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Media Survey
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Media Messages About Sustainable Seafood: #How do Media Influencers affect consumer attitudes? @Project no. 2017-131
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Summary

We are seeking to better understand the role of media influencers, particularly chefs, in shaping consumer attitudes about sustainable seafood. This report outlines results from a preliminary analysis of media (news, social, and lifestyle media) over a 4-year period of 2015–2018, focusing on media examples that have the potential to shape consumer attitudes about the sustainability of Australian seafood. The effectiveness of these messages will be tested in interviews with chefs and media influencers, and in focus groups with seafood consumers.

The term 'influencer' refers to influential individuals whose perceived expertise or knowledge on a particular topic (in this case, seafood) gives them the capacity to affect purchasing decisions or perceptions of the industry. We have identified influencers who actively engage with seafood issues and who have varying views about fishing and aquaculture industry practices. The focus here is on 'earned', rather than 'paid', media coverage, and on individuals who are perceived as being at some 'arm's length' from industry interests (i.e. not simply industry spokespeople).

It should be noted that this research does not seek to identify what 'is' sustainable, but rather to understand how sustainability is represented in media, and to investigate how different types of media representations may affect consumer views about sustainability.

Key findings so far:

News media

- The Australian seafood industry has consistently secured the greatest 'share of voice' in news coverage of issues affecting the commercial fishing and aquaculture industries, but on controversial issues, much of the industry response is reactive to stories generated from other sources (e.g. governments, NGOs, community groups, etc.)
- Issues related to fisheries management receive the greatest amount of coverage in news media, with industry often responding to opponents in combative terms.
- As was also the case on other media platforms, when the term "sustainable" is used by media or by influencers, what is meant by this is typically not defined or explained.
- The main influencers cited in news media are chefs. These chefs generally acknowledge that Australia's wild-catch fisheries are among the best managed and most sustainable in the world; the picture for aquaculture is a little more complicated. Chefs and influencers can be powerful advocates for industry, but clear alignment between the chefs'/influencers' public personas and industry messages is essential for a successful partnership.

Summary

Social media

- Conversations about seafood issues are highly fragmented on Twitter and Facebook, with industry, chefs/foodies, and environmental groups operating within distinct, and largely separate, networks. 'Bridging' of these networks can bring seafood issues to the attention of wider audiences. Given the relative isolation between the social media networks of chefs and those of environmental groups, engaging more fully with chefs and their 'foodie' followers may offer a different avenue for positive messages about Australian seafood.
- In cases where industry and NGOs have sought to use chefs and other influencers as allies during periods of conflict, their involvement has generated surprisingly little social media engagement and does little to shift dominant perspectives on contentious issues. It is more advisable to invest in developing relationships with influencers during 'calmer' periods, rather than during times of conflict.

Lifestyle media

- Most lifestyle media (e.g. television cooking shows, foodie magazines, Instagram, etc.) that explicitly engages with sustainability messages suggest that only some Australian seafood is sustainable. Choosing under-utilised species on grounds of sustainability and taste was the most salient sustainability message in Australian lifestyle media.
- Lifestyle media is a powerful voice in shaping ideas about what constitutes 'good' food. Representations of food producers and their stories are appealing to a 'foodie' audience, but constrained media production budgets and trickier filming logistics mean that professional fishers are far less likely to feature in Australian lifestyle media than any other type of food producer. Strengthened relationships with media producers—and some creative thinking about how to best depict fishers—are essential for ensuring more compelling lifestyle media coverage.
- There are two emerging sustainability issues that may require more proactive industry engagement: food waste and animal welfare. The first is an emerging food trend ("fin to fin" cookery), while the latter is predicted to be a ticking "time bomb" if not proactively managed. There is also emerging evidence to suggest that "provenance" may offer a valuable alternative route for sustainability messages.
- While Facebook and Twitter are still the dominant platforms used for media campaigning (especially among older audiences), Instagram is fast becoming 'the' social media platform for chefs and foodies. However, industry visibility on Instagram is limited due to limited engagement and ineffective use of hashtags and other platform conventions.
- Other types of lifestyle media influencers, such as food bloggers, tend to be less active on seafood issues than on other food issues, so the activities of food bloggers are notably absent from this media survey.

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Purpose of media survey

Chefs and media influencers have contributed to a 'mainstreaming' of contemporary food politics throughout the West. Their media activities have helped to shape an ethically- and environmentally-aware 'foodie' audience who are disproportionately catered to by media, restaurants, food retailers, and food marketers, and whose politics and preferences substantially shape public debate about food issues (Phillipov 2017). This influence has occurred across a range of food sectors, including seafood. Campaigns by celebrity chefs have impacted debates about seafood sustainability and shaped consumer purchases in the UK and the US (Bowman & Stewart 2013; VanWinkle 2017; Silver & Hawkins 2017). In the UK, for example, Hugh Fearnley-Whittingstall's *Fish Fight* campaign contributed to increased supermarket sales of a number of 'alternative' and 'sustainable' species, including pollack, coley, dab, squid and sardines (Smithers 2011). While there have been some Australian examples of politically-driven seafood campaigns fronted by celebrity chefs (e.g. Matthew Evans' *What's the Catch?*), the full extent of the impact of chefs and influencers in shaping Australian consumers' attitudes about the sustainability of Australian seafood still remains unclear.

The purpose of the media survey is to identify the ***role of chefs and influencers in shaping Australian media coverage of seafood sustainability issues.*** The focus here is on 'earned', rather than 'paid', media coverage.

We analysed mainstream and social media coverage of Australian seafood industry issues in news, television food programs, cookbooks, 'foodie' magazines, Twitter, Facebook and Instagram to identify:

1. The media messages about seafood sustainability that are most prominent in Australian media;
2. The strategies employed to communicate those messages; and
3. The role played by key influencers in either enhancing or diminishing sustainability messages.

While the media survey did not encompass all media platforms, its coverage was sufficient to develop a broad picture of recent media representations of the sustainability of Australian seafood. The results outlined below are preliminary, and are not intended to capture every media example relevant to the sustainability of Australian seafood. Instead, the results below are designed to be broad enough to assist in identifying case studies for closer analysis, and to inform recruitment for the interviews and focus groups being conducted in the later stages of the project.

Definitions

Sustainability

This research does not seek to define what sustainability 'is' or to demarcate specific species, practices or industries as 'sustainable'. Instead, we identify the ways in which ideas about sustainability appear in media. This will be used as a source of baseline data to explore further in research interviews (e.g. to understand how chefs and influencers involved in sustainable seafood debates define this term) and focus groups (e.g. to understand how different types of media representations affect consumers' understanding of sustainability).

Influencers

This research uses the term 'influencer' in a similar way to social media marketers (though we do not limit our analysis to social media): an influencer is someone with the ***capacity to affect purchasing decisions or perceptions because of their perceived expertise or knowledge on a particular topic*** (in this case, seafood). Influencers are people who cultivate a following among a particular niche. They are typically perceived as being at 'arm's length' from industry interests: i.e. they are not simply people promoting their own businesses, nor are they merely paid marketing appearances.

For the purposes of this research, not everyone who has 'influence' over a particular issue is considered an 'influencer'. For example, a news reporter covering seafood issues as part of their normal duties may have significant influen*ce* over how an industry is reported and perceived, but they would only be considered an influen*cer* if they cultivate a specific niche or audience centred around their seafood knowledge and expertise. Likewise, while NGOs can have influence over an issue, when we discuss NGOs here, our focus is on NGO engagement with individual influen*cers*, not all NGO activities.

The dominant influencers identified are chefs, followed by a smaller number of media professionals, activists and seafood industry figures. These influencers primarily speak to the influential 'foodie' audience. We have included chefs and influencers acting individually, as well as those acting on behalf of industry groups and NGOs.

Our media survey identifies influencers with a prominent 'voice' on seafood sustainability issues, but it is not yet clear the extent to which they influence purchasing decisions and perceptions. The next stages of the research will involve testing this.

Industry

The term 'industry' is used throughout to refer to fishing and aquaculture producers and industry associations, including FRDC.

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News Media

News Media

Summary of key findings

- As is typical of how sustainability is talked about on other media platforms, what is meant by 'sustainability' is typically not defined by news media or by influencers.
- The Australian seafood industry has consistently secured the greatest 'share of voice' in news coverage of issues affecting the commercial fishing and aquaculture sectors, but news media's emphasis on conflict means that industry responses to controversial issues are often reactive, rather than proactive.
- Chefs who appear in media generally acknowledge that Australia's wild-catch fisheries are among the best managed and most sustainable in the world; the picture for aquaculture is a little more complicated. Chefs and influencers can potentially be powerful industry advocates, but clear alignment between the chefs'/ influencers' public personas and industry messages is essential for a successful partnership.

News media

Method: News media analysis

Using the Factiva database, we identified all Australian urban and regional news articles (print and online) related to the commercial seafood, fishing and aquaculture industries for the 4 years from 1 April 2015 to 31 March 2018. We used a very broad Boolean search in the first instance: commercial fish* OR fish* indust* OR aquaculture OR fishing. This breadth was to ensure that we did not miss any articles relevant to sustainability issues, but which did not use the word "sustainability".

Our initial search resulted in 6786 news texts. These were subjected to a content analysis to identify those relevant to sustainability issues (broadly defined to include environmental, social/cultural, and/or economic sustainability). Those articles unrelated to sustainability issues were removed, leaving 2734 articles remaining in the sample. These articles were then coded to identify:

1. key reported issues; and
2. whose interests or perspectives determined the framing of the story (e.g. industry, NGOs, recreational fishers, government/political actors, research organisations, chefs and other media influencers, etc.).

This gave us a comprehensive picture of the key seafood sustainability issues visible in mainstream news media, along with whose interests were driving this coverage. The focus was on print and online news coverage due to the fact that these media are important in driving both news and activist agendas, and because they are the types of news most likely to be circulated on social media (Araujo & Van der Meer 2018). While not everything reported below relates directly to the activities of chefs and influencers, additional results have been included in cases where they provide context and/or where they may be relevant to consumer attitudes about the sustainability of Australian seafood.

Via our Factiva search, we also identified which individuals were prominent in the media coverage of seafood sustainability issues, with a focus on media influencers (such as chefs, celebrity anglers, other prominent figures, etc.). Of the 850 stories initially identified from the larger sample, only 282 of these were relevant (that is, they included chefs/media figures/influencers and engaged with seafood sustainability issues). Chefs were overwhelmingly the most prominent type of influencer (see Table 2).

The relevant texts were then subject to a second content analysis to identify:

1. type of story (e.g. news item, restaurant write-up, story about a festival/event, cookbook review, etc.);
2. major theme; and
3. which chefs/influencers featured in the story.

The frequency with which individual chefs and influencers appeared in news media coverage was used as a proxy for 'reach'. This enabled us to identify the influencers that gained most traction in mainstream media and which had the capacity to move beyond a single platform or sphere of influence.

Individual chefs and influencers were placed within three categories to reflect the frequency with which they appeared in the coverage: tier 1 (4+ mentions); tier 2 (2–3 mentions); tier 3 (1 mention). See Table 2 (below) for the full list of chefs and influencers that appeared in each tier. All are chefs except those marked with an asterisk: Rex Hunt is a celebrity recreational angler; John Susman is a prominent industry voice; Andrew Ettinghausen is a media personality; and Anthony Huckstep and Kate Gibbs are journalists and authors.

The number of mentions was used as part of the selection strategy for identifying individuals to follow on social media, as well as for developing a list of potential recruits for the interview stage of the project. Previous research (e.g. Friedlander & Riedy 2018) has identified two mentions as sufficient to count as an "influencer". For the interview component of the research, participants were selected from across the 3 tiers in order to achieve a representative spread of chefs and influencers of varying prominence and reach.

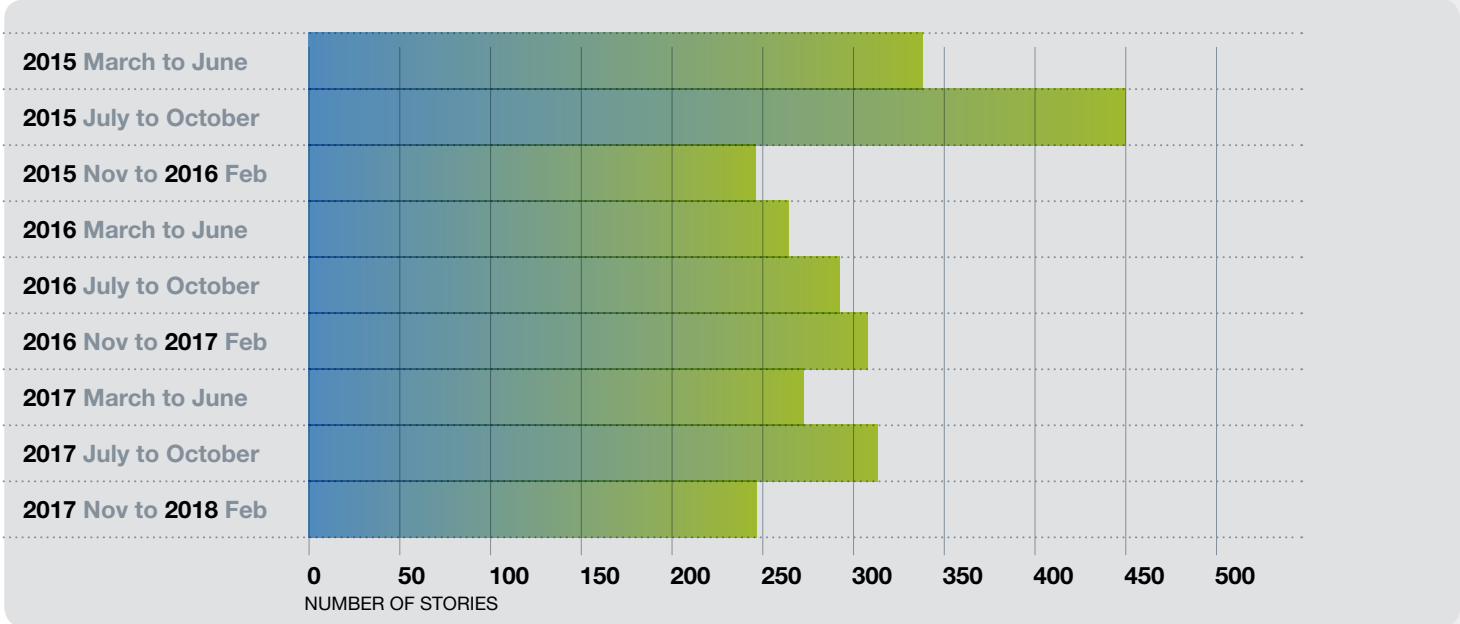
News media

Results:
News media analysis
Major reported issues in news media

News reporting on seafood sustainability suggests that there is significant public interest in fisheries issues and that industry has been successful in ensuring that fisheries issues remain 'on the public radar'.

Results from Factiva showed news media coverage of sustainability issues to be relatively steady throughout the sample period, with an average of 75 stories per month. Comparative searches show this amount of coverage to be among the largest for Australian food industries. Results for 1 April 2015 – 31 March 2018 (divided into four-month periods) are shown in Figure 1 below.

Figure 1: News reporting on sustainability issues in commercial fisheries and aquaculture sectors, 1 April 2015 – 31 March 2018 (n = 2734)



News media

Reporting on fisheries includes both 'flash points' involving controversial events and ongoing reporting of fisheries management and sustainability issues. ***The two dominant reported issues across the sample period were those related to aquaculture*** (31.9%, most of this related to salmon aquaculture)***, and those related to fisheries management*** (30.4%).

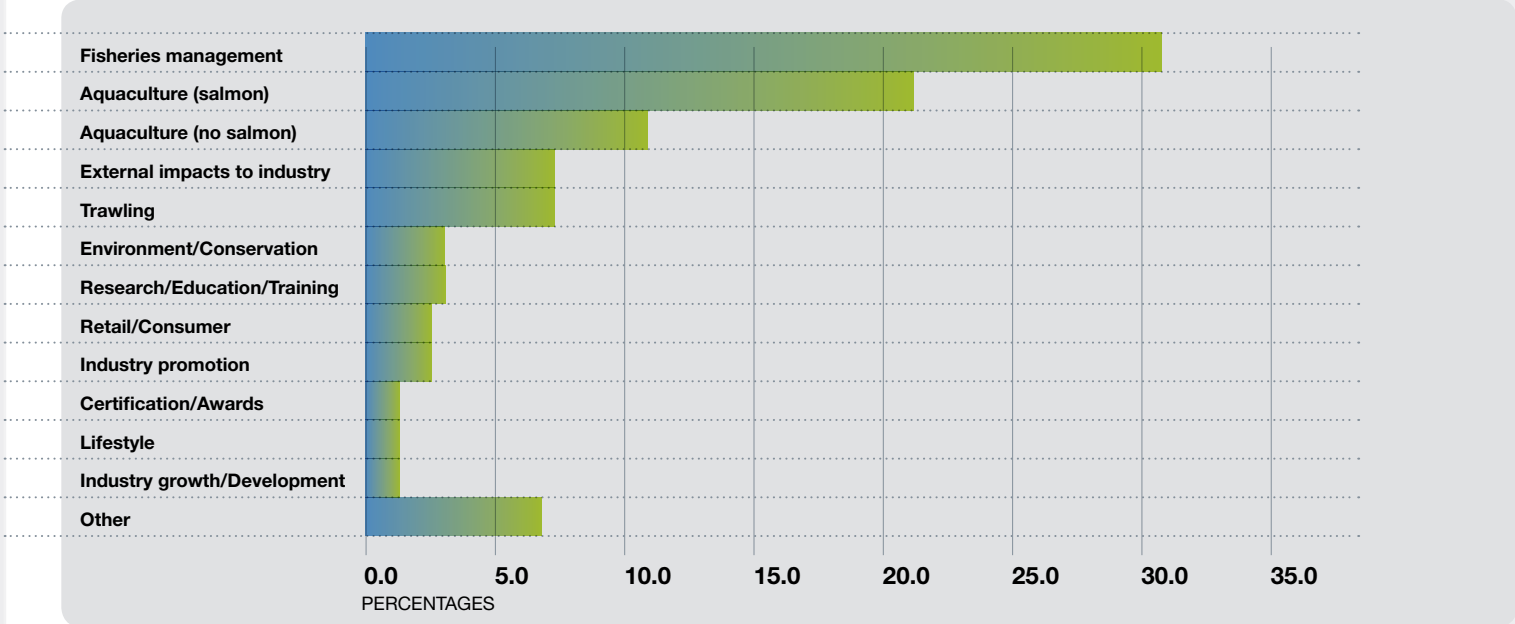
The large amount of reporting on salmon aquaculture reflects a spike in coverage following *Four Corners* exposé of circumstances in Tasmania's Macquarie Harbour and Okehampton Bay. Fisheries management issues, ranging from regulatory and fishing zone changes to by-catch and biosecurity, appear more regularly throughout the sample.

Due to the large amount of media coverage generated by salmon aquaculture, the two graphs below show:

1. All major reported issues for the sample period (Figure 2); and
2. Major reported issues related to salmon aquaculture (Figure 3).

