapers reach their lowest levels of coverage observed throughout the review period in 2010; German and UK-based newspapers show coverage levels in 2010 that are very close to their overall lowest values in HIV/AIDS-related coverage.

The analysis of climate change and HIV/AIDS-related coverage above has helped to illustrate country-level differences with regard to these two issues. A comparison of the relative ranks of the five overall most prominent issues (calculated as average coverage levels across all 115 newspapers 2008-2010) within six countries clarifies these regional and country-level differences as illustrated in Table 3, suggesting that there is no universal global consensus on the most pertinent environmental or socioeconomic issues.

Table 3: Relative rank of each issue by country (average levels of coverage 06/2008-05/2010)

	AUSTRALIA	FRANCE	GERMANY	SOUTH AFRICA	UK	USA
Climate change	1	5	3	5	1	4
Corruption	2	2	4	1	4	1
HIV/AIDS	5	4	5	3	5	5
Human rights	3	1	1	4	3	3
Poverty	4	3	2	2	2	2

time is particularly pronounced in French and US-based newspapers, dropping from around 1.0 to 0.5 and from 1.5 to

As can be seen, all six country subsamples show different prioritizations across the five sustainability-related issues in



terms of absolute levels of coverage. *Human rights* emerge as the most frequent coverage issue in France and Germany; *corruption* receives highest levels of coverage in South African and US-based newspapers; and *climate change*-related coverage dominates Australian and UK-based newspapers. *Climate change* emerges as a particularly interesting issue as it shows the lowest levels of coverage in two other country subsamples (France and South Africa) at the same time. Coverage on *HIV/AIDS* shows the lowest levels of coverage among the five sustainability-related issues in four of the six countries. Only in South Africa and – to a certain extent – in France, the issue receives relatively high coverage levels when compared to the other four issues.

Trends in the global North and South

Notwithstanding the stark differences between e.g. European newspapers observed above, potentially showing a sharp divide between the sustainability-related media agendas reflected by Northern European and Southern European newspapers as well as continental European newspapers compared to their UK and Irish counterparts, there may also appear a generic divide between sustainability-related media agendas in the global North and South. In particular, Latin American and Asian newspapers appear to show prioritisations similar to the agenda reflected by South African newspapers. Therefore, a general comparison of Northern and Southern subsamples may shed light on generic differences in sustainability agendas.

Figure 9 presents a general overview of aggregated media coverage on the eight environmental and twelve socioeconomic issues in the global North (average of 76 newspapers) compared to the global South (average of 39 newspa-

pers). It shows levels of coverage in the North divided by respective levels of coverage in the Southern newspaper subsample (12-month-average). It can be seen that whilst the Northern subsample shows levels of coverage on environmental issues largely 2-3 times higher in absolute terms than the Southern subsample, the gap between coverage on socioeconomic issues narrows considerably over time.

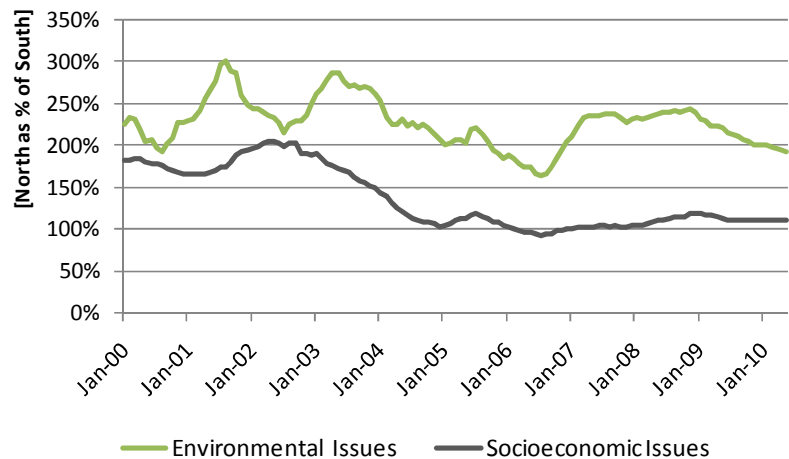


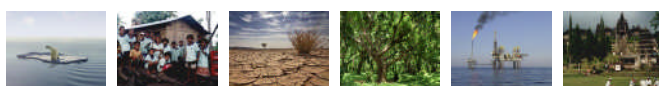
Figure 9: Aggregated coverage of environmental and socioeconomic issues in global North, normalized by global South

Discussion

Several important observations have emerged from this analysis of trends and patterns in global and regional newspaper coverage on sustainability-related issues. Firstly, despite the emergence of sustainable development as a policy field in its own right, the overall levels of coverage have remained relatively stable over time between 1990 and 2008. Whilst coverage on environmental issues has increased – due to the emergence of *climate change* as a global environmental problem – coverage on socioeconomic issues has stagnated, and towards the end of the review period decreased in absolute terms. Furthermore, the analysis of issue-specific trends has shown that within the environmental domain, the focus of coverage

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Compared to their Southern counterparts, Northern newspapers therefore show a stronger bias towards coverage on environmental issues in the latter stages of the review period. However, it should be noted that this development is not homogeneous across the sets of environmental and socioeconomic issues, respectively; furthermore, stark differences can be identified both within the Northern and Southern subsamples. Among others, the overall trends are to a certain extent driven by: (a) the marked increase in coverage on climate change, as



has shifted from issues such as the *ozone layer/ground level ozone, air pollution* and *acid rain/acidification* towards *climate change* as the dominant theme of newspaper coverage on environmental issues. Likewise, in the socio-economic domain, a shift away from *HIV/AIDS* over time can be observed in Northern newspapers with coverage on the other major issues remaining at similar levels over time, while coverage generally picks up in developing country newspapers over time.

