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Celebrity chefs and the sustainable seafood movement: Smokescreen or a dish to savour?



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Celebrity chefs and the sustainable seafood movement: Smokescreen or a dish to savour?

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Summary

Celebrity chefs are a major part of British media culture, with several highly prominent on television and able to amass formidable book sales. Sales of endorsed products often increase subsequent to the release of these cookery books. The ethical leanings of a chef may therefore impact behavioural trends of consumers. This study examined the books of ten celebrity chefs over three time periods; 2005-07, 2009-11 and 2012, with a view to establishing the sustainability of the seafood featured within them. The Marine Conservation Society's *Fishonline* website (www.fishonline.org) was used to assess the sustainability of an average gram of seafood in each book. This was combined with a grading of the introduction, recipes and alternative suggested species in each book to produce an overall "sustainability" score. Hugh Fearnley-Whittingstall's books achieved the highest ranking across all three time frames, with an average score of 87%. However, Delia Smith scored consistently low – between 17% and 22%. Raymond Blanc showed the greatest improvement, rising from 22% to 85%, reflecting a general improvement among most chefs over time. Continued promotion of sustainable seafood by celebrity chefs could help improve the management of marine resources, but uptake of the concept is still highly variable between individuals.

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How Sustainable is the Seafood in Celebrity Chef Cook Books?

The last decade has seen an exponential rise of the “sustainable seafood movement” (Jacquet & Pauly 2007; Potts et al. 2011; Sainsbury's Supermarkets Ltd & Future Foundation 2012). The ethos behind this movement is to improve fisheries management by encouraging retailers and consumers to choose more sustainable varieties of seafood and therefore increase the demand for such products. Although the magnitude of influence is debated (Jacquet et al. 2010; Froese & Proelss 2012), there is increasing evidence that demand for sustainable seafood is securing a price premium for suppliers and is leading to improvements in both fisheries management and the health of certain fish stocks (Roheim et al. 2011; Guitierrez et al. 2011).

In the United Kingdom (UK), celebrity chefs are a major part of British media culture, with several highly prominent on television and able to amass formidable book sales. Consequently they are known to have a large influence over consumer demand for certain ingredients (BBC 2000; Daily Mail 2012; Hall 2012; Chandler 2012). Therefore, if celebrity chefs are engaged in the sustainable seafood movement it could be helping to drive consumer preference for such products. We assessed the sustainability of the information provided, and the seafood used, in the recipe books of 10 UK celebrity chefs across three time frames to examine variation in ingredients between individuals and over time. The chefs were selected after a survey of the general public which determined which were the most well-known (Laycock, 2011).

Initially, books from 2005-7 and 2009-11 were compared, with a view to establishing whether or not there had been any improvement in the sustainability of the ingredients used and information provided in line with the known rise in public awareness of overfishing and marine conservation issues over the same time period (Jacquet and Pauly 2007; Sainsbury's Supermarkets Ltd & Future Foundation 2012). Subsequently, in January 2011 the high profile Fish Fight Campaign (www.fishfight.net) was launched by the celebrity chef Hugh Fearnley-Whittingstall, which focussed on the need for consumers to choose more sustainable seafood. This campaign gained unprecedented media attention in the UK and influence over retailers (Fish Fight n.d.). We therefore carried out an additional analysis in 2012 to examine whether celebrity chefs had been further influenced by this campaign.

Analysis was conducted in two steps. Firstly, each book was assessed according to three criteria, with scores ranging from 0 (least sustainable) to 3 (most sustainable) in each case:

1. The introduction of the book, seafood section or conclusion was graded on whether or not it mentioned sustainability. No mention at all would result in a '0', as would advice deemed incorrect or misguided. A maximum score of '3' could be obtained where the author gave sustainability advice at a species level or made mention of consumer guides such as the *Fishonline* site produced by the Marine Conservation Society (MCS) (www.fishonline.org).
2. The presence, absence and nature of advice on sustainability within each recipe was also given a score out of 3, which provided an average score for each book. For example, a recipe requiring “200g organic farmed trout” would achieve a higher score than one which just said “200g trout”.
3. A score of 0 to 3 was also given according to suggestions for alternative ingredients. For example, in one instance a chef advised consumers to use orange roughy as an alternative to salmon. Advice such as this resulted in a score of '0' as orange roughy is considered highly

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unsustainable (www.fishonline.org). This scoring section was removed for some books when there were no suggestions for alternative ingredients.