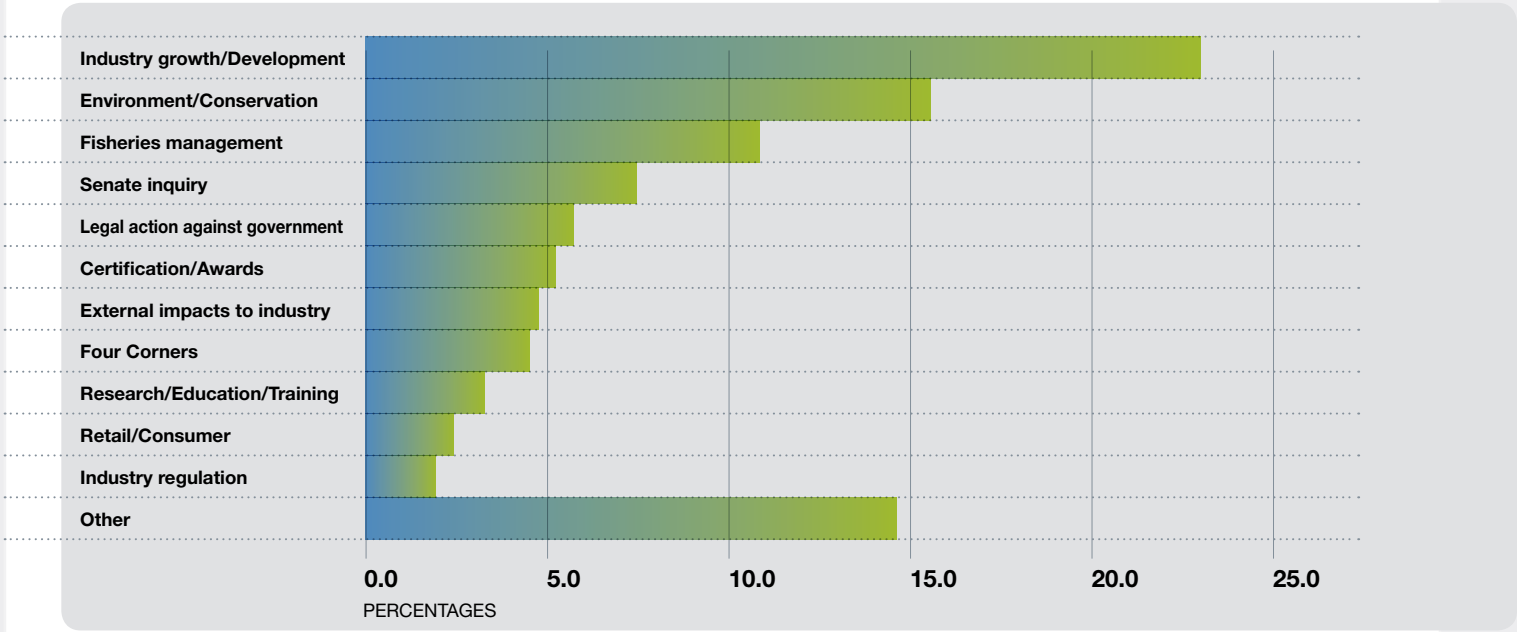
Table 1 below provides more detail on the topics included within each 'issue' code (where not otherwise self-explanatory).

Figure 2: All major reported issues, 1 April 2015 – 31 March 2018 (n = 2734)



News media

Figure 3: Major reported issues related to salmon aquaculture, 1 April 2015 – 31 March 2018 (n = 582)



News media

Table 1: Topics included within each 'issue' code

Fisheries and aquaculture management	• Biosecurity • Net-free zone changes • Disease outbreaks • By-catch (excluding that related to trawling) • Overfishing • Mortality management (Figure 3 only) • Biomass management/water oxygen levels (Figure 3 only)
External impacts to industry	• Seal interference • Waterways contamination • Oil/seismic exploration • Other industries (mainly salmon impacting other fisheries)
Trawling	• Includes trawling-related by-catch
Environment/Conservation	• Fisheries practice impacting environment • Ocean temps rising • Introduced species management • Great Barrier Reef • Climate change • Sustainable seafood charter (Figure 3 only)
Research/Education/Training (if relevant to sustainability, including economic sustainability)	• Reports of research outcomes • Promotion of education and training opportunities
Retail/consumer	• Fisheries management impacts to retailers • Labelling (e.g. country of origin) • Promotion to buy local seafood
Industry promotion (if relevant to sustainability, including economic sustainability)	• Promotion of festival or retailer • Articles about member of fishing industry, or a promotion of a particular industry
Certification/Awards	• Including MSC certification and sustainability awards • Reports on industry awards
Lifestyle	• Promotion of seafood in lifestyle sections
Industry growth/development	• Investment in infrastructure • Expansion • Concern from community about expansion/growth
Industry regulation (Figure 3 only)	• Calls for an independent regulator to oversee management of salmon aquaculture • Calls for increased government regulations
Four Corners (Figure 3 only)	• Sustainability of salmon in question • Use of synthetic astaxanthin

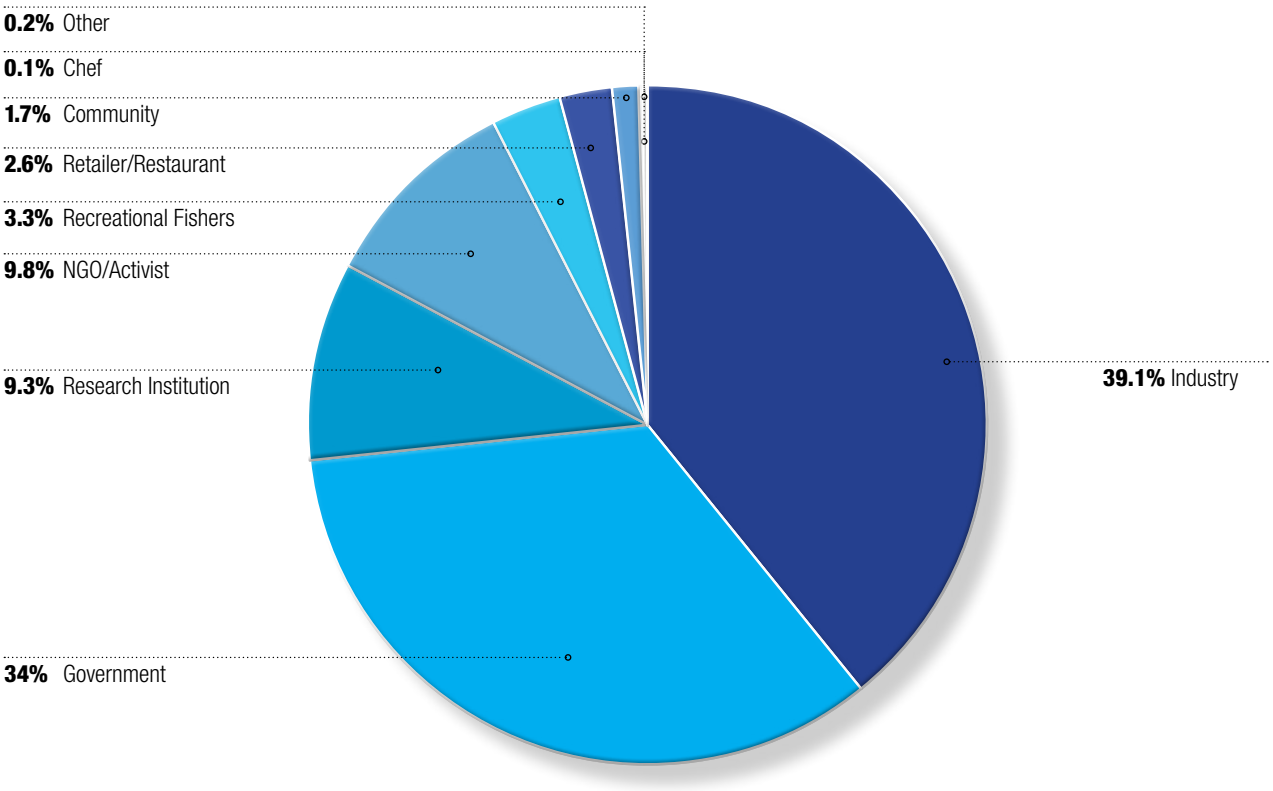
News media

Drivers of news media coverage

Industry voices and perspectives provided the dominant frame for 36.8% of articles, giving industry the largest 'share of voice' in the news sample (see Figure 4). This was closely followed by government, regulators and other political actors at 34%. Industry's large share of voice was maintained across the sample (see Figure 5), indicating its effectiveness at engaging mainstream media via traditional media relations techniques.

Although chefs/influencers, NGOs/activists and recreational fishers appeared throughout the sample, their perspectives provided the dominant frame for only 0.1%, 9.8% and 3.3% of articles respectively. This varied for some issues, including those related to trawling and net-free zones (see Figures 6 and 7 below).

Figure 4: Drivers of news media coverage, 1 April 2015 – 31 March 2018 (n = 2734)



News media

Figure 5: Industry share of voice over time,
1 April 2015 – 31 March 2018 (n = 2734)

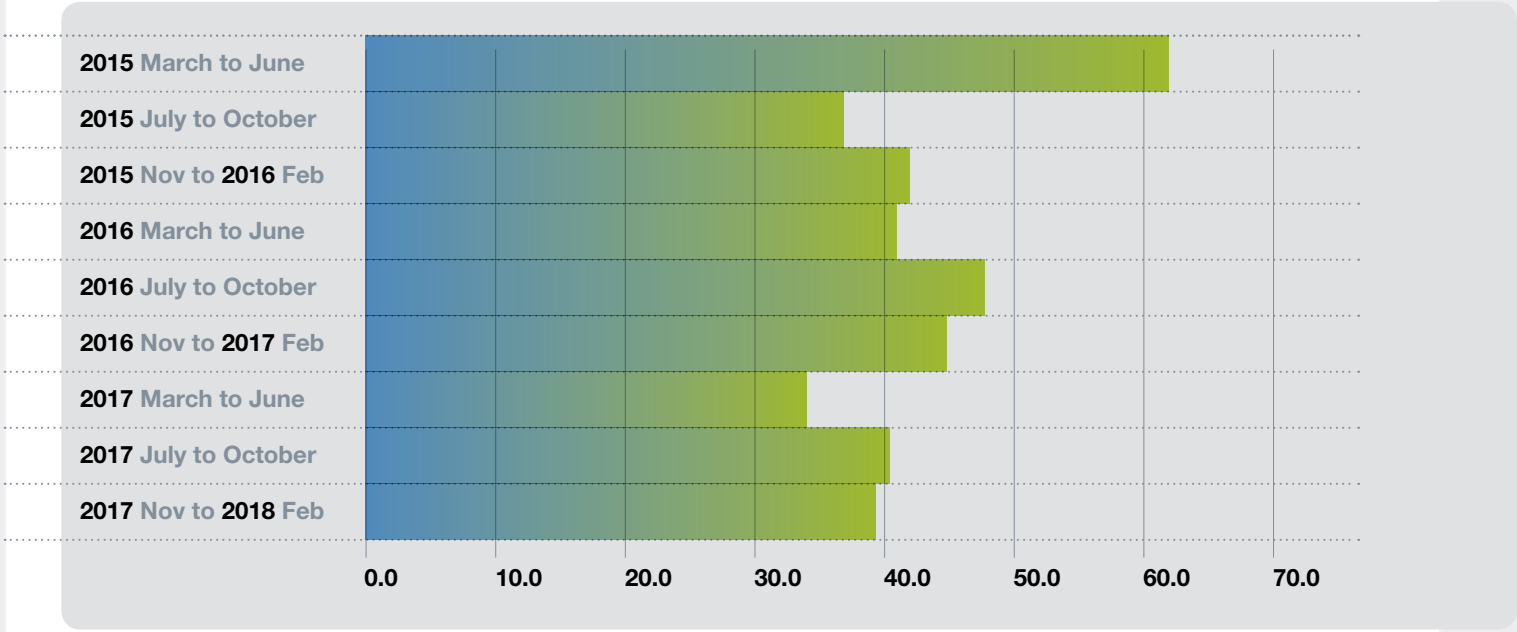
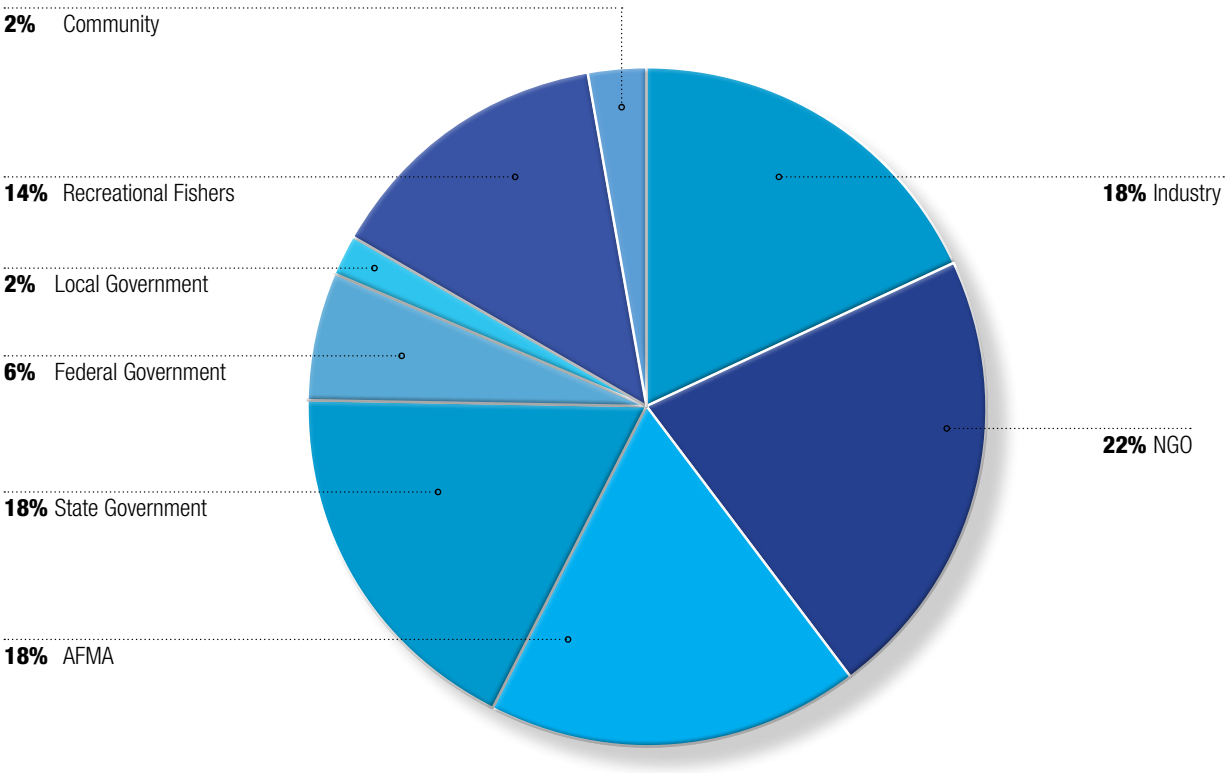


Figure 6: Drivers of news media coverage: trawling,
1 April 2015 – 31 March 2018 (n = 210))



News media

Reports on trawling were primarily focused on the Geelong Star "super trawler", which dominated reporting on fisheries issues in April–May 2015. In these news stories, industry perspectives provided the dominant frame for only 18% of news stories, placing industry third in terms of share of voice (see Figure 6). Federal, State and Local government actors and regulators had the largest share of voice at 44% of articles, followed by NGOs at 22%.

Recreational fishers provided the dominant frame for 14% of articles. Chefs/influencers did not provide the dominant frame for any mainstream news stories on this topic.

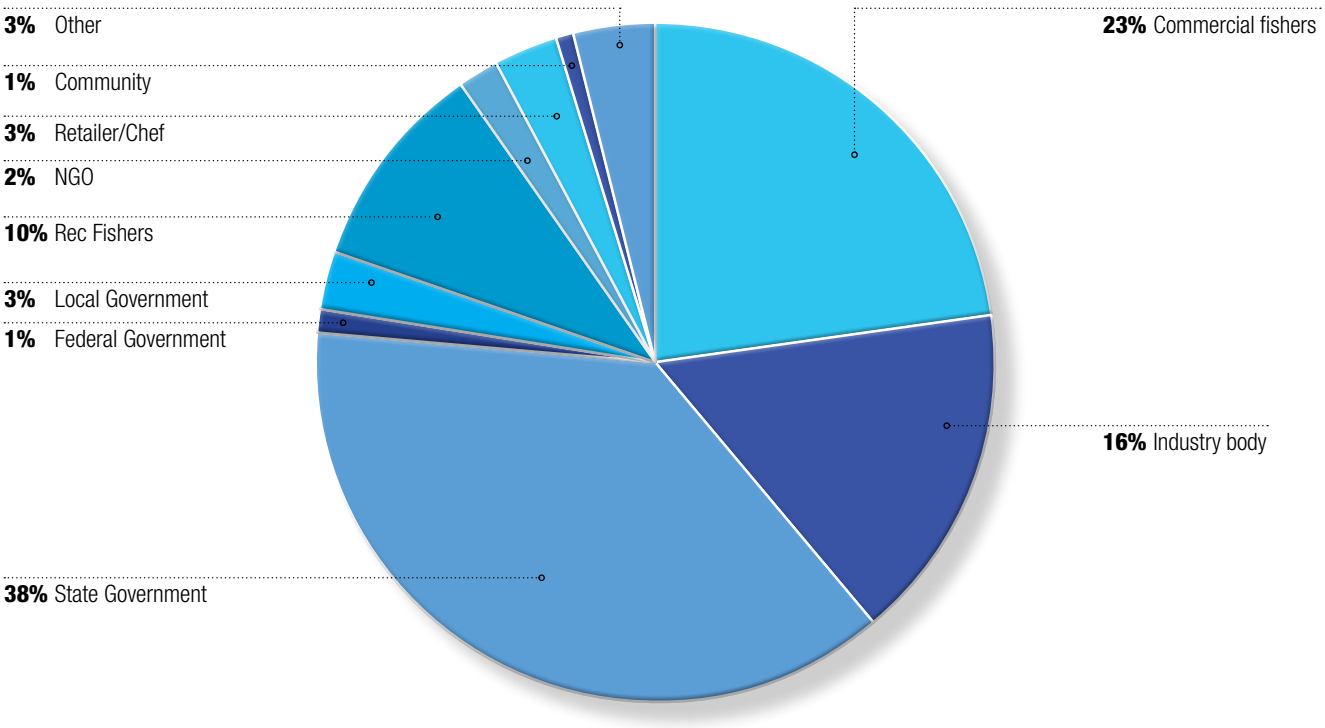
Reports on net-free fishing zones were dominated by stories about zone changes (both proposed and implemented) in Queensland, NSW and Victoria, and highlighted conflicts between commercial and recreational fishers (see Figure 7). In these stories, industry perspectives provided the dominant frame for 39% of news stories, slightly less than government and political actors at 42%. Recreational fishers, NGOs and chefs provided the dominant frame for 10%, 2% and less than 3% of stories, respectively.

Slant of coverage: Not as positive as it initially appears!

While industry has been successful in securing the largest share of voice on key issues, much of the news coverage was driven by the "news value" of conflict (for discussion of news values, see Harcup & O'Neill 2017). In mainstream news media, fisheries issues receive the greatest attention in times of conflict. This is unsurprising, given that conflict is a major driver of the news agenda on most issues (Swenson & Olsen 2018). These results may vary slightly if coverage in other mediums were also included (e.g. radio has become increasingly 'lifestyled', with more positive stories featured).

It should be noted that while industry secures a large share of voice on relevant issues, ***most of the news stories did not originate from industry sources,*** apart from obvious exceptions in categories such as industry promotion (see Table 1). Governments were the most prominent origins of stories (especially on fisheries managed issues), followed by NGOs and community groups (especially on controversial fisheries issues), and research organisations such as universities and CSIRO (especially on issues of climate change, rising ocean temperatures, and other environmental impacts on the sustainability of fisheries).

Figure 7: Drivers of news media coverage: net-free fishing zones, 1 April 2015 – 31 March 2018 (n = 135)



News media

A very small portion of stories were initiated by recreational fishing groups (mostly net-free fishing zones). ***In many of these cases, industry was responsive, but not necessarily reactive:*** that is, industry often worked to add its voice to the discussion of relevant issues, and this was portrayed in largely positive or neutral terms.

However, ***on controversial issues*** (e.g. trawling, salmon aquaculture, and government changes to fishing regulations, including net-free fishing zones), ***industry was frequently reactive, rather than proactive, or even simply responsive.*** Consequently, share of voice cannot be seen as a straightforward proxy for 'positivity' of coverage. ***A notable portion of the conflict in news stories about fisheries issues derives from industry's criticisms of others*** — whether that be criticisms of other sections of the industry (e.g. in the case of salmon aquaculture), or criticisms of recreational fishers, environmental groups, political decision-makers and others (e.g. in the cases of net-free zones and trawling).

'Reactive' media coverage, even when it presents industry perspectives and practices in positive terms, essentially responds to an issue according to terms that have already been determined by others. For example, no matter how many positive stories there may be that point to the "sound science of fisheries management", once something is called a "super trawler" (with its connotations of an enormous entity sucking everything out of the sea), it is almost impossible for positive reporting to overcome the original negative connotations. Indeed, previous research (e.g. Lakoff 2010) has shown that there are limited opportunities to change the terms in which stories are reported once this initial framing has been set. This is because introducing new language is not always possible, and any "new language must make sense in terms of the existing system of frames" (Lakoff 2010).

Reactive coverage can also appear as an attempt by industry to restrict who is deemed to be a legitimate voice on fisheries management issues. Indeed, ***there is a tendency to criticise, sometimes quite harshly, those who disagree with or critique industry practices.*** Across the sample, the dominant industry position on fisheries management was that decisions should be made according to "the science", rather than on the basis of other interests (e.g. *Wynnum Herald,* 29 June 2016; *ABC News,* 26 July 2017; *ABC News,* 18 September 2017). In other words, if "the science tells us it's sustainable" (*Wynnum Herald,* 29 June 2016), then fishing should occur. Sometimes, this prioritisation of 'the science' is presented in vociferous and divisive terms, such as when an industry association executive officer described a decision to ban netting in Queensland's Trinity Bay as "based on the greediness of a few [recreational] fishers, and the stupidity of Labor, rather than good science" (*Cairns Post,* 2 November 2015).