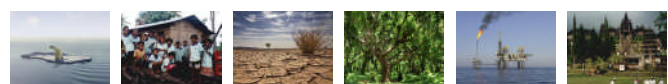
For the vast majority of issues, no homogeneous global trends can be identified. Instead variations in public agendas in different countries have emerged, possibly reflecting different perceptions or underlying value judgments towards the issues reviewed. In addition generic patterns of coverage have emerged that are linked to the levels of development of a country. For example, although *climate change* has arguably emerged as a threat to global sustainability, this has mainly been resonated in the global North. In terms of newspaper coverage, *climate change* can be seen as a prime example of a regionally confined issue, similar to *air pollution, ground-level ozone/ ozone layer depletion, or acid rain/ acidification* for example. In particular with regard to *climate change* and *ozone layer depletion* as essentially global phenomena, this points towards the influence of regionally diverse perceptions of importance or urgency of problems on levels of newspaper coverage, as well as towards tradeoffs between different issues in sustainability. Whilst sustainability contains the three avowed 'pillars' of economic, environmental and social concerns these do not

rise and fall as one entity but demonstrate staggered waves where one emerges above another and then is overtaken. Along these lines, a question might be whether the increased levels of coverage on *climate change* in developed country newspapers have in turn crowded out other issues, and therefore contributed to simultaneously decreasing levels of coverage on socioeconomic issues between 2006 and 2008.

In contrast to the patterns observed in the case of *climate change*, the majority of other issues show a convergence of coverage levels over time between global North and South, raising the question whether this convergence is simply a matter of Southern newspapers "catching up", or whether this development is rather caused by a range of mimetic, coercive and normative pressures. Of course the question also emerges as to why a continued regional or country level divergence of coverage on certain environmental and socioeconomic issues can be observed. Such observations of perceived media salience regarding sustainability-related issues are highly relevant in the context of wider social and environmental agendas such as international corporate social responsibility (CSR) for example. In this instance the question arises of whether the CSR agenda as reflected by corporate practice actually reflects local needs and problem structures, or whether it primarily reflects the perceptions of the Northern actors that drive the dissemination of CSR. This in turn could create a mismatch between the CSR agenda and local sustainability agendas. The analysis of newspaper articles such as those summa-

risied in this discussion paper may help in the development of understanding of regional interpretations of sustainability related issues, and the relative importance of particular issues and potentially competing regional priorities which may lead to variations in response. This type of analysis also provides a useful insight into the complexities of disseminating global policy agreements which are subsequently interpreted and applied against a backdrop of competing regional priorities and cultural concerns.

Finally the pertinent question arises of whether these changes in coverage over time can be attributed to changes in the actual problem structure, or whether they can be interpreted as a mere change in the perception of these problems, and their perceived importance and urgency. Decreased levels of coverage on *air pollution* or *ozone* could serve as an example of changes with regard to the actual problem structure: as both terms refer to environmental problems that – at least in the global North – have been successfully tackled by relatively low-cost technological fixes in recent years. The related decrease in newspaper coverage may be directly linked to these cases of successful environmental policy. In contrast while *HIV/AIDS* continues to be a key global challenge with an accelerating impact in various regions, overall trends across the sample of 115 newspapers show a clear general decrease of coverage levels over time. Particularly in the Northern subsample, where a stark decrease of coverage towards the end of the review period can be identified, irrespective of the threat the disease continues to pose.



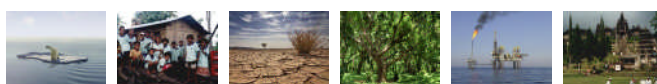
Avenues for Future Research

Further research should consider whether newspaper coverage in the global North and South represent distinctly Northern and Southern agendas in sustainability. Future research could also explore how popular concepts such as sustainability/ sustainable development have been framed over time and in specific countries, and how trade-offs in sustainability are perceived and addressed in differ-

ent regional contexts. One interesting area of enquiry would be an exploration of underlying reasons for patterns of coverage in US newspapers that distinctly diverge from those found in other newspapers based in the global North. There is also a need to include additional newspapers from underrepresented regions in order to arrive at a more globally balanced sample and to reduce the bias towards newspapers based in the global North. Finally the ongoing

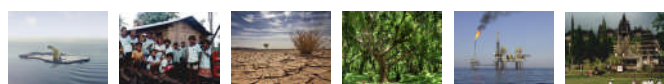
research agenda for this joint project includes a correlation analysis of newspaper coverage and GDP/HDI. With the specific aim of exploring whether generic patterns that emerge from the analysis of newspaper coverage on sustainability-related issues can be (partly) explained by levels of Gross Domestic Product (GDP) or human development as measured by the Human Development Index (HDI).

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