Secondly, the actual seafood used in each book was assessed the MCS *Fishonline* website (www.fishonline.org) which ranks species from 1 (most sustainable) to 5 (unsustainable). A list of each species used within each book was generated, including the total weight in grams. This weight was then multiplied by the species ranking from the *Fishonline* website; where no consumer advice was given an average score was used. The 'sustainability x weight' scores were added together, before being divided by the total weight in grams of seafood from each book to give an average MCS ranking for the average gram of seafood within each book. This score needed to be inverted, as the other scores in the study ran from 0 = poor to 3 = good, so the final score was calculated by deducting the average MCS ranking from 5. For example, an average MCS ranking of 2 would be deducted from 5 to give a final score of 3. As the best possible original MCS score was 1, the best possible inverted score was therefore 4. We weighted this section slightly higher than the others as we felt it to be the most important criteria.

For each book the scores from steps one and two were combined and an overall percentage score was calculated based on the maximum possible score that book could have achieved. In most cases the maximum possible score was 13 (3+3+3+4). In some cases chefs did not suggest any alternative ingredients for their recipes; however, we did not consider this to be grounds for penalisation. Therefore the final percentage score for these books was graded out of 10 instead of 13.

A Dish to Savour?

The overall scores for all ten chefs are listed below in table 1 along with an average score for each year group. The 2012 analysis did not include step 3 (an assessment of any suggested alternative ingredients) owing to limited access to resources. Furthermore, three of the chefs analysed in 2005-7 and 2009-11 (Delia Smith, Anthony Worrall Thompson and Raymond Blanc) did not release any new material in 2012, therefore no data is available for those chefs for that period.

Table 1. Seafood sustainability scores for the cookery books from all 10 chefs studied and the average ranking for all chefs across the three year groups. * *Jamie Oliver* released two cookery books during 2010, one of which scored fairly poorly, but the other a little better (*Jamie Does* scored 28% and *30 Minute Meals* scored 48%). As a result an average score was given.

	2005-7	2009-11	2012	Average
Hugh Fearnley-Whittingstall	91%	91%	80%	87%
Raymond Blanc	22%	85%		54%
Heston Blumenthal	65%	30%	65%	53%
Gordon Ramsay	16%	34%	63%	38%
Hairy Bikers	30%	30%	45%	35%
Anthony Worrall Thompson	27%	39%		33%
Rick Stein	32%	24%	43%	33%
Jamie Oliver	20%	38%	32%	30%
Nigella Lawson	22%	33%	24%	26%
Delia Smith	22%	17%		20%
Average score for each year:	35%	42%	50%	41%

The greatest improvement over the full time period (47%) was seen from Gordon Ramsay, whose scores went from 16% to 63% between 2005 and 2012. Raymond Blanc didn't release any new material in 2012 but he did make a dramatic improvement of 63% (from 22% to 85%) between 2005 and 2010. Of all the chefs, Hugh Fearnley-Whittingstall maintained the highest scores across all three time frames, whilst Delia Smith maintained the lowest mean score. Jamie Oliver and Nigella Lawson also remained in the bottom half of the table over the study period.

Whilst Gordon Ramsay's 2012 score is a respectable one, his earlier work left a lot of room for improvement. *Passion for Seafood* (first published in 1999 but reprinted in 2007 with the original recipes intact) opened with a discussion on sustainability and presented the need to maintain the health of the oceans. However, the recipes did not always reflect this sentiment. For example, in this book Ramsay advocated the use of orange roughy as an alternative to salmon. Due to the extreme vulnerability of orange roughy to overfishing, alongside plummeting catch rates as early as the mid-1990s (Stevens 2003), MCS has consistently ranked orange roughy as a fish to avoid on sustainability grounds (score of 5). Contradictory information such as this has the power to misguide consumers, so it is encouraging to see Gordon Ramsey's most recent book presents a more consistent message.