Prioritising "the science" was also a typical approach used by industry during the Geelong Star controversy. For example, industry figures warned that this was a case of fisheries issues being "managed by social media and public protest, rather than robust science and due process" (*Hepburn Advocate,* 21 October 2016). There were also various versions of the claim that the "attack on salmon farms [during the controversies surrounding Tasmanian salmon aquaculture] displayed poor knowledge of science" (*The Mercury,* 7 November 2017).

Industry and its allies tend to characterise those critical of industry practices as "extremist", "radical" or "anti-fishing". For example, when responding to the findings of an inquiry into commercial fishing in NSW, a representative of the Wild Caught Fishers Coalition said that, "The government, the minister, against the industry's best advice, has sided with his ***radical department and consultants"*** (*ABC News,* 24 February 2017).

News media

The characterisation of critics as "radical" or "extreme" was especially common during the controversies over salmon aquaculture and the Geelong Star. Tassal characterised environmental NGOs like Environment Tasmania as ***"extremist groups seeking to undermine science and global reporting processes*** under the ASC [Aquaculture Stewardship Council]" (*The Mercury,* 27 June 2017). In a statement, the Small Pelagic Fishing Industry Association described the Geelong Star as a "magnet for mis-information as ***radical green groups try to use the vessel to further their anti-commercial fishing agenda***" (*Narooma News,* 17 April 2015). A lengthy post from the Association's Facebook page, in which it characterised the Stop the Super Trawler Alliance as "deceit[ful]" and "malicious" in its claims that the Geelong Star had killed a whale shark, was reprinted in full by the *Bay Post* (16 February 2017).

Government actors and other allies defending industry interests often did so in very strong terms. This included characterising opponents of fish farming in Okehampton Bay as part of an "***anti-jobs coalition of radical environmentalists***" (Tasmanian Liberal MHA Guy Barnett in *ABC News,* 1 January 2017; see also *The Mercury,* 3 January 2017) and "environmental extremists" (*ABC,* 9 February 2017). Such strategies have substantial political currency in places like Tasmania, given its long history of environmental conflict, but while the reactive nature of such comments can be useful for political points-scoring, it does little to change the terms in which issues are presented and discussed, or to improve public perception of industry practices.

Fisheries scientists were often trenchant defenders of industry. For example, an executive director of research at the WA Fisheries Department described "extremism" and "zealotry" stemming from "Australia's zero-tolerance to the incidental catch of species such as dolphins" as key risks to the social acceptability of Australia's fishing industry. He lamented that public "sensibilities [rather than scientific or economic considerations] increasingly dictated the way Australian fisheries were managed" (*The West Australian,* 15 July 2015).

Given the public suspicion of "scientific evidence" in fisheries debates (King & O'Meara 2018), and the fact that food and environmental conflicts are frequently conflicts over values, rather than conflicts about "the science" (Ankeny & Bray 2017), prioritisation of 'science' (and 'jobs') over other considerations can potentially impact on community support. While many of these issues are highly emotive ones for commercial fishers and their supporters, and so emotional reactions may be understandable, ***characterising opponents as "extremists" or "malicious" does not build community trust or goodwill, and does little to improve public perceptions of commercial fishing.*** Moreover, while powerful allies can be valuable, many of industry's most vocal public supporters also have their own goals in mind (such as politicians seeking political gain), and so their comments do not always serve the best interests of industry.

At present, 'conflict' is the dominant strategy for securing news coverage, but ***it is important to engage with other news values***, including both 'traditional' news values like human interest and those more specifically adapted to a social media age (such as shareability, see Harcup & O'Neill 2017). A more proactive strategy of positive media coverage *before* issues arise is more effective than adopting crisis management strategies once issues have come to light. The most successful messages for galvanising public support are not those that reassure communities about the technical-managerial aspects of fisheries management, but those that ***shift the focus from "fisheries management" to "sustainable seafood" with messages that "target ... our stomachs, tastes, identities and emotions***" (Silver & Hawkins 2017).

Industry should also ***continue to invest in other forms of relationship-building*** (such as the direct relationships with the political decision-makers), as well as investing in managing its relationships with its well-intentioned, but sometimes unhelpful, allies.

Chefs, influencers and news media

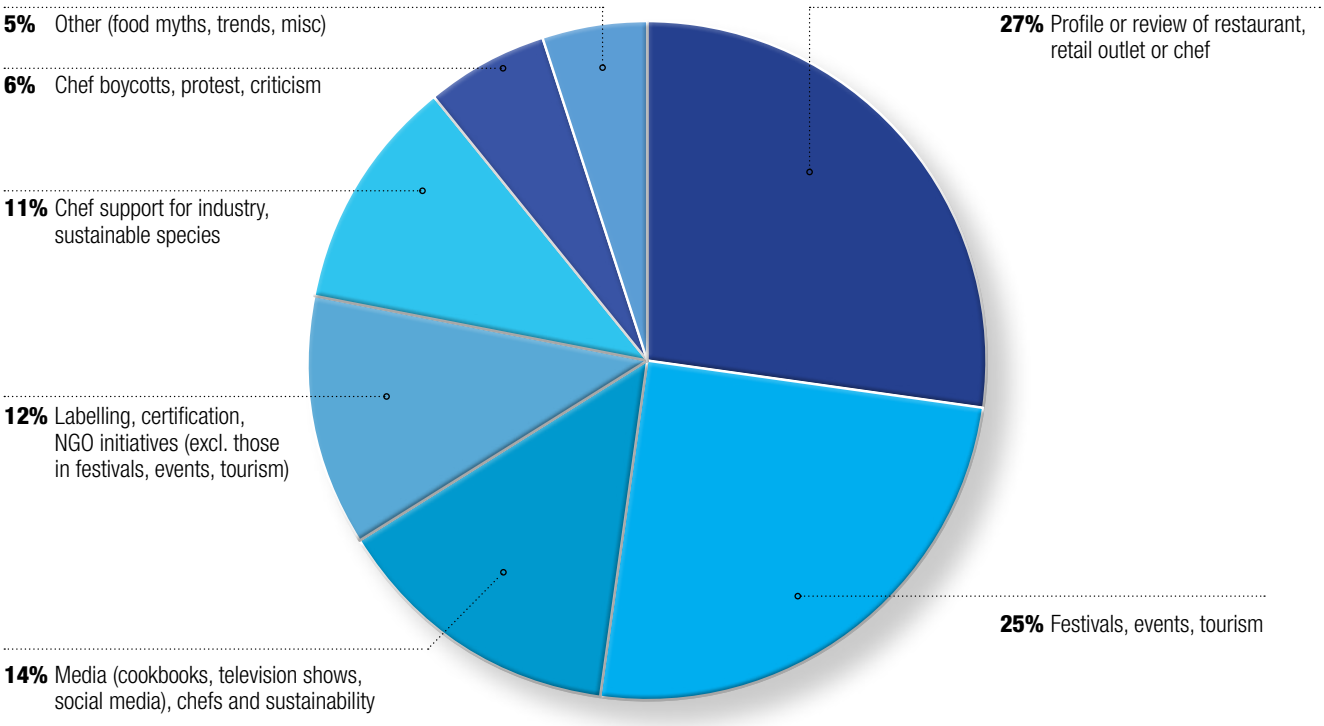
Content analysis of the articles featuring influencers showed that chefs and influencers most commonly appear in the lifestyle sections of news media. 'Hard' news stories are relatively uncommon. As Figure 8 illustrates, two types of stories predominate:

1. profiles and reviews (of restaurants, retail outlets or individual chefs) (27%); and
2. stories about festivals, events and other forms of tourism (25%).

This accounts for 52% of news stories about sustainable seafood that feature chefs and influencers.

In both major categories of stories (profiles/reviews and stories about festivals/events), there is minimal discussion of what 'counts' as sustainable seafood. "***Sustainable seafood" is a term that is mostly used without explanation or qualification.*** For example, a review might simply note a restaurant's focus on "sustainable seafood", as in the case of reviews of Baraka (*The Daily Telegraph,* 11 August 2015), Cirrus (*The Sydney Morning Herald,* 2 September 2016), The Fish Shak (*Gold Coast Bulletin,* 27 December 2016) and Iki-Jime (*The Age,* 14 November 2017). Other reviews mention seafood from "sustainable sources" (Three Blue Ducks review, *The Australian,* 25 July 2017), "sustainably sourced seafood" (Babyface Kitchen review, *Illawarra Mercury,* 9 March 2016), or the "sustainable catch of the day" (Saint Peter review, *The Daily Telegraph,* 20 November 2016).

Figure 8: Celebrity chefs and sustainable seafood, story type. 1 April 2015 – 31 March 2018 (n = 282)



News media

A similar tendency occurs when reporting on food festivals and events. For example, the annual Narooma Oyster Festival is said to "leverage ... off popular interest in sustainable food" (*Narooma News,* 19 April 2015), with the festival's location described as "one of the world's most environmentally sustainable oyster growing regions" (*Bay Post,* 26 April 2017). Promotion of the Noosa Food and Wine Festival included a focus on both seafood and "sustainability" (*Courier Mail,* 28 April 2015), particularly through its "Sustainable Seafood Dinner" (*Noosa News,* 5 April 2016). Similarly, the Cast Off Festival in Woy Woy emphasised "sustainable seafood feasts" (*Central Coast News,* 18 March 2016), while reporting on the Apollo Bay Seafood Festival mentioned its "sustainable seafood" focus (*Echo,* 8 February 2018). In most cases, this is the full extent to which "sustainability" is discussed.

In the cases where further information about sustainability is provided, this information is often minimal (and is mostly qualified through vague terms like "local" or "fresh"). In the case of the Fremantle Seafood Festival, sustainability was specifically linked with MSC certification (*The West Australian,* 30 March 2015), but in most cases, festivals typically offer patrons insight into sustainability practices through demonstrations and information sessions provided by celebrity chefs and industry influencers. For example, the Noosa Food and Wine Festival promised to have chefs and other industry figures on hand to share "insight into our local seafood, safe fishing practices and sustainability" in a "fun informal manner" (*Noosa News,* 17 April 2015; see also *The Advertiser,* 16 May 2015). The Cast Off Festival offered "cooking demonstrations from local chefs and sustainability talks" (Central Coast, 18 March 2016).

The restaurant reviews' focus on 'sustainability' reflects the consumer trend towards 'sustainable' eateries (Crowe 2018). Since these reviews do not engage directly in debates about the specific practices that 'count' as sustainable, they tap into consumer interest in sustainability in fairly uncontentious ways. However, the fact that only some seafood is identified as "sustainable" can nonetheless imply that other seafood is *un*sustainable or, in the case of the "sustainable seafood" eatery, that serving sustainable seafood is a specialist skill only of the high-end restaurant. In contrast, because they locate 'sustainability' within a particular region or area, and thereby connect with both consumer and media trends emphasising provenance, seafood festivals are perhaps more successful at making sustainable seafood appear more widely accessible—albeit primarily for a middle class 'foodie' audience.

Of the small proportion of stories that feature chefs and influencers engaging with seafood sustainability issues in greater depth, these are ***more likely to be supportive, rather than critical, of the commercial industry.*** As shown in Figure 8, 11% of stories in the sample were explicitly supportive of industry, compared to 6% that were critical. 12% of stories advocate for improved seafood labelling and/or certification schemes, such as country of origin labelling or MSC certification.

Chefs' and influencers' statements of support for industry tend to simply state that the industry is sustainable. For example, Ed Halmagyi's cobia recipe in the lifestyle pages of the *Macarthur Chronicle* (27 September 2016) described Australia as home to some of the world's "best-practice operations" in sustainable fishing. Halmagyi, best known as 'Fast Ed' in his appearances on *Better Homes and Gardens* and in his five cookbooks, is a celebrity chef with a significant public profile. With celebrity chefs considered to be both food authorities and "lifestyle experts" (Lewis 2008), the lack of evidence for sustainability claims is typical of chefs' engagement with food media, and Halmagyi's comments should be considered significant endorsements within the 'feel good' conventions of lifestyle media.

Engaging in sustainability debates: The importance of brand alignment

Chefs and influencers only rarely appear in 'hard' news stories on seafood sustainability issues, but when they do, they are often strong advocates of industry. This is especially true of the wild catch sector. ***However, for this advocacy to be effective, there must be a clear alignment between the chef/influencer's public persona and their messages of industry support.***

Over the 4-year sample, chefs were the most prominent advocates for industry during the lead up to the ban on net fishing in Port Phillip Bay in 2015. The two most prominent were celebrity chefs Neil Perry and Guy Grossi, whose perspectives provided the dominant framing for much of the mainstream news coverage during the height of reporting on this issue (around November 2015). Prior to their involvement, reporting on the issue had largely be confined to local news outlets, but the lure of high-profile celebrity chefs assisted the story to achieve coverage in major metropolitan newspapers, radio, television and online.

In news media, the chefs were quoted as saying that banning net fishing in Port Phillip Bay could harm "Melbourne's global food reputation" (*Herald Sun*, 5 November 2015; see also *Geelong Advertiser,* 5 November 2015), that it would "dramatically affect" the supply of fresh fish (*Herald Sun,* 21 November 2015), and that it would make Melbourne reliant on seafood "imports" (*Herald Sun,* 21 November 2015; *Geelong Advertiser,* 5 November 2015). Both chefs repeatedly emphasised the sustainability credentials of the fishery. Perry described the "beautiful fresh sustainable fish" of Port Phillip Bay as "fundamentally a part of the culture of Melbourne" (*Herald Sun,* 5 November 2015; *Geelong Advertiser,* 5 November 2015), while Grossi said, "We don't want to import everything ... if it's a sustainable resource why shouldn't we continue to enjoy it?" (*Herald Sun,* 21 November 2015). Both chefs' mainstream media comments were accompanied by additional campaigning via their own social media accounts, with posts on Twitter, Instagram and Facebook.

The chefs' key messages (that the Port Phillip Bay fishery was sustainable, that it was culturally important to Melbourne and Victoria, and that ending netting would impact on local seafood supply) were also the key messages of other supporters of the Port Phillip Bay fishery, including Seafood Industry Victoria and the Melbourne Seafood Centre. Perry's and Grossi's wider public profile assisted in generating 'mainstream' media interest in the issue.

However, the case also highlighted the importance of working with the 'right' chefs and influencers. While clearly well-intentioned, some aspects of the chefs' messages and personas did not effectively 'gel' with those of industry. For example, there was some incongruity in high-end restaurant chefs warning that the wider public will lose access to fresh seafood while prioritising Melbourne's global food reputation (more on this in Social Media analysis, below). Moreover, for Perry in particular, while he owns several Melbourne restaurants, his persona is very 'Sydney', and this potentially limited his capacity to connect with Victorian audiences.

News media

The case highlights the importance of 'fit' when working with chefs and influencers. To be effective, the brand identity of the chef or influencer must closely match the identities and messages that industry is intending to convey. This was especially important in the case of Port Phillip Bay, where industry's recreational opponents had their own celebrity supporters with a much clearer alignment between the celebrity personas and key messages, such as Rex Hunt (who received comparable mainstream media coverage to Perry and Grossi) and Paul Worsteling (who was prominent on recreational fishing TV programming). The value of chefs like Perry and Grossi was in their significant public profiles, but there was insufficient brand alignment to significantly advance the industry's position.

In contrast to chefs' and influencers' support for the wild catch sector, ***negative statements about Australia's commercial fisheries were limited to Tasmania's salmon industry.*** This was almost exclusively in the context of their role as signatories to Environment Tasmania's Sustainable Salmon Chefs Charter, which was supported by a number of well-known Tasmanian and Australian chefs. These were chefs with identities that were highly congruent with Environment Tasmania's position: that is, they were chefs who were advocates for provenance and sustainability, and who were often at the helm of produce-driven eateries. In the news stories on the Charter, chefs including Philippe Leban, Christian Ryan and Christine Manfield indicated concerns about the "sustainability and transparency" of Tasmanian salmon in the wake of the *Four Corners* exposé (*The Mercury,* 26 June 2017); they explicitly stated that they were not "anti-salmon" (*The Mercury,* 29 June 2017), but that they had temporarily stopped offering salmon on their restaurant menus until "clarification" on sustainability concerns could be provided (*The Mercury,* 29 June 2017).

Interestingly, ***these chefs' views did not go unchallenged in the reporting***. For example, around half of the stories published in Tasmanian newspapers were critical of the chefs' stance and gave prominence to the perspectives of government ministers and other MPs who "condemned" (*The Mercury,* 27 June 2017) or "slammed" (*Tasmanian Country,* 30 June 2017) the chefs' decision.

These results highlight that while chefs tend not to provide a great deal of evidence to support their views about sustainability (as is typical of lifestyle media), they are often in demand as advocates for various sustainability causes. Throughout the sample, chefs and influencers were typically supportive of the Australian seafood industry's sustainability credentials and, significantly, were not given a 'free run' by media to voice criticisms in cases where they were not.

News media

Table 2: Chefs and influencers in news coverage, 1 April 2015 – 31 March 2018

Tier 1 (4+ mentions)	Tier 2 (2–3 mentions)	Tier 3 (1 mention)
Matthew Evans (n = 22)	Analiese Gregory (n = 3)	Adrian Hart (n = 1)
Andy Allen (n = 14)	Christine Manfield (n = 3)	Alejandro Saravia (n = 1)
Ben Milbourne (n = 14)	Josh Catalano (n = 3)	Andrew McConnell (n = 1)
Neil Perry (n = 14)	Josh Niland (n = 3)	Andrew Wallace (n = 1)
Tom Kime (n = 12)	Luke Burgess (n = 3)	Andy Burns (n = 1)
Christian Ryan (n = 7)	Tetsuya Wakuda (n = 3)	Anthony Colledge (n = 1)
David Moyle (n = 7)	Andrew Ettinghausen (n = 3) *	Bart Beek (n = 1)
Don Hancey (n = 7)	Anthony Huckstep (n = 2) *	Ben Pollard (n = 1)
Philippe Leban (n = 7)	Cheong Liew (n = 2)	Ben Shewry (n = 1)
Matt Golinski (n = 6)	Donovan Cooke (n = 2)	Chris Niquet (n = 1)
Rex Hunt (n = 6) *	Ed Halmagyi (n = 2)	Colin Barker (n = 1)
Anthony Lui (n = 5)	Fouad Kassab (n = 2)	Corey Costelloe (n = 1)
Brent Savage (n = 5)	Frank Camorra (n = 2)	Dan Learoyd (n = 1)
Darren Robertson (n = 5)	Ian Curley (n = 2)	Dan Moss (n = 1)
Guy Grossi (n = 5)	James Gallagher (n = 2)	Daniel Masters (n = 1)
Maggie Beer (n = 5)	Jason Wright (n = 2)	Daniel Wilson (n = 1)
Masaaki Koyama (n = 5)	Kate Gibbs (n = 2) *	Dany Angrove (n = 1)
Nick Hildebrandt (n = 5)	Lynton Tapp (n = 2)	Dave Campbell (n = 1)
John Susman (n = 4) *	Mark LaBrooy (n = 2)	David Koorey (n = 1)
Matt Moran (n = 4)	Mark Sainsbury (n = 2)	David Rayner (n = 1)
Peter Gilmore (n = 4)s	Matt Dempsey (n = 2)	Gareth Howard (n = 1)
Peter Manifis (n = 4)	Peter Kuruvita (n = 2)	Graham Jefferies (n = 1)
Shannon Bennett (n = 4)	Rodney Dunn (n = 2)	Guy Turland (n = 1)
	Ryan Squires (n = 2)	Hamish Hames (n = 1)
	Santiago Fernandez (n = 2)	Hanzel Martinez (n = 1)
	Scott Trotter (n = 2)	James Day (n = 1)
	Simon Evans (n = 2)	James Viles (n = 1)
	Tim Browne (n = 2)	Jason Hutcheon (n = 1)
	Tom Chiumento (n = 2)	Jason Roberts (n = 1)
		Josh Kularo (n = 1)
		Josh Lopez (n = 1)
		Josh Pelham (n = 1)
		Kade Brennan (n = 1)
		Kelvin Andrews (n = 1)
		Kerry Bragagnolo (n = 1)
		Khanh Nguyen (n = 1)
		Lorenzo Pagnan (n = 1)
		Luke Southwood (n = 1)
		Mark Jensen (n = 1)
		Matteo Zamboni (n = 1)
		Matty Bennett (n = 1)
		Michael Clift (n = 1)
		Nathan Tillott (n = 1)
		Nelly Robinson (n = 1)
		Oliver Edwards (n = 1)
		Pablo Walker (n = 1)
		Paul Iskovs (n = 1)
		Paul McDonald (n = 1)
		Paul McGrath (n = 1)
		Peter Robertson (n = 1)
		Quentin Whittle (n = 1)
		Raffaele Cirillo (n = 1)
		Ross Lusted (n = 1)
		Shannon Gee (n = 1)
		Sheldon Black (n = 1)
		Simon Taylor (n = 1)
		Stefano Manfredi (n = 1)
		Stuart Fergusson (n = 1)
		Tom Haynes (n = 1)
		Tony Ford (n = 1)
		Travis Kamiyama (n = 1)
		Troy Rhoades-Brown (n = 1)
		Zac Sykes (n = 1)
		Zachary Nicholson (n = 1)

Social media

Social Media

Summary of key findings

- Conversations about seafood issues are highly fragmented on Twitter and Facebook, with industry, chefs and environmental groups operating within distinct, and largely separate, networks. 'Bridging' of these networks can bring seafood issues to the attention of wider audiences.
- In cases where industry and NGOs have sought to use chefs as allies during periods of conflict, chefs' involvement generated surprisingly little social media engagement and had limited capacity to shift dominant perspectives on contentious issues. Different strategies are necessary to successfully engage chefs as influencers—such as investing in developing relationships with chefs during 'calmer' periods, rather than during times of conflict.

Method

Two methods were used for the social media analysis: ***Twitter network analysis*** and ***qualitative analysis of Twitter and Facebook posts.*** The focus here is primarily on Twitter and Facebook as platforms for 'political' conversation and campaigning. Instagram is discussed in more detail in the following section on Lifestyle Media.

Network analysis

Data for the network analysis was collected using TrISMA, the Tracking Infrastructure for Social Media Analysis, which collects tweets from four million Australian Twitter users. Tweets were collected for three key issues that were identified via the News Media analysis or the research interviews as issues that were substantially affected by social media:

1. the ban on net fishing in Port Phillip Bay;
2. the controversies over salmon aquaculture in Tasmania; and
3. the Geelong Star "super trawler".

Keyword and hashtag searches were used to identify the relevant tweets in each case. There were 1900 tweets for the ban on net fishing in Port Phillip Bay; 26,596 tweets associated with the controversies surrounding Tasmanian salmon; and 45,166 tweets for the Geelong Star.

This Twitter data was subject to a network analysis to identify the level, range and depth of engagement between users across the three issues. Focusing on retweets and @mentions, we identified the users and communities with the greatest degree of influence and visibility within the three conversations. Retweets and @mentions are two of Twitter's communicative affordances that allow users to interact, disseminate information, and bring issues to the attention of others. Research has shown that users often employ retweets and @mentions differently to achieve different communicative goals: retweets indicate conversations between users, with retweets often signalling an endorsement of another user's tweets and/or an attempt to disseminate their views within one's own community; @mentions are the users that are talked to, at or about, with the number of @mentions often indicating the perceived level of importance of different actors within a network. The network structures created through the collective use of retweets and @mentions were analysed for the insights they provided into the engagement and conversation dynamics surrounding the three issues.

A community detection algorithm was used to identify clusters of users based on their levels of interaction and to visualise the resultant networks. In the visualisations below, the users that appear in the centre of the graphs are those that are retweeted/@mentioned by a majority of the other users in the dataset. Those situated at the peripheries are those retweeted/@mentioned only by certain communities of users. To ease the reading and interpretation of the visualisations, each community was assigned a different colour. The colours, therefore, represent communities of users with a high level of inter-tweeting or @mentioning. Each circle (node) in the network represents an individual Twitter account, and each curved line (edge) represents a retweet/@mention. The size of a node represents the sum of retweets/@mentions received by an account as a proxy for the account's level of activity, engagement and reach. The larger a node is, the higher number of retweets/@mentions received by the account. To assist in reading the graphs, only the top retweeted/@mentioned accounts (i.e. those with the most engagement) are shown with their usernames.

As well as visualising the engagement and conversation dynamics surrounding the three identified issues, an additional network analysis was conducted on all individuals and organisations that appeared in the news media coverage analysed in the News Media analysis, above. We identified the active Twitter users among the chefs and influencers in Table 2, as well as those among the NGOs, environmental groups, and industry and recreational fishing organisations who appeared in the news media coverage. Of the list of 161 individuals and organisations, 81 had Twitter accounts; TrISMA has an ongoing collection of tweets for 56 of these.

TrISMA was queried to identify tweets posted by the users in the list that @mentioned and/or retweeted any of the other users in the list. In this case, combining analysis of retweets and @mentions provided a clearer picture of the overall communicative environment, as it enabled us to identify the communities of users that interact with each other.

There were 4,051 tweets posted between 2015 and 2017 in which one of the identified users had retweeted/@mentioned any of the other users in the list. However, since it is possible that a tweet @mentions more than one account, all secondary @mentions were also included to allow identification of shared networks among the identified users. When secondary @mentions were included, the dataset consisted of a total of 11,819 tweets. These were analysed for their networks of interaction and endorsement, using the same approach to network analysis and visualisation as for the issues analysis.

It should be noted that while Facebook is also a key site for debates relevant to the sustainability of Australian seafood, we have been unable to undertake a network analysis of users of this platform due to recent changes to Facebook's API. However, qualitative analysis of Facebook interactions suggest that we would anticipate similar results to what is presented below.

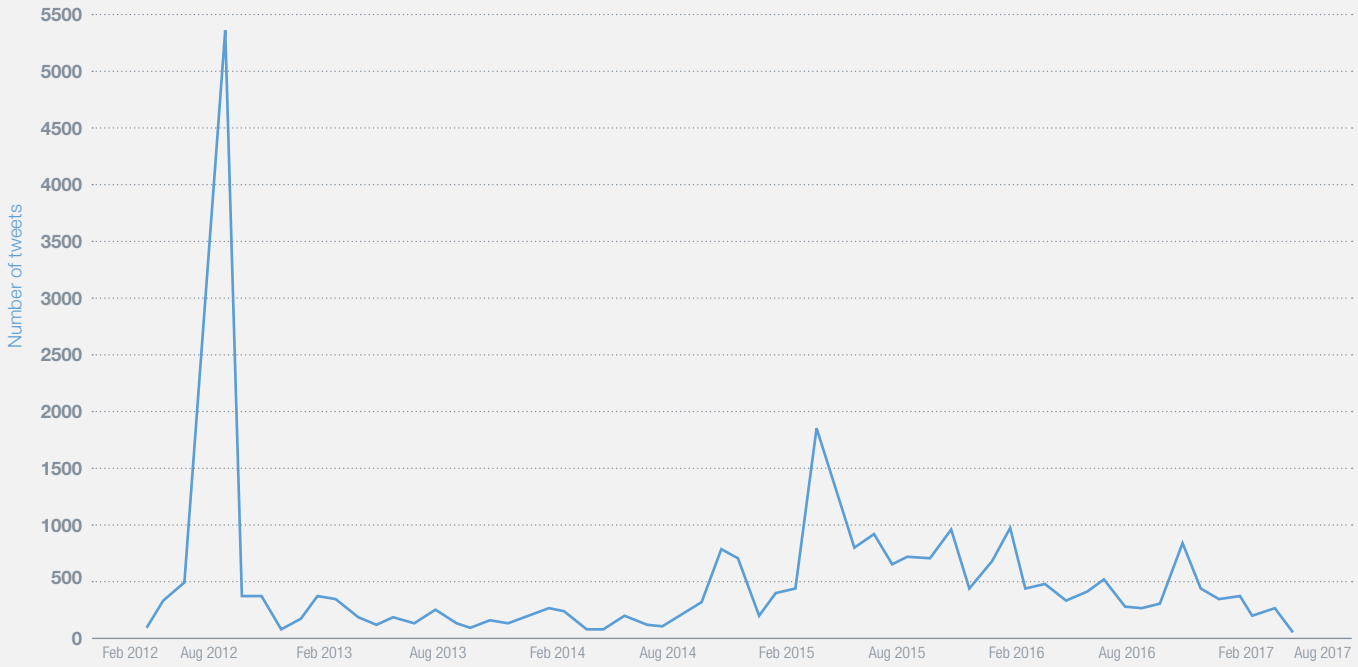
Social media

Results: Network analysis

Social media can play a significant role in shaping public debate about contentious issues, with some worrying about the effect of a well-timed "Twitter storm" on the fate of industry (Tracey et al. 2013). Throughout the mainstream news stories collected for the News Media analysis (above), social media is described as a significant contributor to debates about the Geelong Star (16 stories), salmon aquaculture (5 stories) and net-free fishing zones (2 stories). However, in Australia, ***"Twitter storms" happen far less often than is commonly thought***, possibly due to the lower uptake of Twitter among Australian audiences compared to elsewhere in the world. Even the social media activity surrounding the Geelong Star, which faced an established and well organised campaign from recreational fishing groups, environmental advocates and local communities, was comparatively muted, particularly when compared to earlier campaigns against "super trawlers". As Figure 9 shows below, although the Geelong Star generated the most social media activity of any issue during our sample period, this activity was substantially dwarfed by that surrounding the FV Margiris in 2012. (The large spike in September 2012 represents Twitter activity related to the Margiris; the much smaller spike in April 2015 represents the height of the Twitter discussion related to the Geelong Star).

The occasional "Twitter storm" aside, ***social media activity surrounding fisheries issues is remarkably fragmented***—much more so than those associated with many other food industries (see Burgess, Galloway & Sauter 2015). There are few commonly used hashtags uniting discussion of seafood issues, and as is the case for many social media communities, social media activity related to Australian seafood is highly prone to "echo chambers" (where users choose to interact only within like-minded networks) and "filter bubbles" (where the algorithmic curation of information exposes users only to like-minded views) (Dehghan 2018). ***Fragmentation is amplified by the fact that many seafood industry organisations use Facebook and Twitter primarily as 'push' mediums***—that is, content is delivered 'to' users with little interaction from them. However, it should be noted that similar tendencies are common amongst recreational fishing groups and, to a lesser extent, environmental organisations.

Figure 9: Tweets over time, #stopthetrawler



Social media

The sparseness and insularity of social media activity surrounding fisheries issues works to limit the visibility of issues outside of existing networks. In the case of the Australian seafood industry, this is something of a mixed blessing: because this insularity also effects environmental and recreational fishing groups, it can limit the reach and impact of some of the most damaging criticisms of the industry, but it also limits industry's capacity to make its views and practices more broadly visible. Although social media has often been celebrated as a unifying force, it can also contribute to sharp polarisations that result in tightly held positions becoming even more entrenched (Sunstein 2017).

This latter scenario most clearly describes the social media conversations surrounding fisheries issues: particularly on Facebook, ***debate is divisive and there is a tendency on all sides to attack and insult those they disagree with.*** Beyond referring users to credible third-party resources to correct errors of fact, it is usually not constructive to engage opponents in debate over contentious issues. When issues are emotive and emotional, it is rare for people to change their minds upon hearing new 'facts'. Insults, while they may be tempting and may help to let off steam, are usually not very persuasive either.

The key is to get people to *care* about seafood (and, eventually, seafood industry issues). This requires making issues visible not just to those who are already interested (either those who are already supportive of industry or those that are too hostile to ever change their minds), but to broader "foodie" (Johnston & Baumann 2009) audiences (more on 'foodie' audiences below). ***However, it is necessary to 'clean up' the tone of some social media conversations before seeking to attempt to bridge networks and bring social media content about fisheries issues into wider public view.***

Social media

Port Phillip Bay net-free fishing zone

Debate surrounding the ban on net fishing in Victoria's Port Phillip and Corio Bays was too sparse to conduct a network analysis. There was a concerted attempt by some users to give visibility to the issue and generate momentum around specific hashtags (e.g. #savebayseafood), but this was largely unsuccessful. Although the hashtag was used by some users, only a small number of very active accounts participated, and their followers did not retweet their posts to a large extent. This prevented the issue from achieving the momentum it needed to become a more visible topic.

Tassal and salmon aquaculture in Tasmania

In contrast to Port Phillip Bay, the conversation networks surrounding Tassal and salmon aquaculture in Tasmania showed greater levels of activity and interaction. Figures 10 and 11 below show the retweet and @mention networks arising from *Four Corners*' exposé on salmon farming in Macquarie Harbour and Okehampton Bay.

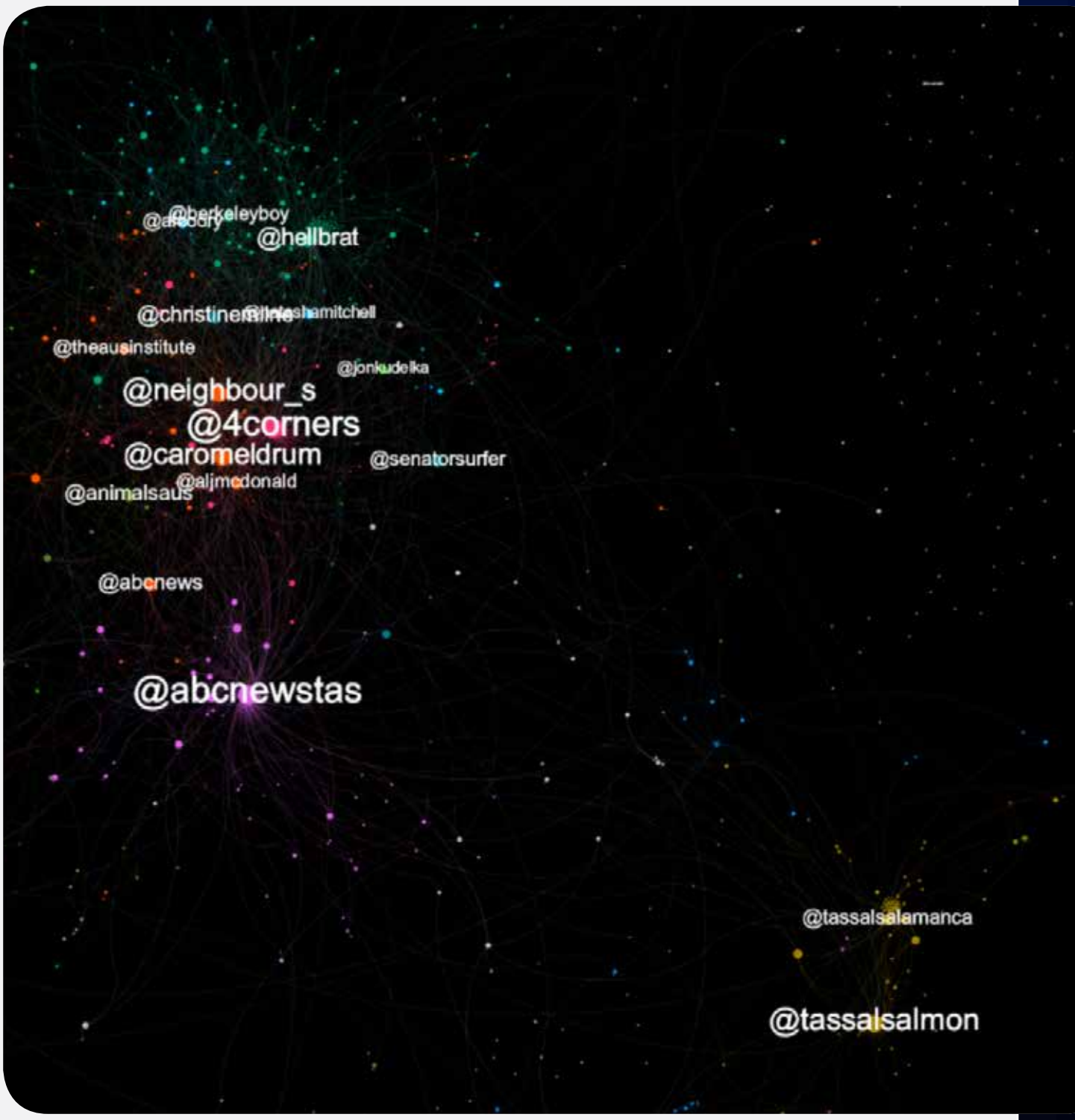
The retweet network reveals several distinct, but largely disconnected, clusters of activity. Given that the public debate about Tasmanian salmon farming was sparked by the *Four Corners* story, 'Big Fish', which has a live tweeting feature, and given the continued salience of traditional media as a source of information for many social media users (Araujo & Van der Meer 2018), the accounts most central to this network are those associated with national news and current affairs media, followed by local media. The central position in the network is occupied by accounts related to *Four Corners* and other ABC programs (e.g. @4corners, @caromeldrum, @aljmcdonald), with a second distinct cluster formed by local Tasmanian media (e.g. ABCnewsTas, @LeonCompton, @936Hobart).

Another influential cluster centres around politically progressive and environmental actors. Helen Barratt (@hellbrat) plays a central role in this cluster. Other important accounts in this category are @berkeleyboy, which is a highly active account with a large number of followers. @Cloudless8, which appears to be a pro-Labor account, plays both a central and bridging role in this cluster; its tweets are retweeted by many users within this cluster, as well as by users who have retweeted other central accounts. ***Accounts such as these play an important role in giving visibility to the issue within different Twitter communities.*** However, environmental and politically progressive communities in the Australian Twittersphere are typically inward-looking and prone to echo chambers (Dehghan 2018), as they are in this case. That said, echo chambers are not hermetically sealed, and given that environmental and politically progressive communities are well-connected to other clusters in the Australian Twittersphere, especially to general politics and news, concerted efforts by them in using hashtags, @mentioning and retweeting other accounts, and being retweeted and @mentioned by them, can significantly increase the visibility of issues and information.