Other celebrity chefs have so far chosen not to get heavily involved with marine environmental issues, focussing instead on their own socio-political agenda. For example, Jamie Oliver worked alongside Hugh Fearnley-Whittingstall on the Fish Fight campaign; however, in recent years his main focus has been to raise awareness of the growing obesity epidemic among children (www.jamieoliver.com/us/foundation/jamies-food-revolution/home). As long as these chefs are not using unsustainable ingredients in their recipes then this is clearly not a problem.

Overall, the most positive message from this study is that despite some variation between individual chefs, there was a general improvement in sustainability scores across cookery books over time (from 35% to 50%). This suggests celebrity chefs are increasingly considering the sustainability of fish and seafood within their cookery books and recipes. This increased engagement with sustainable seafood appears likely to continue into the future given current trends in the UK seafood market.

A survey of public perceptions was carried out alongside our recipe book analysis in 2011 (Laycock 2011). When asked to what extent they agreed with the statement "Celebrity chefs have had an impact on my shopping habits", 32% of those surveyed agreed while 43% disagreed, and 25% neither agreed nor disagreed (Laycock 2011). This suggests that although up to a third of people admit to being influenced by celebrity chefs, the remainder appear ambivalent. However, book sales figures for celebrity chefs remain high, with Jamie Oliver topping the UK sales charts (for all books) for the last three consecutive Christmas's (Stone 2012). As such the cookery books and recipes of high profile chefs are thought to have been influencing consumer purchasing patterns for some time. In 1995 a Delia Smith cook book resulted in a sharp rise in cranberry sales (BBC 2000) and more recently in 2012, gammon sales increased by 294% after she included it in a recipe on TV (Daily Mail 2012). Delia is not alone, Heston Blumenthal's Christmas Pudding saw record sales before appearing on eBay at twice the recommended retail price (Hall 2012) and Jamie Oliver has been credited (in part) for a 5.2% increase in sales of frozen foods (equivalent to £250 million) (Chandler 2012). Likewise, Hugh Fearnley-Whittingstall's "Fish Fight" TV campaign is thought to

have led to dramatic rises in supermarket sales of “alternative” fish species such as mackerel, pollack, coley, pouting and whiting (Guardian 2011). If celebrity chefs continue to use more sustainable seafood in their recipes this therefore appears likely to lead to higher consumer demand for these products from retailers. Ultimately such a trend could help encourage more sustainable fishing practices and reduce pressure on fish stocks and the marine environment in general.

Conclusions and Recommendations:

- The sustainability of the seafood promoted by celebrity chefs in the UK appears to have generally improved between 2005 and 2012.
- Although sustainability scores varied considerably between the top ten celebrity chefs, most appeared to be engaging with the concept by 2012.
- These trends mirror a general increase in the profile and demand for sustainable seafood in the UK marketplace over the same time period.
- It is difficult to assign cause and effect, but there are several well-known examples of celebrity chefs influencing consumer demand in the past.
- Environmental groups and certification bodies should therefore continue to engage with celebrity chefs to promote the concept of seafood sustainability.
- It would be particularly beneficial to encourage more sustainable behaviour in highly popular chefs such as Jamie Oliver and the Hairy Bikers who’s scores still leave room for improvement.
- Increased promotion of seafood sustainability in popular culture should be seen as an important way of reducing pressure on the marine environment into the future.

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Appendix 1. Full results from the recipe book analysis over the three time periods.