The salmon industry's voice, in contrast, is very far from the central retweet network. @tassalsalmon and @tassalsalmanca play important roles in information dissemination within their own networks, but their peripheral location within the overall discussion means that these tweets are less likely to be seen within other user networks. Since retweeting is often used as a sign of endorsement (Bruns & Stieglitz 2013), this limited re-tweeting of industry accounts can be viewed as ***a deliberate decision by other Twitter users to not give visibility to industry perspectives.*** This explanation is confirmed by the @mentions network, which shows industry accounts in a far more central role.
As Figure 11 shows, the @mentions network reveals media figures and outlets (e.g. @4corners, @caromeldrum, @leoncompton, @abcnewstas) to be in a similarly central role as they were in the retweet network. However, this network also shows both fewer political and environmental accounts at its centre and a greater centrality of industry accounts (e.g. @tassalsalmon, @huonsalmon). @tassalsalmon, for example, received a far greater number of @mentions than retweets. This is typical of how Twitter users typically engage with organisations during times of controversy (Araujo & Van der Meer 2018), and ***shows that they are aware of industry communication, but are engaging with it on their, rather than on industry's, terms.***

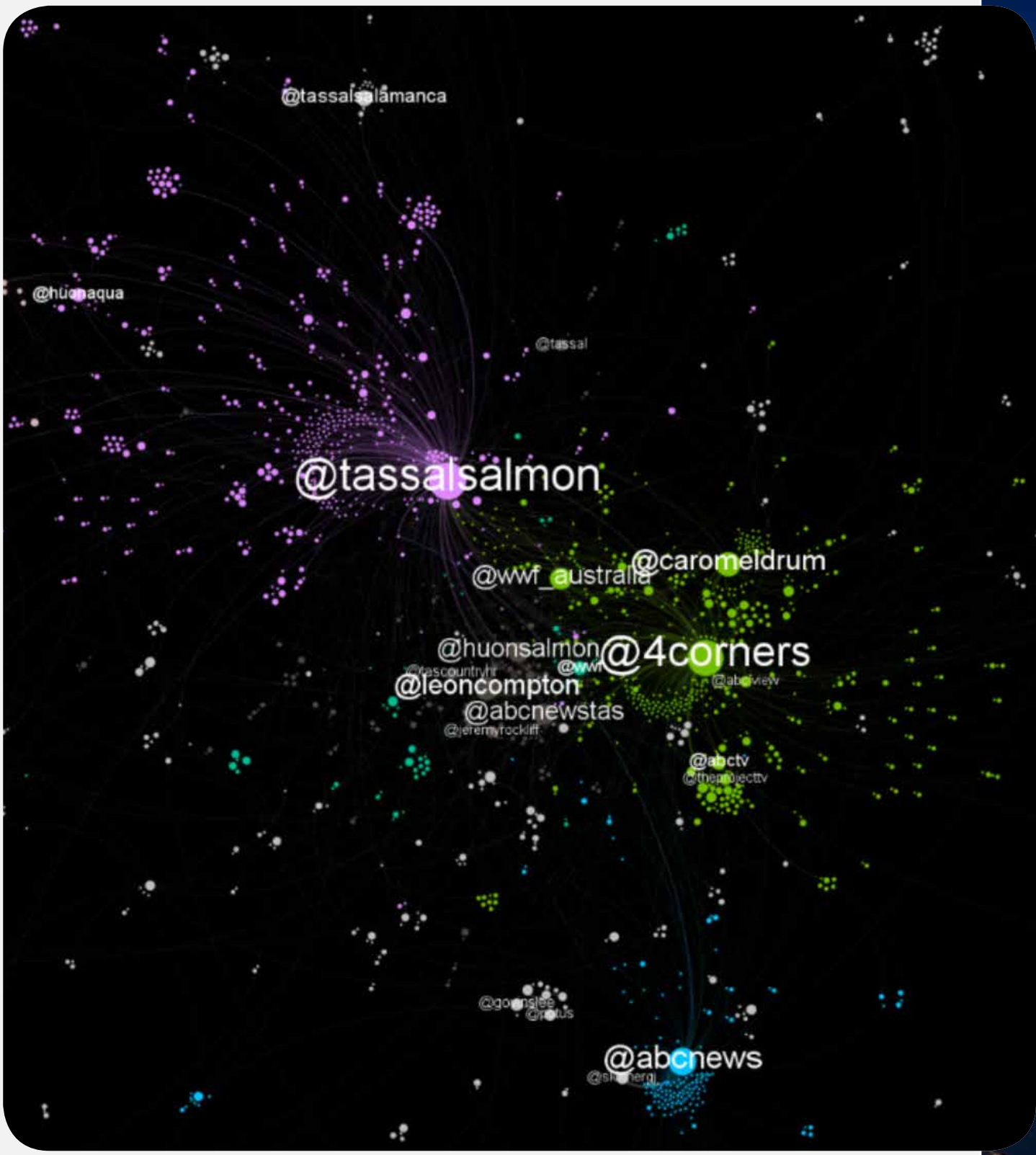
Social media

Figure 10:
Tassal and Tasmanian salmon, retweet network



Social media

Figure 11:
Tassal and Tasmanian salmon, @mention network



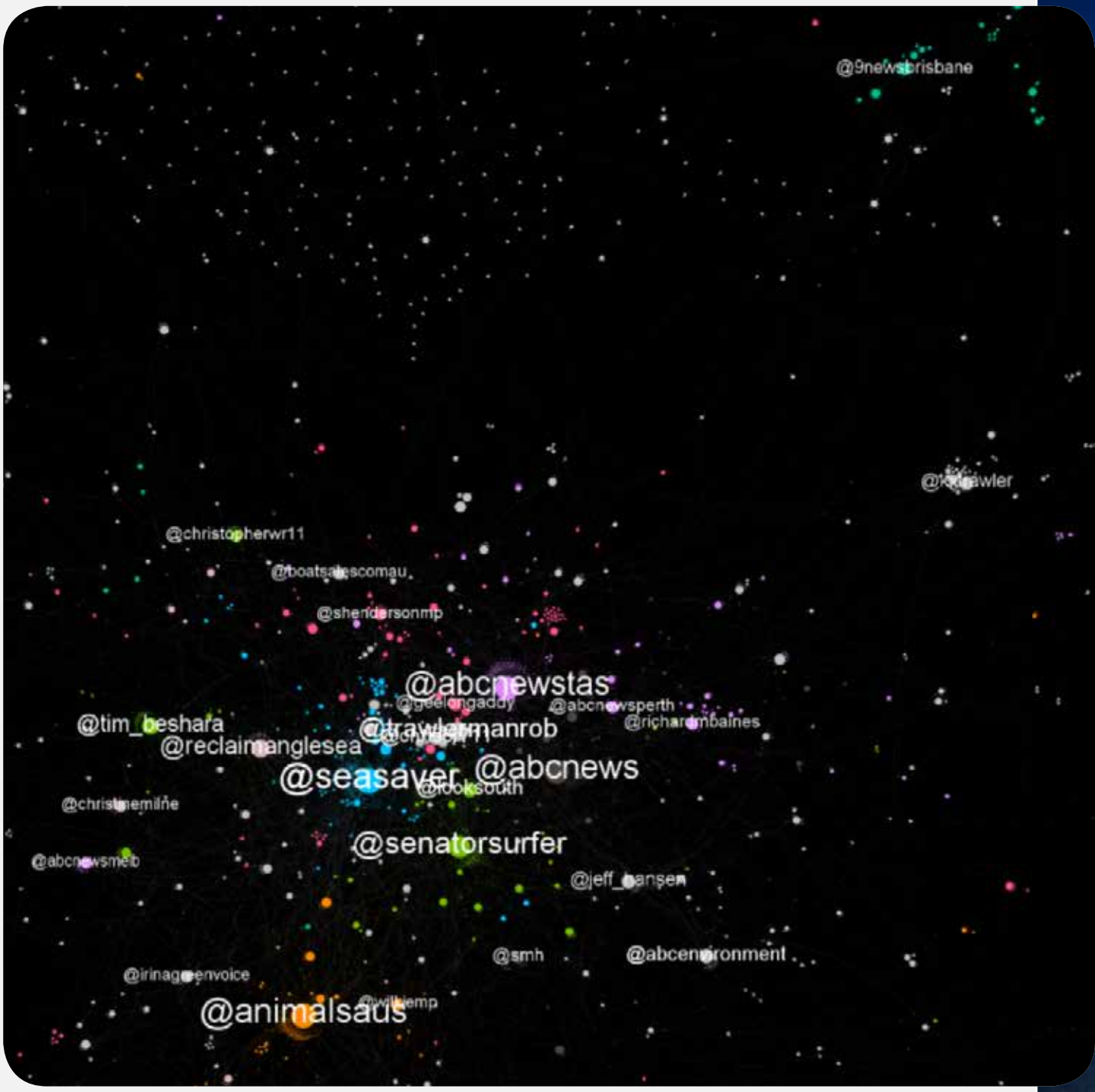
Social media

Comparing the retweet and @mentions networks, it becomes clear that ***users are strategically choosing to retweet or @mention accounts to achieve different communicative goals.*** Retweeting introduces information to one's own followers. @mentioning, in contrast, is used to talk to, at or about other users, including those one disagrees with. @mentions are often a tool used to engage in debate with particular users and/or to bring issues to the attention of one's own followers, so that they might join the user in criticising, or engaging in further debate with, these other user accounts.

Such strategies of @mentioning mean that industry does not necessarily have control over how contentious issues play out on Twitter, particularly when industry's attempts to counter criticisms are effectively silenced by users' decisions not to retweet industry posts. When contentious issues arise, ***there is a risk that industry groups and organisations can invest time and energy in 'pushing out' content that will only be seen by those who are already part of their networks and who are already supportive of their positions.*** Generating social media content does not in itself shape the terms of the debate: how this content circulates within online and offline networks is key. ***Moving beyond echo chambers and 'bridging' between network silos requires a planned social media strategy.*** Developing relationships with 'influential' users, both on- and offline, during calmer times (i.e. time when there is no controversy) is essential for boosting the industry's social media visibility.

Social media

Figure 12:
Geelong Star, retweet network



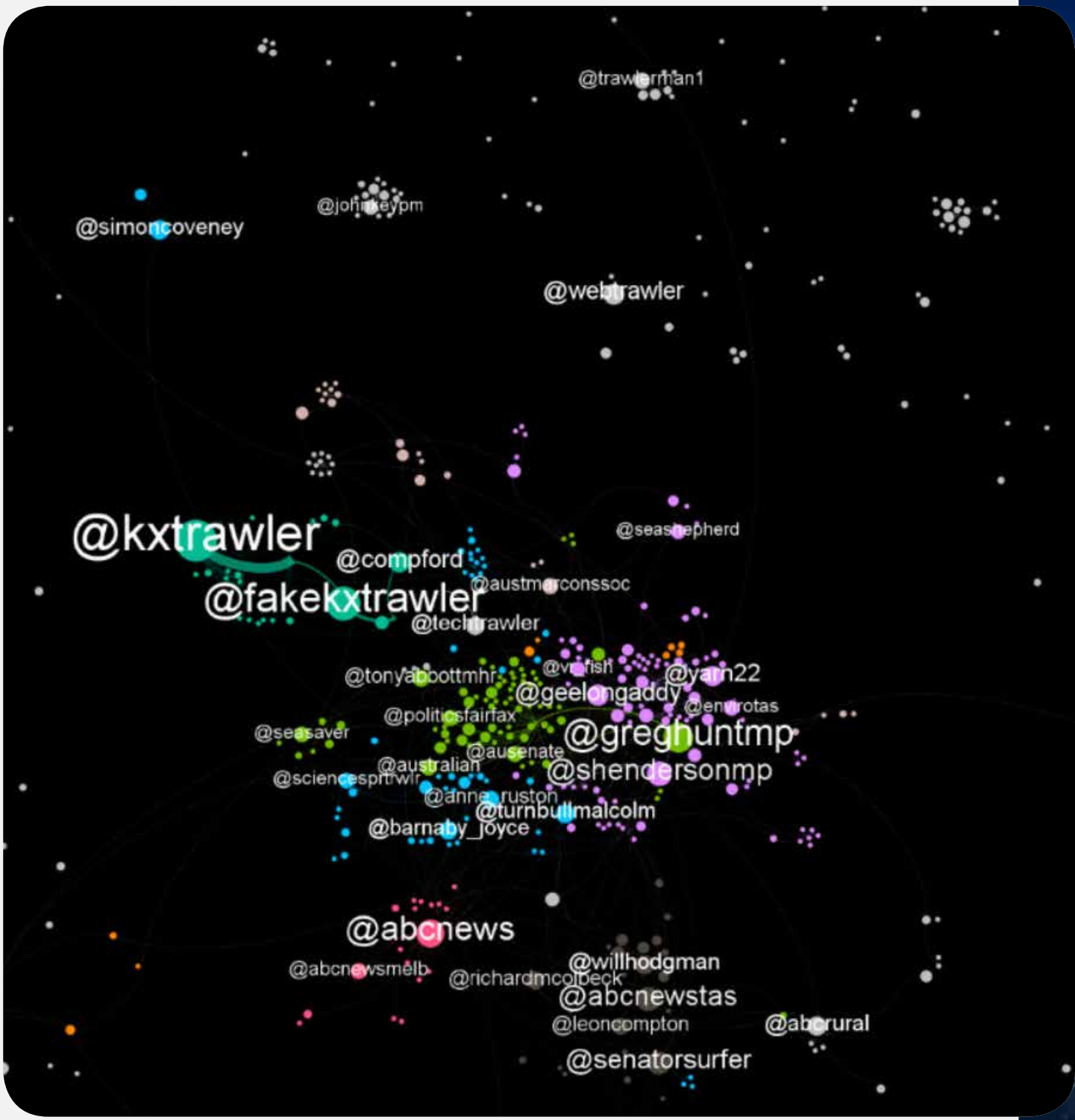
Social media

The retweet and @mention networks associated with the Geelong Star reveal similar patterns to those associated with Tassal and salmon aquaculture. The retweet network (Figure 12) shows media figures and outlets (e.g. @abcnews, @abcnewstas) to have a similarly central role. In this case, however, there is greater activity from environmental activists in the centre of the network—this is to be expected given that much of the social media activity surrounding the Geelong Star was stimulated by activist campaigning, rather than by a media exposé.

There are several distinct clusters of progressive political or activist accounts shaping the debate: a group of UK-based anti-trawling accounts (e.g. @seasaver, @stopsuptrawlers, @dolphinseeker30); a group of Australian Greens and environmental actors (e.g. @tim_beshara, @greenpeaceaustp, @christopherwr11); and a cluster of animal welfare groups plus Andrew Wilkie (e.g. @animalsaus, @voicelessnews, @wilkiemp). The Australian Marine Conservation Society (@austmarconssoc) is at the periphery of the network: it received a large number of retweets, but only from a limited number of accounts, most of which did not retweet other users also involved in the conversation.

Social media

Figure 13:
Geelong Star, @mention network



Social media

The @mention network (Figure 13) has half the nodes and edges of the Tassal example. Despite the volume of Twitter activity surrounding the Geelong Star, activity did not coalesce so clearly around a central set of accounts: the central focus that *Four Corners* offered the Tassal case was absent from that of the Geelong Star. There were also no visible industry accounts associated with the Geelong Star, which limited activists' capacity to @mention them, and hence directly engage them in their criticisms. Instead, the most @mentioned relevant users were media outlets (e.g. @abcnewstas) and politicians (e.g. @barnaby_joyce, @greghuntmp, @turnbullmalcolm, @senatorsurfer).
It should be noted that @kxtrawler and @fakekxtrawler are parody accounts; their large size is due to the fact that both accounts are managed by the same person and repeatedly @mention each other.

The centrality of media outlets in both the retweet and @mention networks shows the important role of mainstream media as a key node of visibility and user engagement. The centrality of politicians to both networks shows how users' focus is on bringing the issue to the attention of those with political power, not in engaging with industry. ***That said, the fragmentation of the networks largely prevented users from generating the levels of activity necessary for significant impact*** — which seems to be typical of the way that seafood issues currently 'play out' on social media.

Social media

User network

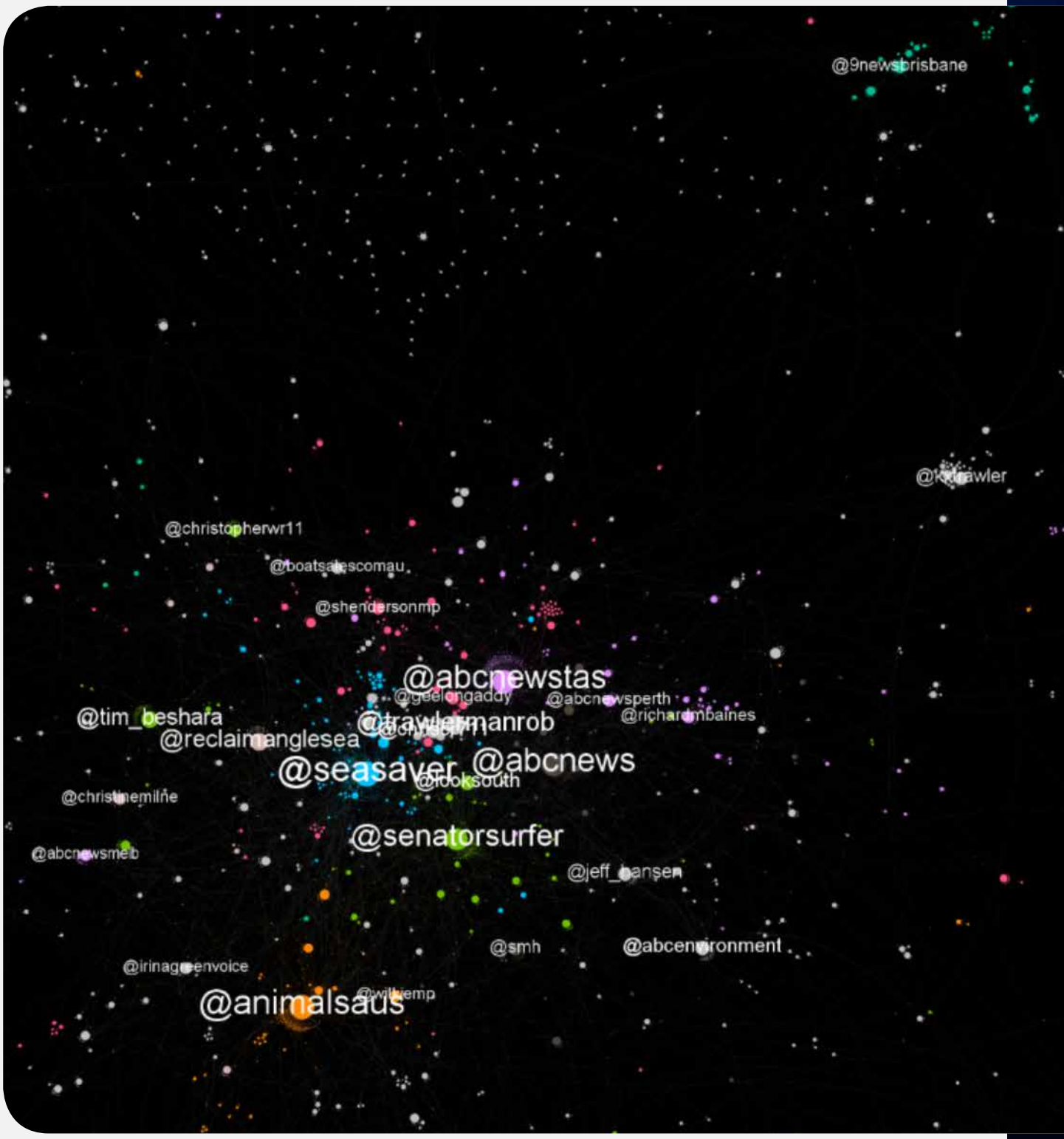
As Figure 14 shows, the overall user network reveals a number of distinct clusters with high levels of influence within retweet and @mention communities. The most well-connected is the cluster of accounts formed around @anthuckstep and @fisheads. Other well-connected clusters are formed around @chefmattmoran, and around @ben_milbourne. ***Environmental groups (e.g. @envirotas, @ausmarconssoc) are relatively isolated within the network, indicating limited connections with either chefs or industry.***

Accounts related to recreational fishing (e.g. @ifishtv, @vr_fish, @recfishwest) form a distinct and relatively isolated cluster that, interestingly, also comprises several industry organisations (e.g. @setfia, @vicseafood). This group is distinct from a separate, but equally isolated, cluster of seafood industry groups (@sydfishmarket, @ntscouncil, @seafoodaus). Geographical location partly explains the disconnect between the two groups of industry accounts, with @ntscouncil playing a 'bridging' role between them. However, further analysis is needed to fully elucidate the precise relationships between the two clusters, as well as between the commercial and the recreational fishing groups within them.

It should be noted that across all clusters, ***industry networks are relatively disconnected from those of chefs.***

Social media

Figure 14:
User network, retweets and @mentions



Social media

While we found that only half of the users we initially identified were active on Twitter, those who *are* active have a strong presence and substantial follower base. The level of interaction and reach of chefs within the network show that if they are to start a conversation about an issue, it has the potential to speak to large audiences. It is notable that, for the most part, ***chefs' voices were largely absent from the issues-based networks*** analysed above, and that there are few common users between the user network (Figure 14) and the issues networks (Figures 10–14). The issues networks highlight the importance of media outlets and political actors for 'setting the agenda' on social media during times of controversy (see Araujo & Van der Meer 2018). The user network, in contrast, suggests quite a different communication architecture for the circulation of views about seafood and sustainability. The user network is in many ways an inversion of the issues networks: here, chefs are central, with activists, politicians and media outlets sitting on the periphery.

Chefs in the user network were selected specifically because they had made public statements about seafood and sustainability. Their almost complete absence, then, from the issues networks is striking, as is their distance from the environmental advocates and activist organisations within the user network. For the most part, ***there are few shared networks between environmental NGOs and chefs:*** that is, users who follow and interact with chefs do not seem to also follow and interact with NGOs and activist organisations. This means that chefs—even those with a public commitment to sustainability issues—speak primarily to a 'foodie' audience and not to environmentalist communities.

The ways in which environmental issues are framed greatly impacts which issues receive attention and whether and how audiences engage with content (Lakoff 2010). As we will see in the Lifestyle Media analysis, below, ***the interests and preferences of the foodie audience powerfully shape popular discourses about food, but industry has not yet fully capitalised on the potential of forging relationships with this group.*** Given that the chefs in the user network appear to speak primarily to this foodie audience, they ***highlight potentially fruitful avenues for different kinds of conversations about sustainable seafood with different kinds of audiences*** than those that are typically galvanised during periods of controversy.

Social media

Qualitative analysis of Twitter and Facebook

Qualitative analysis focused on two issues: the ban on net fishing in Port Phillip Bay; and the controversies surrounding Tassal and Tasmanian salmon. These were both cases that elicited active social media engagement from chefs and influencers, and in which social media activity was thought to have impacted on the overall outcome of the case: in the case of the former, chefs mainly spoke in support of the seafood industry; in the case of the latter, the chefs were more critical. These differences are useful for exploring the communications strategies that become salient as controversial issues play out online, and how messages do (and do not) move across and between media platforms.

The Port Phillip Bay case study involved the collection and qualitative analysis of thousands of Twitter and Facebook posts. We identified relevant Twitter posts through keyword and hashtag searches (e.g. “Port Phillip Bay” AND “fishing” OR “fishery”; #savebayseafood), and then following relevant accounts and conversation threads and collecting and analysing additional posts. We also collected posts to relevant Facebook pages (e.g. Victorian Seafood, Say NO to the Netting Ban in Port Phillip & Corio Bay, Friends of Corio Bay Action Group, VRFish) for October–November 2015, which was the period of peak social media activity during this conflict. We then followed links and shares to other relevant public pages to identify key themes in the social media conversation. We were especially interested in identifying salience (i.e. which messages come to predominate) and shareability (i.e. which messages are most frequently repeated and shared). Only public posts and pages were analysed.

Qualitative analysis of issues surrounding Tasmanian salmon focused on the social media activity surrounding the Sustainable Salmon Chefs Charter. This was an initiative of Environment Tasmania that specifically deployed Tasmanian and Australian chefs as influencers seeking to shape public opinion and consumer purchasing decisions about Tasmanian salmon. We used the search terms “Sustainable Salmon Chefs Charter” to identify relevant posts on Twitter, Facebook and Instagram, and collected relevant posts from the Twitter, Facebook and Instagram accounts of Environment Tasmania and the chef signatories of the charter. As with Port Phillip Bay, posts were analysed for themes as well as assessing for salience, activity and engagement.

Social media

Results: Network analysis Port Phillip Bay

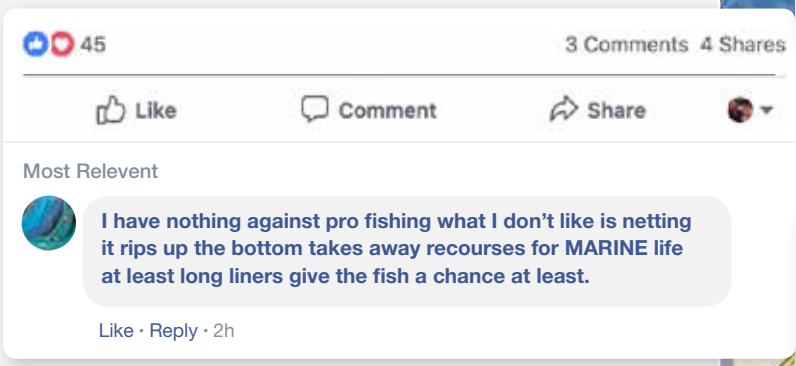
Qualitative analysis of Facebook and Twitter discussion surrounding the case study issues ***shows discussion to be highly polarised.*** In the case of Port Phillip Bay, strongly held positions on both sides resulted in quite vicious attacks on those holding opposing views. Supporters of the Bay's commercial fishery were active defenders of the industry on oppositional Facebook pages (i.e. those advocating for the ban on netting), and on recreational fishing sites; the converse (i.e. recreational fishers and supporters of the ban posting to industry sites) occurred far less frequently. Emotions ran high for some of industry's allies on these pages, though the responses from industry and from industry organisations was much more measured. Industry responses focused on 'debunking' myths or eliciting further discussion; these were largely successful.

Responding to claims that the Port Phillip Bay fishery was unsustainable, industry representatives often asked questions like, "where are you getting that [information] from?" The goal was clearly to create an opportunity to 'correct' misinformation, but such approaches were usually met with no reply. This is typical on social media, which is often less a forum for persuasion and discussion than a place for strongly held views to become even more deeply entrenched. Throughout the social media discussion, industry members and supporters often referred users to the SIV website for the "facts" (siv.com.au/savebayseafood). However, given that this was an especially bitter conflict in which support for the anti-netting position was bolstered by powerful narratives of "science as suspect" and "commerce as corrupting" (King & O'Meara 2018), incorrect information is usually best addressed via a trusted third party independent of industry interests (e.g. a scientific body, scientist, or public persona with a reputation in the field, see Ogier & Brooks 2016).

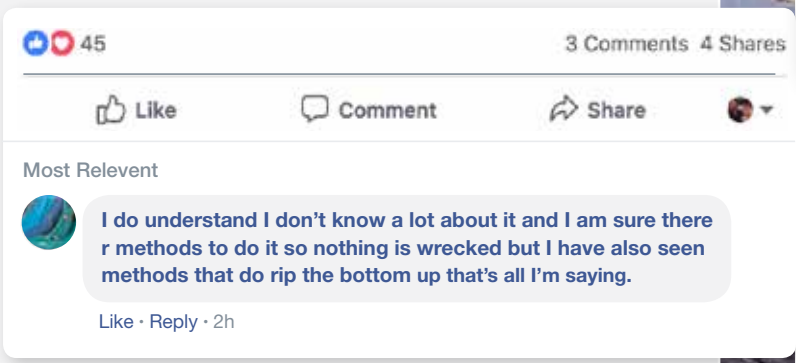
Facebook and Twitter posts varied significantly in tone and content, but there were two key industry messages that became salient and most likely to be circulated, at least among industry supporters: 1. that the decision to ban net fishing in Port Phillip Bay was motivated by political, rather than scientific, considerations; and 2. that this ban on commercial fishing would have significant impacts on consumers.

While the mainstream news coverage of the issue tended not to centre on sustainability concerns (see News Media analysis, above), sustainability was a key focal point of the Facebook pages of recreational fishing groups and their supporters. The top three criticisms (in terms of frequency and salience) were: 1. that commercial fishers were "taking all the fish" from Port Phillip Bay, leaving none for recreational anglers, 2. that commercial fishers were catching indiscriminately, with harmful effects on the sustainability of the fishery, and 3. that netting practices were damaging marine eco-systems in the Bay.

As Tanya King and Dayne O'Meara (2018) show in a recent article about Port Phillip Bay, supporters of the netting ban typically viewed 'official' scientific assessments as corrupted by industry interests or dismissed them in favour of "local anecdotal knowledge". As an example of the latter, one poster to the Say NO to the Netting Ban in Port Phillip & Corio Bay Facebook page said:



When this view was challenged by another poster, he both acknowledged his lack of expertise and responded with an appeal to his own experience:



Social media

Consequently, industry messaging—in both social media activity and mainstream media comment—emphasised the sustainability credentials of the fishery. On Twitter and Facebook, support from the Greens was frequently used as evidence of this sustainability. Many of these posts were shares of mainstream news coverage, with images of Greens MLC Greg Barber captioned with comments such as:

The Greens and @GregMLC support the commercial fishers in Port Phillip Bay, a sustainable fishery
(@GoodFishBadFish, 12 November 2015)

Fishing closures in Port Phillip are not about environmental sustainability. Shown by Greens support #SaveBaySeafood
(@brinyscience, 11 November 2015)

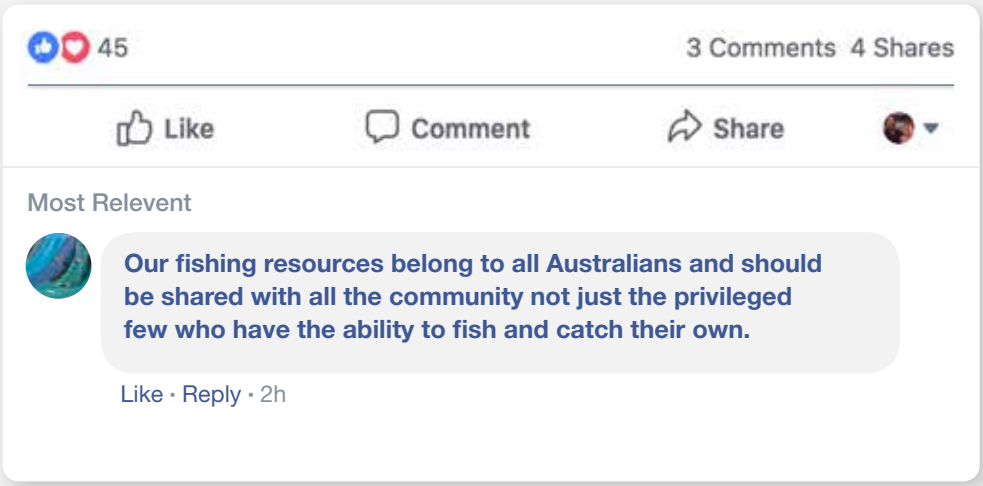
Sustainability messages were also employed by the celebrity chefs supporting the industry's campaign (see News Media analysis, above).

Social media

However, in part because the mainstream media coverage rarely explicitly engaged with sustainability issues, *appeals to the sustainability of the fishery were largely unsuccessful in reframing debate on this issue.* (It should be noted that this conclusion applies equally to those in the anti-netting camp: their claims for the *un*sustainability of the Port Phillip Bay fishery was also not really picked up by other media and so gained little public traction or broader visibility beyond their own networks).

In news media (as per previous page), appeals to 'the science' appear as one of the most common defences of industry practices. On social media, however, appeals to the Port Phillip Bay fishery's scientifically verifiable sustainability credentials were dwarfed in number by the second theme: the claim that closing the commercial fishery will have a negative impact on consumers. This was by far the most salient argument adopted by industry and its supporters, and the one used by the greatest number of online posters. The key message was that the fish from Port Phillip Bay are a community resource, and that recreational anglers were attempting to deny access to local seafood to the 87% of Victorians who don't fish. A representative selection of Facebook and Twitter comments include:

(Victorian Seafood Facebook page, 20 October 2015)



(Say NO to the Netting Ban in Port Phillip & Corio Bay Facebook page, 20 January 2015)

Tweets Tweets & replies Media

Melb Seafood Centre@melbsfoodcent • Nov 8 2015
Vic Govt plans to deny 87% of Victorians access to fresh local affordable seafood.

1 5 5

Twitter:
Vic Govt plans to deny 87% of Victorians access to fresh local affordable seafood.
(@melbsfoodcent, 8 November 2015)

Tweets Tweets & replies Media

The Rockpool Files@rockpoolfiles • 5 Nov 2015
We are representing the interests of 5 million Victorians that don't fish. Just as important.

1 5 5

We are representing the interests of 5 million Victorians that don't fish. Just as important.
(a, 5 November 2015)

Social media

Chef Neil Perry was an especially active proponent of the message that Port Phillip Bay's commercial fishery was a public resource that was being 'locked away' by recreational anglers. As well being active on Twitter, Perry also posted messages on Instagram, some of them quite strident in their support for Port Phillip Bay's fishers. See example in Figure 15:

Perry's post described the Port Phillip Bay fishery as supplying the "tables of ordinary citizens of Melbourne & their restaurants" and criticised "special interest groups like recreational fisherman" for trying to take "our" seafood. Much like the messages about the Bay's sustainability, the message that the Bay is a "community resource" and that a ban on net fishing is motivated by the "greed" of recreational anglers, with negative consequences for those who don't fish, was largely unsuccessful in reaching wider publics. ***While clearly persuasive to those who supported the Bay's commercial fishing industry, it was a message that gained limited visibility outside of industry networks.*** This can be demonstrated in part by the message's limited impact on the mainstream media coverage—the closest variant of this message to gain traction in mainstream media was the claim that a ban on net fishing would harm Melbourne's "global food reputation" (see News Media analysis, above).

chefneilperry • **Follow**

Some of the best flathead in the world on the tables of ordinary citizens of Melbourne & their restaurants, shame on special interest groups like recreational fisherman, it's not yours it's ours. The bay is sustainable for all #savebayseafood.
A photo posted by Neil Perry

2,122 views

OCTOBER 30, 2015

Log in to like or comment. ...

Social media

Attempting to persuasively frame commercial activity as a community resource was hazardous in a bitter conflict like Port Phillip Bay, and it is always a hard sell for an elite restaurant chef to frame the products it uses as something belonging to "ordinary citizens".

It should be noted, however, that this strategy of framing commercial activity as a community resource has been used successfully by a range of other food industries. We see it in cases where the survival and success of agricultural industries is discussed as an issue of food security, for example. The failure of similar arguments to gain traction in the fisheries space is likely indicative of the different cultural resonances associated with fishing and farming in white Australian culture (Murphy 2008). That is, farming is bound up in Australian myths of nation in a way that fishing is not, and so appeals for the survival of commercial fisheries that work elsewhere in the world (e.g. in Norway, Canada, even New Zealand) are not easily translatable into the Australian context. Moreover, in the case of Port Phillip Bay, recreational fishing groups were very successful in framing recreational fishing as a wholesome, widespread and egalitarian pastime. This has enabled them to essentially 'own' the discourse of fishing as a community resource.

As with news media, once frames and discourses are set, they are hard to shift. T***he case of Port Phillip Bay, then, highlights the need to consider different types of messages that are effectively resonate within the Australian context*** and the cultural place of commercial and recreational fishing in this country.

Environment Tasmania Sustainable Salmon Chefs Charter

The Sustainable Salmon Chefs Charter was one of the only major examples we identified during the sample period in which chefs were critical of industry. As described in the News Media analysis (see above), the chefs maintained that they were not "anti-salmon" but were seeking clarification around the sustainability and transparency of current industry practice. (Indeed, preliminary results from the research interviews suggest that chefs joined this campaign because they saw its message as a positive, rather than a negative, one).

The campaign was primarily focused on social media, and it combined messages from local Tasmanian chefs (e.g. Annaliese Gregory, David Moyle, Philippe Leban) with those of chefs with a greater national profile (e.g. Maggie Beer, Christine Manfield, Matt Moran). Chefs were photographed, and their image accompanied with a quote about their views on Tasmanian salmon. See Figures 16–17 for examples.

Social media

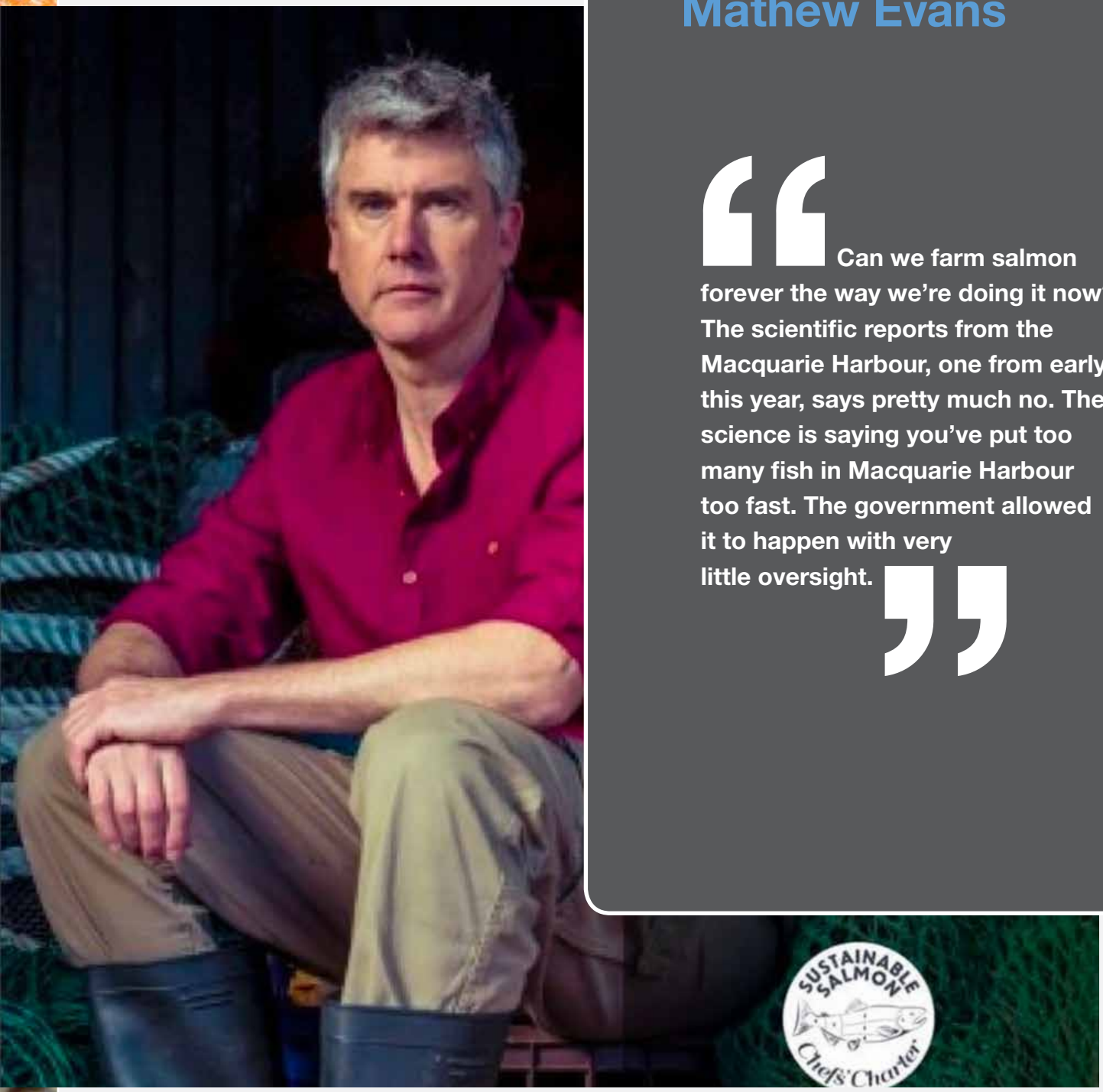
Figure 16:
Environment Tasmania's Sustainable Salmon Chefs Charter, Philippe Leban

Philippe Leban

"This is such an important issue to support. The salmon farming industry is a success story and I would like to think that I could use the product now and in the future knowing and feeling confident that the product has not adversely affected the environment before it ends on someones plate"

Social media

Figure 17:
Environment Tasmania's Sustainable Salmon Chefs Charter, Matthew Evans



Mathew Evans

"Can we farm salmon forever the way we're doing it now? The scientific reports from the Macquarie Harbour, one from early this year, says pretty much no. The science is saying you've put too many fish in Macquarie Harbour too fast. The government allowed it to happen with very little oversight."

Social media

The Charter received some mainstream media interest (and criticism—see News Media analysis, above), but it generated surprisingly little social media activity. Only a handful of Twitter posts engaged with the topic. Environment Tasmania's Instagram posts, which (along with Facebook) was the campaign's main method of dissemination, averaged only 30-ish 'likes', even for posts featuring chefs with large social media followings, such as Maggie Beer and Matt Moran.

Facebook posts about the Charter similarly elicited minimal engagement. The Environment Tasmania Facebook page has 6.6k followers, but very few of them engaged with posts about the Sustainable Salmon Chefs Charter. For example, the post on 24 July 2017 announcing Maggie Beer as a new signatory to the Charter received 169 reactions, 15 comments and 26 shares, but this level of engagement was highly unusual: when Beer featured again on 16 December 2017, the post only received 24 reactions, 5 comments and 6 shares. The post on 21 December 2017 announcing Matt Moran's involvement received only 40 reactions, 12 comments and 7 shares; Christine Manfield received only 20 reactions, 2 comments and 4 shares on 11 August 2017.

Engagement was even more dismal when Environment Tasmania's posts were shared on the chefs' (or their restaurants') Facebook pages. For example, when A Tiny Place shared the post that head chef and owner Philippe Leban was offering dinner for two as a prize for participating in the campaign against Tassal, it generated a mere 12 reactions, 2 comments and no shares.

In contrast, it was news stories that tended to elicit the greatest engagement. When Environment Tasmania first announced on Facebook the launch of the Sustainable Salmon Chefs Charter, it received 35 reactions, 2 comments and 6 shares. When it shared a news story about the Charter the following day, this generated 134 reactions, 26 comments and 40 shares. An announcement that the issue had been covered on *The Project* (accompanied by a short clip) generated 80 reactions, 14 comments and 70 shares. However, the highest level of engagement by far was reserved for stories about the impact of salmon aquaculture on human health: when Environment Tasmania shared a *Sydney Morning Herald* story about Tassal's use of antibiotics, it received 124 reactions, 30 comments and 169 shares; a story in *The Australian* on the same topic received 96 reactions, 15 comments and 75 shares.

These patterns of engagement highlight the power and salience of mainstream news media in directing social media conversations. During the controversies involving Tassal and Tasmanian salmon, news stories (usually from major mastheads) were the posts most likely to be shared and commented on, although some stories were more shareable than others: engagement spikes associated with stories about antibiotic use suggest that ***concerns about personal health motivate greater online engagement than stories about environmental or industry impacts.***

Social media

Both the Sustainable Salmon Chefs Charter and the case of Port Phillip Bay also reveal the ***relatively limited power of celebrity chefs to reframe, and generate engagement with, contentious issues online.*** Recent research on news in a social media age indicates that 'celebrity' is becoming a less powerful news value than what it once was: a 2017 study by Tony Harcup and Deidre O'Neill found that "celebrity" has declined as a factor in determining the shareability of news stories on social media. The involvement of celebrity chefs assisted in getting issues associated with the Sustainable Salmon Chefs Charter and Port Phillip Bay onto the mainstream news agenda, but it generated little traction beyond that.