Chef	Book Title	Year	Pages	Weight	g per page	Preamble	Detail in Recipes	MCS score	Alternatives	Total	Out of	%
Jamie Oliver	Jamie's Italy	2005	305	22,250	72.95	0	0	1.54	1	2.54	13	20%
	Jamie Does	2010	321	12,730	39.66	0	0	1.76	1	2.76	10	28%
	30 Minute Meals	2010	224	8,580	38.30	2	0	2.79	N/A	4.79	10	48%
	15 Minute Meals	2012	236	19,475	82.52	1	0	2.19	N/A	3.19	10	32%
Gordon Ramsay	Passion for Seafood	2007	158	61,335	388.20	0	0	2.04	0	2.04	13	16%
	World Kitchen	2010	241	18,600	77.18	0	0	2.47	2	4.47	13	34%
	Ultimate Cookery Course	2012	282	12,965	45.98	3	0	3.26	N/A	6.26	10	63%
Nigella Lawson	Forever Summer	2005	264	18,219	69.01	0	0	1.81	1	2.81	13	22%
	Heart of the Home	2010	447	10,733	24.01	0	1	2.33	N/A	3.33	10	33%
	Nigellissima	2012	262	4,665	17.81	0	0	2.37	N/A	2.37	10	24%
Delia Smith	Fish	2005	113	33,593	297.28	0	0	1.8	1	2.8	13	22%
	Complete How To Cook	2009	678	16,585	24.46	0	0	1.26	1	2.26	13	17%
Rick Stein	French Odyssey	2005	175	44,054	251.74	0	0	2.16	2	4.16	13	32%
	Far Eastern Odyssey	2009	276	35,182	127.47	0	0	2.06	1	3.06	13	24%
	Spain	2011	289	33,375	115.48	0	2	2.3	N/A	4.3	10	43%
Heston Blumenthal	In Search of Perfection	2006	448	9,590	21.41	3	1	2.48	N/A	6.48	10	65%
	The Fat Duck Cookbook	2009	285	26,885	94.33	0	1	1.96	N/A	2.96	10	30%
	Heston At Home	2011	342	9,110	26.64	3	0	3.49	N/A	6.49	10	65%
Antony Worrall Thompson	Weekend Cookbook	2007	160	5,910	36.94	0	0	1.57	2	3.57	13	27%
	Antony Makes it Easy	2010	213	12,380	58.12	1	0	2.13	2	5.13	13	39%
Hairy Bikers	Ride Again	2007	211	9,785	46.37	0	0	1.94	2	3.94	13	30%
	Mum's still know best	2010	205	3,350	16.34	0	1	1.91	1	3.91	13	30%
	Hairy Dieter	2012	170	7,020	41.29	0	2	2.48	N/A	4.48	10	45%
Hugh Fearnley-Whittingstall	Fish book	2007	277	110,762	399.86	3	3	2.89	3	11.89	13	91%
	River Cottage Everyday	2009	378	13,928	36.85	3	3	2.86	3	11.86	13	91%
	3 Good Things	2012	386	13,385	34.68	3	2	3	N/A	8	10	80%
Raymond Blanc	Simple French Cookery	2005	98	3,900	39.80	0	0	2.2	N/A	2.2	10	22%
	Kitchen Secrets	2011	296	9,160	30.95	3	3	2.48	N/A	8.48	10	85%

Appendix 2.

In the table above:

Year is the year of publication.

Pages: the total number of pages from the first page of the first recipe to the last page of the last recipe. This approach was used because some chefs include lengthy introductions and conclusions, which could distort figures for the number of grams of fish and seafood per page.

Weight: the total weight of fish and seafood used throughout the book in grams.

G per page: the total weight of fish and seafood / the number of pages.

Preamble: the score for any mention of sustainability in the forward of the book and / or seafood or fish section and / or the conclusion of the book.

Detail in Recipes: a score for the information provided in a recipe. For example, organic farmed salmon would achieve a higher grade than just saying farmed salmon.

MCS score: the score obtained for the analysis of the seafood used in a book. The MCS score has been inverted, MCS's online seafood rankings run from 1 = good to 5 = bad, which is contrary to all other scores in the analysis. For this reason a conversion was carried out ($5 - x = \text{score}$), for example, an MCS ranking of 3 would become $5 - 3 = 2$.

Alternatives: the score given for alternative ingredients suggested within a recipe, in many cases this wasn't applicable.

Total: the final score achieved, which was then deducted from the 'out of' column and converted to a percentage to provide a final result.

Out of: the highest potential score a book could achieve. Some books didn't include any alternative ingredients within recipes. As such, it seemed unreasonable to deduct marks for not recommending sustainable species.

% is the final score achieved for each book.