Clearly, a great many people cared about the ban on net fishing in Port Phillip Bay and the controversies around Tasmanian salmon, but the involvement of chefs in both issues did not successfully 'bridge' different audiences or encourage new audiences to engage with these issues. ***In neither case was the chefs' 'foodie' audience galvanised to act***—either in support of industry in the case of Port Phillip Bay, or in support of environmental campaigns in the case of the Sustainable Salmon Chefs Charter. Research interviews will further explore the factors at play in both cases, but the qualitative media analysis so far suggests that in the Australian context, ***chefs may perhaps not be the 'natural' allies of activist causes*** in the way that they may be elsewhere in the world. ***This suggests that different strategies than those typically used may be needed to more effectively engage them as influencers.***

Lifestyle Media

Summary of key findings

- Most lifestyle media (e.g. television cooking shows, foodie magazines, Instagram, etc.) that explicitly engages with sustainability messages suggest that only some Australian seafood is sustainable. Choosing under-utilised species on grounds of sustainability and taste was the most salient sustainability message in Australian lifestyle media.

- Lifestyle media is a powerful voice in shaping public discourses about what constitutes 'good' and 'desirable' food. Representations of food producers and their stories are appealing to the increasingly powerful 'foodie' audience, but constrained media production budgets and trickier filming logistics mean that professional fishers are far less likely to feature in Australian lifestyle media than any other type of food producer. Strengthened relationships with media producers—and some creative thinking about how to best depict fishers—are essential for ensuring more compelling lifestyle media coverage.

- Two emerging sustainability issues would benefit from more proactive industry engagement: food waste and animal welfare. The first is an emerging food trend ("fin to fin" cookery), while the latter is predicted to be a ticking "time bomb" if not proactively managed.

- Instagram is fast becoming 'the' social media platform for chefs and foodies, but industry visibility on Instagram is limited due to limited engagement and ineffective use of hashtags.

Method: Lifestyle media analysis

The lifestyle media analysis reported in this section refers primarily to specialist food media, including television food programs, cookbooks and foodie magazines. Relevant lifestyle media texts were identified through three methods:

1. Via the Factiva news searches (in News Media analysis, above) to identify the lifestyle media texts that generated wider media attention;
2. Via the media releases of major industry organisations to identify publicised lifestyle media initiatives for the period 2015–2018;
3. Via manual searches of relevant stories and features in foodie magazines, including *delicious*, *Donna Hay* and *Australian Gourmet Traveller*, for the same period.

Relevant texts were then analysed using a combination of content, discourse and visual analyses (Deacon et al. 2007) to determine dominant themes and messaging strategies.

The power of lifestyle media

While there were fewer examples of lifestyle media than news or social media (see above), ***lifestyle media—and the 'foodie' audience it attracts—have become a disproportionately powerful voice in shaping public discourses about what constitutes 'good' and 'desirable' food*** (Phillipov 2017; Lewis 2008). Rather than targeting a broader public, ***appealing to the 'foodie' audience is now crucial*** to the development of influential media messages about food.

Lifestyle media features information on recipes, advice on ingredient sourcing and preparation, and details on the regions, places and restaurants where different foods can be eaten. But while the quality of the information provided by lifestyle media is very important for its success, many of the past decade's most popular examples of lifestyle media have been those that lean more heavily toward 'entertainment'. Specifically, they do not simply (or even primarily) provide information, but rather play with audience emotion and "affect" (Lockwood 2013) to get them to *feel* something about the food they are witnessing on-screen or on the page.

In popular food television, for example, ***the emotional dimension is essential***—whether that emotion arises from the suspense of a cooking competition (e.g. *MasterChef*) or from the fantasy of a pleasurable 'escape' into a bucolic rural idyll (e.g. *Gourmet Farmer*). Indeed, both examples have had measurable consumer impacts: the 'MasterChef effect' on the eating, shopping and cooking habits of Australians has been widely reported (Sinclair 2010), while Tasmanian food producers have reported increased visits to their cellar doors and farm gates as a result of *Gourmet Farmer* (Phillipov 2016). Both programs are also examples of the extent to which ***food has become intensely 'storied' within lifestyle media***. Stories of food's provenance, of chefs' commitments to this food, and of producers' connections to and investments in the food they produce have all become important narratives within lifestyle media. These are made even more effective if they can be accompanied by beautiful images of the food itself and/or of picturesque locations in which the food is produced, prepared or eaten.

For food industries seeking to engage with lifestyle media, this is not just a matter of having their ingredients featured in on-screen recipes: allowing the audience to (virtually) 'meet the producer' is now a powerful tool in stories about provenance and sustainability, and the ***seafood industry is significantly under-represented*** in this regard.

An increasing segment of Australian lifestyle media now engages directly or indirectly with issues of sustainable and ethical food production (Phillipov 2017). Unlike elsewhere in the world, such as in the UK, where chefs' "campaigning culinary documentaries" about sustainable seafood and other issues have had marked impacts on consumer buying habits (Bell, Hollows & Jones 2015). However, overtly 'political' messages are rare in the Australian context, at least in the case of those aimed at broader audiences—Matthew Evans' 2014 documentary *What's the Catch?* is probably one of the rare exceptions.

Notably, while a great deal of lifestyle media features seafood recipes, ***seafood industry voices are less visible in lifestyle media than in any other media genre.*** When industry voices do appear, they tend to be the voices of individual fishers, but these are under-represented compared to other types of food producers.

Media production companies are keen to feature fishers, but they are looking for producers that suit the values and style of their show (e.g. interesting characters, engaging stories) and that can be accommodated within their time and budget constraints (more on this below). Australian food television is produced by only a handful of production companies, and these companies invest in research to identify producers suitable to feature on their programs. ***Making 'good' stories visible and accessible to these companies and their research staff (as well as to the local tourism agencies they consult) is important for increasing positive lifestyle media representations of Australia's fishing industry.***

Lifestyle media

Results: Lifestyle media analysis

A number of major lifestyle media texts featuring seafood sustainability messages were released during the sample period, including those aimed at both specialist and cross-over audiences. Where there were a number of excellent specialist texts—most notably *The Australian Fish and Seafood Cookbook* (authors: Susman, Huckstep, Swan & Hodges, Murdoch Books 2017)—the focus below will be on those with a greater capacity to attract non-specialised audiences. *The Australian Fish and Seafood Cookbook* is comprehensive and authoritative, but its detail and heft makes it one primarily for the seafood aficionado.

The lifestyle media examples discussed below reflect the range of messages about seafood sustainability used within the genre. They include food television focused on seafood as a central concern (*Food Safari Water, Seafood Escape*) as well as those filmed in coastal locations and which feature seafood, albeit not as a central narrative (*Peter Kuruvita's Coastal Kitchen, Andy and Ben Eat Australia*). They also include foodie magazines with features on seafood (*delicious, Australian Gourmet Traveller*), seafood-focused cookbooks (*The Gourmet Farmer Goes Fishing*), and cookbooks with seafood-focused sections (*The Everyday Kitchen*).

Across these examples, ***the most salient messages about seafood sustainability appear in three broad categories:***

1. Sustainability is explicitly acknowledged as important, and all Australian seafood is identified as sustainable;
2. Sustainability is explicitly acknowledged as important, but only some Australian seafood is identified as sustainable; and
3. Sustainability is not an explicit part of the messaging strategy. The focus instead is on related concepts like provenance.

Surprisingly few messages related to other themes that we expected to find, such as health.

Theme 1:
All Australian seafood is sustainable

Messages promoting the sustainability of Australian seafood primarily appear in texts that have been either produced by industry or by influencers with close industry relationships. Examples in this category include food television shows like *Seafood Escape* (broadcast on Network Ten's Channel ONE), and foodie features such as Anthony Huckstep's monthly seafood column, 'Catch of the Day', in *delicious* magazine.

Seafood Escape is developed and funded by the FRDC, and designed to improve relationships between the commercial and recreational fishing sectors. Each episode sees host Andrew Ettingshausen introducing professional fishers to local chefs to show them (and, by extension, the audience) the "full story" of how seafood gets to their plate. The show's two seasons feature commercial fishers from all around Australia and chefs ranging from nationally well-known seafood chefs (e.g. Josh Niland) to those with more local profiles (e.g. Rebecca Stubbs).

Each episode focuses on one chef and one commercial fishing operation. Episodes begin with an 'on the water' demonstration from commercial fishers, followed by Ettingshausen and the guest chef trying their own hand at catching fish via the same method. This focus on the professional work of commercial fishing crews is interspersed with recipes making use of the catch. Through dialogue, voice over and on-screen action, *Seafood Escape* emphasises the hard work of professional fishing as well as the sustainability credentials and careful management of commercial fisheries. A typical example of how this occurs can be seen in an episode featuring South Australia fisherman Bart Butson and Adelaide Hills chef and winery owner Rebecca Stubbs. Butson demonstrates the processes involved in haul netting, emphasising sustainability of the fishery. He explains that the net does not touch the sea bed: "If we damaged the weed, we wouldn't have a job," Butson says. Social media commentary surrounding the series, particularly on Facebook, indicates that the show was well received by professional fishers, and that it had a significant impact on their wellbeing to see the commercial fishing industry so positively represented on mainstream media. *Seafood Escape*'s broadcast following Ettingshausen's other television program, the recreational fishing show *Escape Fishing with ET*, speaks to a fairly specific audience of (primarily male) recreational fishers, with the journey of learning undergone by the chefs a guise for the audience's own learning.

Anthony Huckstep's 'Catch of the Day' column speaks to a quite different audience: the *delicious* readership is 80% female and primarily Social Grade AB[1]. Since July 2017, the 'Catch of the Day' column has profiled a different seafood species each month—from sardines to King George whiting—with tips for buying, storing and cooking alongside commentary from industry expert John Susman. *Delicious* has long had a similar column on meat, so the 'Catch of the Day' feature assists in raising the profile of Australian seafood.

Sustainability messages in foodie magazines are typically rare, but 'Catch of the Day' explicitly emphasises the sustainability of Australian fisheries management practices. This includes both traditionally under-utilised species as well as those with more contentious sustainability credentials. For example, features on blue mackerel and sardines describe the fish as "highly sustainable" (*delicious*, August 2017) and "a superhero of sustainability" (*delicious,* March 2018), respectively, due to the fact that both species are fast growing and prolific breeders. Australian grown Bluefin Tuna is also promoted on the basis of its sustainability. The Bluefin Tuna story opens with the following paragraph: Globally, it may be as controversial as that monkey-abandoning JBT (Justin Bieber t****r), but southern bluefin tuna (SBT), prized for its creamy mouthfeel when eaten raw, is, in fact, caught then grown under the world's most stringent management practices in Australia, and it's helped protect and rebuild the biomass. (*delicious*, June 2018)

In contrast to other media representations of Australian seafood, the column emphasises the sustainability credentials of the industry as a whole—although this is unusual in its level of interest in, and commitment to, the industry.

[1]See delicious media kit: https://www.newscorpaustralia.com/wp-content/uploads/2018/02/delicious-media-kit.pdf.

Theme 2: Only some Australian seafood is sustainable

Of the lifestyle media texts to engage explicitly with sustainability messages, those that raise questions about sustainability or which present only some Australian seafood as sustainable are the most numerous. Compared to those in Theme 1, *these texts are far less likely to feature industry voices* and are instead more likely to foreground those of chefs and—sometimes—NGOs. Several different types of message predominate: those that claim that fish stocks are under threat; those that promote under-utilised species; and those focused on issues of food waste and animal welfare.

It should be noted that while certification was sometimes mentioned as a measure of sustainability, it was not a major theme, with *only a minority of chefs specifically advocating for certification*.

1. Fish stocks are under threat

An example of lifestyle media messages emphasising threats to fish stocks is a recent 2-page feature in *Australian Gourmet Traveller magazine*, 'Running on Empty' (*Australian Gourmet Traveller*, September 2018). While the article states that "in Australia, marine parks and fisheries are governed by strict guidelines designed to ensure sustainable fishing", this statement appears in the article's third-to-last paragraph. The feature begins with statistics about over-fishing, including in Australia ("A 2016 study of Australia's marine domain found that of 83 species assessed, 17 per cent of those were either overfished, environmentally limited or depleting"), and an anecdote from Attica owner and head chef Ben Shewry, who states that he no longer serves wild caught fin fish on his restaurant menu due to concerns about the over-fishing and sustainability of fish stocks ("I decided I couldn't [serve it] in good conscience, so I just took it off"). The article concludes by directing readers to the Australian Marine Conservation Society's website, sustainableseafood.org.au, and goodfishbadfish.com.au for "information on choosing your seafood wisely".

2. Under-utilised species

Messages in this category emphasise that only some types of Australian seafood are sustainable and encourage consumers to only (or predominantly) choose sustainable species. These 'sustainable' species are mainly within the broad category of 'under-utilised' species: plentiful, fast growing, short lived, low impact species like sardines, Australian salmon, squid and mussels. Such species are promoted on the basis of both sustainability and taste. This promotion aligns with some of the seafood industry's own goals of expanding markets for under-utilised species, but in lifestyle media, promotion of under-utilised species is often underpinned by an implicit or explicit critique of 'over-utilised' ones.

For example, although *The Gourmet Farmer Goes Fishing* cookbook (authors: Matthew Evans, Nick Haddow and Ross O'Meara, Allen & Unwin 2015) includes chapters on species that would hardly be considered 'under-utilised' (see, for example, the chapter on 'Crayfish and Lobsters'), the book does, for the most, direct readers away from well-known species in favour of under-utilised ones. There are chapters on 'Mullet, Mackerel and Australian Salmon', 'Leatherjacket' and 'Sardines', and the book's broader commentaries on seafood sustainability encourage a shift to species lower on the food chain. "Swordfish is overfished in Australia," the authors state, "[but] if you want to have less impact on the oceans, put [sardines] at the top of your list of fish it's okay to eat". A tie-in with the SBS television series *Gourmet Farmer Afloat, The Gourmet Farmer Goes Fishing* leverages off the popularity and personalities of the *Gourmet Farmer* television series, and so its comments about sustainable seafood would typically be read in the context of the authors' previous pronouncements on food and sustainability politics. Typical of *Gourmet Farmer*, the cookbook combines elements of critique with the promotion of pleasurable alternatives and easy recipes for different types of seafood.

Ed Halmagyi's cookbook, *The Everyday Kitchen*, features a section, 'On Sustainable Seafood'. It is unusual insofar as it contains a definition of sustainability ("Sustainable fishery is the practice of harvesting seafood in a manner that maintains fish stock numbers while having minimal effect on the marine environment"), and directs readers to certification schemes as an assurance of sustainability ("Purchase seafood that has been accredited as sustainable by one of several not-for-profit and governmental organisations").

The section encourages readers to choose under-utilised species to ensure sustainability: Halmagyi lists 10 species, including Australian salmon, bream, whiting, goldband snapper, mussels, and squid. The cookbook contains 11 seafood recipes, all of them using species generally considered to be sustainable (e.g. sardines, flathead, mackerel, etc.), but only two recipes use species that specifically appear on the 'sustainable' list (squid and prawns). This oversight may limit the use and accessibility of some of the lesser-known species identified.

3. Limiting waste

In 2018, the growing public profile of chef Josh Niland (chef and owner of Saint Peter and The Fish Butchery) has lent increased visibility to "fin to fin" fish cookery (the seafood version of "nose to tail", see Digges 2017). This involves creatively using all parts of the fish—from marrow and offal to blood and sperm. For Niland, this is a sustainability politics primarily focused on reducing food waste. Niland's rising profile as *Australian Gourmet Traveller*'s Best New Talent in 2017 and Chef of the Year in 2018, coupled with his variety of media appearances (from *Seafood Escape* to *Food Safari Water*), has lent greater public visibility to his unique approach to fish cookery. If the success of the "nose to tail" movement is any indication, ***this is likely to become a more widely accepted food trend***, with attendant opportunities to develop markets for new seafood products with strong sustainability credentials.

4. Animal welfare

Animal welfare guidelines for wild caught and farmed fish have only recently entered into mainstream media discourses about seafood sustainability. Several restaurant chefs now actively promote seafood welfare. The issue here is not so much the *type* of fish eaten, but the *methods* by which the animals are treated and dispatched. In *Australian Gourmet Traveller*'s recent article, Ben Shewry (Attica) directed readers to the RSPCA's "excellent guidelines…that I believe every chef in Australia should be following" (*Australian Gourmet Traveller*, September 2018).

Shannon Bennett's restaurant Iki-Jime takes its name from the Japanese method of killing fish endorsed by the RSPCA as best practice. Iki-Jime's executive chef, Justin James, advocates the method as a means of ensuring both animal welfare and fish quality: by catching and killing each fish individually, it will "taste better and last longer than a fish that's been jostled and bruised by thousands of other fish writhing in the net," he said (*Australian Gourmet Traveller*, September 2018). ***Connecting superior welfare to superior taste has been a very successful strategy in other areas of food politics*** (consider, for example, the 'ethical meat' movement that links 'happy animals' with 'happy meat', see Pilgrim 2013).

Themes of food waste and animal welfare are principally concentrated in 'highbrow' food media texts and have not yet entered the food media mainstream, but ***animal welfare, in particular, is predicted to be a ticking "time bomb"*** with the capacity to considerably impact the reputation of the Australian seafood industry if not proactively managed.[2]

[2]See, for example: http://www.seafoodintell.com/?page_id=271.

Lifestyle media

Theme 3: The importance of provenance

For the majority of lifestyle media, however, explicit engagements with questions of sustainability are largely absent or are presented as only a passing concern. ***In most lifestyle media, it is provenance, rather than sustainability, that is the key marker of 'good' food.*** Lifestyle media texts that emphasise provenance tend to locate food within specific regions or local areas—often accompanied by beautiful images of the landscapes in which this food is produced and stories of the people who harvest and prepare it. A focus on provenance, rather than sustainability, is most typical of 'feel good' lifestyle media texts. These are the texts that foreground 'entertainment' rather than 'information', and which tend to avoid content that could disrupt these texts' easy pleasures.

SBS's Thursday night food programs—especially those that involve 'armchair travel' to various foodie locations (e.g. *Gourmet Farmer, Destination Flavour, Shane Delia's Spice Journey, Peter Kuruvita's Coastal Kitchen*)—are perhaps some of the clearest examples of 'feel good' texts with a focus on provenance. While provenance is distinct from sustainability, provenance is a central component of sustainability and social license in the minds of many Australian consumers.[3] ***Provenance can thus offer a valuable alternative route for sustainability messages***, and preliminary scoping suggests that provenance (e.g. 'local') appears to be more prominent than sustainability on lifestyle media platforms, including social media.

Several of the SBS food programs broadcast during the sample period—*Food Safari Water, Peter Kuruvita's Coastal Kitchen,* and *Andy and Ben Eat Australia*—leaned towards a focus on fish and seafood recipes but gave only limited exposure to the stories of fishers. Indeed, ***the stories of fishers were notably fewer and shorter than those of other types of food and beverage producers that featured in these and similar programs***. Given the appeal of producers' stories for a foodie audience seeking messages about provenance, sustainability and quality, there are missed opportunities for using lifestyle television to generate positive messages about Australia's seafood industry.

Peter Kuruvita's Coastal Kitchen Season 2, set in the Margaret River region, features a great many seafood recipes and a large number of panoramic shots of stunning coastlines, but has limited engagement with commercial fishers and the story of their catch. We meet fishers from only two commercial operations: "sustainable" trout and marron farmers, and abalone divers. This limited engagement with the stories of commercial fishers is striking given that the series concludes with a seafood feast for the Margaret River Gourmet Escape festival. Kuruvita's 'showcase' dish featured mussels, prawns, octopus, crayfish, fish, squid and crab, yet the series focuses only minimally on where, how and by whom these were caught. The absence of stories of fishers is in part a consequence of the fact that these were a feature of a number of Kuruvita's earlier programs (and so there was a desire by both Kuruvita and the production team to showcase other types of food producers), but the lack of air time devoted to fishers constitutes a more general trend within these types of programs.

For example, *Andy and Ben Eat Australia* is equally limited in its depictions of fishers and seafood producers. The show is premised on host Andy Allen's desire to "learn by being hands on, being close to those farmers, being close to that produce, and getting inspiration, doing something on the spot with that produce". But while Andy and Ben visit a variety of agricultural growers, and participate in recreational crab raking and abalone and sea urchin diving, the only commercial seafood operation they visit is a Yorke Peninsula oyster grower.

[3]See: http://frdc.com.au/Media-and-Publications/FISH/FISH-Vol-23-1/Australias-take-on-sustainability-trends.

Lifestyle media

What they show of the grower and his leases—the spectacular overhead shots of pristine waters, Andy eating oysters straight from the water—offers viewers a compelling story about the quality and sustainability of Australian oysters, but the series as a whole disproportionately focuses on agricultural production.

Despite its focus on seafood, *Food Safari Water* engages minimally with fishers—although unlike the other programs, this is consistent with the *Food Safari* series' focus on the stories of chefs and home cooks, rather than producers. The fishers that do appear—barramundi fishers, oyster growers, mussel farmers, scallop divers—are selected to ensure 'good' stories and (often) to avoid filming on the open water.

Television production budgets are not what they used to be: most series now need to shoot several stories in a day and cannot afford to spend a whole day out on a boat. Camera crews also prefer to film early in the morning or later in the afternoon. Filming at night, in the middle of the day, or on fishermen's schedules is often out of the question. It is no accident, then, that most footage of fishing on food television is filmed close to the shore in relatively controllable conditions. Some production companies are also increasingly conscious of broadcasters' nervousness about killing animals on television, and this affects decisions about the types of food and food producers that are selected to appear (so dispatching an oyster is often seen as more palatable than killing a large fish).

Nonetheless, food television can do a great deal of good for the seafood industry. *Food Safari Water*, for example, depicts a culturally diverse range of chefs enthusiastic about the freshness and variety of Australian seafood. It includes striking footage of colourful seafood of all shapes and sizes, and host Maeve O'Meara is shown delighting in all of the delicious seafood dishes she eats. ***If engaging stories are key to the popularity of lifestyle media, Food Safari Water offers highly compelling and appealing stories of Australian seafood***. The SBS website also included a range of additional stories about seafood sustainability for those interested in learning more.

Examples include:

- 'Marvel Over Australia's Sensational Shellfish Bounty' (about sustainable fishing practices around Australia), https://www.sbs.com.au/food/article/2018/10/02/marvel-over-australias-sensational-shellfish-bounty
- 'Smart Seafood Spending: Why Fish Isn't as Expensive as You Think' (a guide to seafood seasonality and under-utilised species), https://www.sbs.com.au/food/article/2018/08/13/smart-seafood-spending-why-fish-isnt-expensive-you-think
- 'Warming Oceans are Changing Australia's Fishing Industry' (written by Alistair Hobday and colleagues, reprinted from *The Conversation*), https://www.sbs.com.au/food/article/2018/08/20/warming-oceans-are-changing-australias-fishing-industry

Examples like *Food Safari Water* show the power of presenting engaging messages about sustainability in a 'feel-good' format—the focus on the provenance, variety and deliciousness of Australian seafood serves as a 'back door' for more concerted sustainability messages.

Given that television ratings figures do not include catch-up or on-demand audiences, the broader cultural reach of these programs can be difficult to estimate in concrete terms, but the fact that they cater to an influential 'foodie' audience does give them the power to shape how issues are talked about and represented for an important audience niche.

The disincentives to filming on water mean that the industry must be creative about how fishers' stories, and their sustainability messages, can be presented both within production companies' time and budget constraints and within lifestyle media's 'feel good' genre conventions. Television production companies are often open to hearing from food producers interested in appearing on their programs, but industry must be savvy about the types of stories that are the best 'fit' within the priorities and conventions of lifestyle media. Being able to provide additional footage (of harvesting, processing, etc.) is often welcome, as is offering stories that suit the values and 'feel' of the individual program.

Lifestyle media

Instagram

In recent years, Instagram has become perhaps the most important lifestyle media platform, especially for food. Since its launch in 2010, Instagram has become an increasingly branded and commercialised space—indeed, the phenomenon of "influencers" originated on Instagram—but Instagram's focus on the visual and its high levels of engagement compared to other social media platforms means that it is becoming a key site for the curation and circulation of food trends. For example, two of Instagram's seafood-related trends from 2017—poké and fish selfies—generated significant social media activity and/or wider media interest (see Cody 2017; Rossi 2017), but both featured limited seafood industry engagement. In the case of poké, the most active players were primarily chefs, restaurants, health and food bloggers, and ordinary home cooks; in the case of fish selfies, activity was limited to chefs and restaurants. However, with their focus on a healthy, easy, visually appealing seafood meal on the one hand, and on visually striking whole fish on the other, there were ***missed opportunities here for Australian seafood industry voices to connect with, and contribute to, the circulation of seafood-related food trends***.

In the past, chefs and restaurants were likely using one or more of Facebook, Twitter or Instagram (or sometimes no social media at all), but Instagram is increasingly becoming the dominant platform for consumer engagement. ***Chefs and restaurants, particularly those of influence, are increasingly using Instagram as their platform of choice***. Of the 22 'tier 1' chefs identified in News Media analysis (above), for example, only one does not have either a personal Instagram account or one associated with their restaurant or food business. The followers they attract are significant. While a relatively inactive or very locally-focused chef can attract as few as a thousand followers, those with national profiles can attract substantially more. Ten of the 'tier 1' chefs have more than 20,000 followers; three have more than 100,000. Maggie Beer and Shannon Bennett have a staggering 162,000 and 165,000 followers, respectively.

Lifestyle media

Instagram is also increasingly used for sustainability messages. Initial results from the research interviews for this study show that some chefs are moving away from other social media platforms, such as Twitter or Facebook, and focusing on Instagram because they see its visual format as more effective for sustainability messaging, and because they are seeing increasing engagement with their posts. Some sustainability campaigns, such as Environment Tasmania's Sustainable Salmon Chefs Charter (see News Media and Social Media analyses, above), are focused primarily on Instagram, with some cross-posting on Facebook, although the level of reach and engagement with activist campaigns still remains limited.

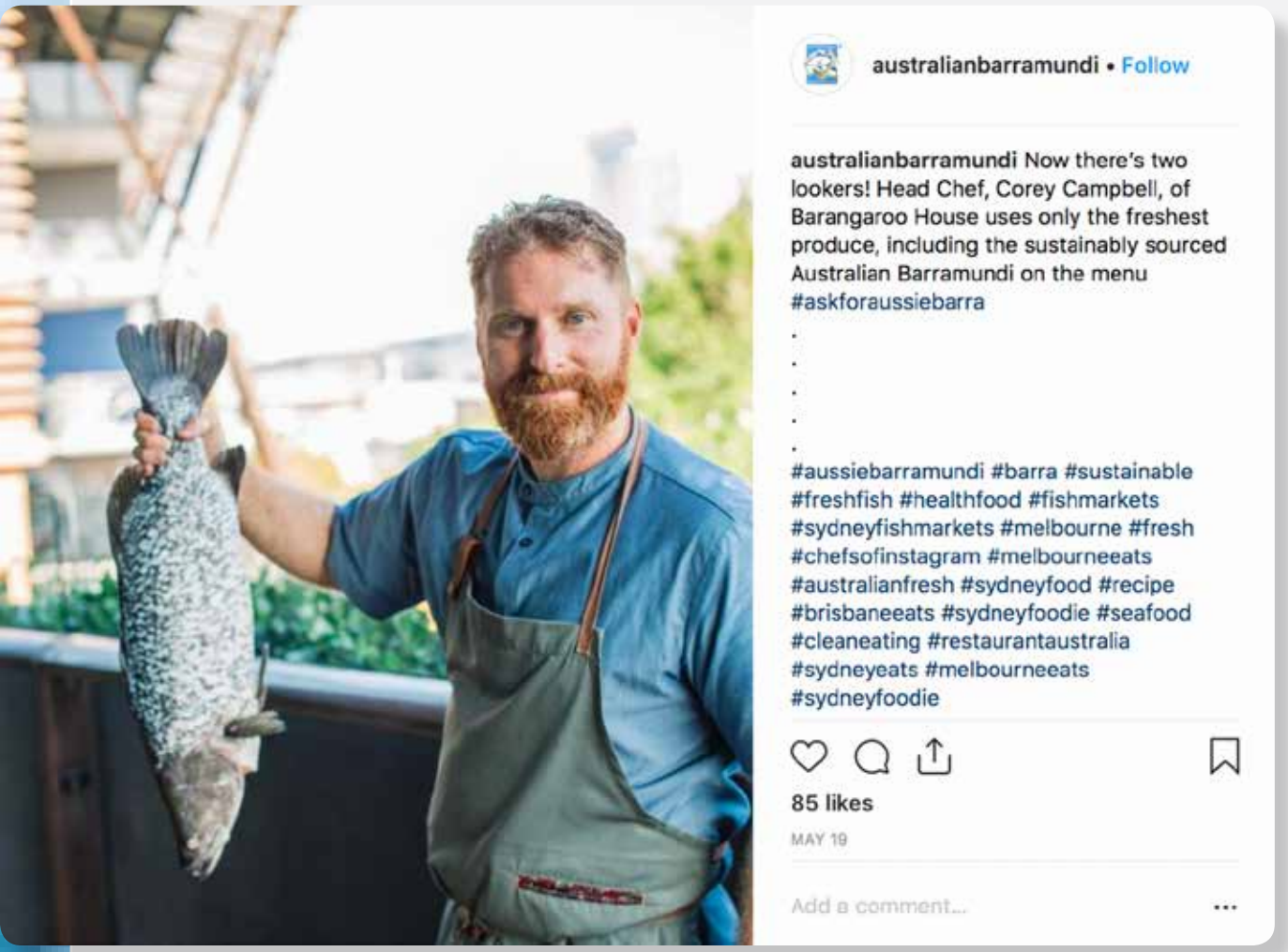
Instagram's most effective posts are those that link in with existing foodie networks. The Australian seafood industry does have some good examples of Instagram use (more on these below), but ***chefs and restaurants are well ahead of industry in attracting followers and connecting posts to popular hashtags***. For foodie audiences, place-based hashtags (e.g. #melbournefood, #melbourneeats, #sydneyfood, #sydneyeats) enjoy wide reach, with over one million posts associated with each. These hashtags are used by chefs to increase the visibility of many of their posts. For example, Guy Grossi uses the hashtag #melbournefood (as well as #sustainable) to boost the visibility of his dish of local sardines, and to connect this food to discourses of place, provenance and sustainability. See Figure 18:

Figure 18:
#sustainable, #melbournefood

Lifestyle media

While, ***on the whole, industry lags behind chefs and restaurants in bringing Instagram posts to the attention of wider foodie publics***, there have nonetheless been some good examples of seafood industry initiatives. For example, the #AskforAussieBarra campaign, developed by Papaya PR for the Australian Barramundi Farmers Association, connects messages of provenance and sustainability with popular, highly visible hashtags, including #melbourneeats, #sydneyfood, #brisbaneeats, #melbourneeats, #sydneyeats, #sydneyfoodie and #chefsofinstagram (the latter with over 3 million posts). See Figure 19 below for an example. The campaign is still in its early stages, and is still focused on developing relationships with chefs, rather than on communicating with consumers, but its Instagram posts offer a good model of ensuring that messages are visible to foodie audiences.

Figure 19:
#AskForAussieBarra



Lifestyle media

In contrast to the #AskforAussieBarra campaign, which promotes Australian Barramundi as a species and Australian Barramundi farmers as a group, most industry uses of Instagram (where it occurs) are largely limited to individual brands marketing to their individual customer bases. There are some excellent examples, the best probably being Glacier 51 Toothfish, whose Instagram (1,574 followers) combines action shots of treacherous ocean conditions with striking images of the fish and the chefs who use it (see Figures 20–22). While such an approach is both highly effective and visually spectacular, the resourcing required to sustain a high-quality online presence in this manner should not be underestimated.

Figure 20:
Glacier 51 Toothfish, Treacherous shots on the water

Lifestyle media

Figure 21:
Glacier 51 Toothfish, Fish action shot

Lifestyle media

Figure 22:
Glacier 51 Toothfish, Chef endorsement

Lifestyle media

Successful engagement on lifestyle media requires working with a) the genre conventions and production constraints of the medium, and b) the specific "affordances" (boyd 2010) of lifestyle media platforms. ***This includes attention not just to the type of message, but to how these messages can elicit the greatest reach and engagement.***

A general note on social media use

While conducting the media survey, we saw significant diversity in industry's capability in successfully engaging with social and lifestyle media. There are some very good examples, and also some quite poor ones.

In some cases, there are some industry groups and associations that have not yet mastered the basics of effective social media use. For example, there are a number of social media posts featuring chefs (who may have appeared at an event, for example, or leant their support to a cause), ***but the chefs are not tagged in the post.*** This severely limits the visibility of such posts, and fails to bring them to the attention of the chef's followers in ways that might help to generate wider interest.

Stakeholder conversations conducted in conjunction with this media survey also revealed that there are a number of industry groups that started out being very enthusiastic about social media and made concerted efforts to engage with various platforms, but they were unable to maintain these activities. Resourcing was the most common barrier, which suggests that ***practical tools to help industry groups plan for sustainable social media engagement might be useful.*** However, additional problems seemed to stem from *how* these media were being used.

Many use social media platforms (whether it be Facebook, Twitter or Instagram) primarily as a 'push' medium. Such groups tend to initially invest a lot of time and enthusiasm in social media and would 'push out' a great deal of content, but would then get discouraged when results don't 'pay off' by generating engagement. This suggests that ***further training in social and lifestyle media use—particularly in how to use these media as tools for building engagement—would be of significant benefit to the industry.***

References

Ankeny, R. & Bray, H. 2017, 'It's Not Just About "The Science"', *Australasian* Science, July/August.

Araujo, T. & Van der Meer, T.G.L.A. 2018, 'News Values on Social Media: Exploring What Drives Peaks in User Activity about Organizations on Twitter', *Journalism*, Online First. *https://doi.org/10.1177/1464884918809299*

Bell, D., Hollows, J., & Jones, S. 2017, 'Campaigning Culinary Documentaries and the Responsibilization of Food Crises', *Geoforum*, vol. 84, pp. 179–187. *https://doi.org/10.1016/j.geoforum.2015.03.014*

Bowman, P. & Stewart, B.D. 2013, 'Celebrity Chefs and the Sustainable Seafood Movement: Smokescreen or Dish to Savour?' Marine Ecosystem Management Report no. 4, University of York. *http://eprints.whiterose.ac.uk/76850/*

boyd, d. 2010, 'Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications', in Z. Papacharissi (ed.), *A Networked Self: Identity, Community, and Culture on Social Network Sites*, pp. 36–50. New York: Routledge.

Bruns, A., & Stieglitz, S. 2013, 'Towards More Systematic Twitter Analysis: Metrics for Tweeting Activities', *International Journal of Social Research Methodology,* vol. 16, no. 2, pp. 91–108. *https://doi.org/10.1080/13645579.2012.756095*

Burgess, J., Galloway, A., & Sauter, T. 2015, 'Hashtag as Hybrid Forum: The Case of #agchatoz', in N. Rambukkana (ed.), *Hashtag Publics: The Power and Politics of Discursive Networks*, pp. 61–76. New York: Peter Lang.

Cody, G. 2017, 'Is This 2017's Biggest Food Trend?', *Good Food*, 17 October, *https://www.goodfood.com.au/eat-out/good-food-guides/is-this-2017s-biggest-food-trend-20171011-gyyzy7.*

Crowe, E. 2018, 'How Sustainability Trends Are Changing the Way Restaurants Do Business', SmartBrief, 30 May, *http://www.smartbrief.com/original/2018/05/how-sustainability-trends-are-changing-way-restaurants-do-business.*

Deacon, D., Murdock, G., Pickering, M. & Golding, P. 2007, *Researching Communications: A Practical Guide to Methods in Media and Cultural Analysis*, Hodder Arnold, London.

Dehghan, E. 2018, 'A Year of Discursive Struggle Over Freedom of Speech on Twitter: What Can a Mixed-Methods Approach Tell Us?' I*n Proceedings of the 9th International Conference on Social Media and Society (SMSociety '18*), pp. 266–270. Copenhagen: ACM Press. *https://doi.org/10.1145/3217804.3217926*

Digges, M. 2017, 'Is Fin to Fin the New Nose to Tail?', *SBS Food*, 23 June, *https://www.sbs.com.au/food/article/2017/06/27/fin-fin-new-nose-tail.*

Friedlander, J. & Riedy, C. 2018, 'Celebrities, Credibility, and Complementary Frames: Raising the Agenda of Sustainable and Other "Inconvenient" Food Issues in Social Media Campaigning', *Communication Research and Practice*, vol. 4, no. 3, pp. 229–245. *https://doi.org/10.1080/22041451.2018.1448210*

Harcup, T. & O'Neill, D. 2017, 'What is News? News Values Revisited (Again)', *Journalism Studies*, vol. 18, pp. 1470–1488. *https://doi.org/10.1080/1461670X.2016.1150193*

References

Johnston, J. & Baumann, S. 2009, Foodies: Democracy and Distinction in the Gourmet Foodscape, Routledge, New York.

King, T. & O'Meara, D. 2018, '"The People Have Spoken": How Cultural Narratives Politically Trumped the Best Available Science (BAS) in Managing the Port Phillip Bay Fishery in Australia', *Maritime Studies*, online first. *https://doi.org/10.1007/s40152-018-0097-5*

Lakoff, G. 2010, 'Why it Matters How We Frame the Environment', *Environmental Communication*, vol. 4, no. 1, pp. 70–81. *https://doi.org/10.1080/17524030903529749*

Lewis, T. 2008, Smart Living: Lifestyle Media and Popular Expertise, Peter Lang, New York.

Lockwood, A. 2013, 'Affecting Environments: Mobilizing Emotion and Twitter in the UK Save Our Forests Campaign', in L. Lester and B. Hutchins (eds), Environmental Conflict and the Media, pp. 49–60. New York: Peter Lang.

Murphy, K. 2008, 'The "Most Dependable Element of any Country's Manhood": Masculinity and Rurality in the Great War and its Aftermath', History Australia, vol. 5, no. 3. pp. 72.1–72.20. *https://doi.org/10.2104/ha080072*

Ogier, E. & Brooks, K. 2016, *License to Engage: Gaining and Retaining your Social License in the Seafood Industry. A Handbook of Available Knowledge and Tools for Effective Seafood Industry Engagement with Communities*. Fisheries Research and Development Corporation (2015–300), Institute for Marine & Antarctic Studies (UTAS) and KalAnalysis, Hobart.

Phillipov, M. 2016, 'Using Media to Promote Artisan Food and Beverages: Insights from the Television Industry', *British Food Journal*, vol. 118, no. 3, pp. 588–602. *https://doi.org/10.1108/BFJ-06-2015-0219*

Phillipov, M. 2017, *Media and Food Industries: The New Politics of Food*, Palgrave Macmillan. Pilgrim, K. 2013, '"Happy Cows", "Happy Beef": A Critique of the Rationales for Ethical Meat', *Environmental Humanities*, vol. 3, pp. 111–127. *www.environmentalhumanities.org*

Rossi, C. 2017, 'Poke Bowls of Instagram', *Pop Sugar*, *https://www.popsugar.com.au/fitness/Poke-Bowl-Ideas-From-Instagram-43218579.*

Silver, J.J & Hawkins, R. 2017, '"I'm Not Trying to Save Fish, I'm Trying to Save Dinner": Media, Celebrity and Sustainable Seafood as a Solution to Environmental Limits', *Geoforum*, vol. 84, pp. 218–227. *https://doi.org/10.1016/j.geoforum.2014.09.005*

Sinclair, L. 2010, 'MasterChef Sparks Coles Sales Surge', *The Australian*, 21 June, p. 32. Smithers, R. 2011, 'Sales of Sustainable Seafood Soar in UK Supermarkets', *The Guardian*, 18 January, *https://www.theguardian.com/environment/2011/jan/17/sustainable-seafood-supermarkets-fish-fight.*

Sunstein, C.R. 2017, #Republic: Divided Democracy in the Age of Social Media, Princeton, Princeton University Press.

Swenson, R. & Olsen, N. 2018, '*Food for Thought*: Audience Engagement with Sustainability Messages in Branded Content', *Environmental Communication*, vol. 12, no. 7, pp. 973–988. *https://doi.org/10.1080/17524032.2017.1279202*

Tracey, S., Buxton, C., Gardner, C., et al. 2013, 'Super Trawler Scuppered in Australian Fisheries Management Reform', Fisheries, vol. 38, no. 8, pp. 345–350. *https://doi.org/10.1080/03632415.2013.813486*

VanWinkle, T.N. 2017, '"Savor the Earth to Save It!"—The Pedagogy of Sustainable Pleasure and Relational Ecology in Place-Based Public Culinary Culture', *Food and Foodways*, vol. 25, no. 1, pp. 40–57. *https://doi.org/10.1080/07409710.2017.1270648*