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Science communication handbook: the news media

Climatica
www.climatica.org.uk
Kathryn Adamson, Tim Lane, Richard Selwyn Jones

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1 Why engage with the media?

Public understanding of science

Up to 87% of the public get their information about science from the media, including television and newspapers (Ipsos MORI Report, 2011).

The Ipsos poll also indicated that **lack of scientist awareness of public understanding was regarded as one of the main barriers to greater public involvement** in decision-making about scientific issues.

The media is a very powerful vehicle to disseminate your research to wide audiences. Developing an effective line of communication with the media is one of the best ways to help ensure that your research field is accurately represented within public spheres.

Research funding

Funding bodies are increasingly recognising the importance of disseminating research findings to the wider public – this trend is set to continue.

Much research is funded through government budgets. Perhaps it is a responsibility of publically-funded projects to pass on the findings and expertise to wider audiences.

Personal development

Through developing their media presence (in the news media and through blogs, for example) many scientists have noted **an increase in scientific citations**. Many have also been approached with further **offers of research collaboration and funding**.

As the expert, it is beneficial to both yourself and your research field to **ensure that your work is accurately reported** to the public. After all, you are the most qualified to talk about your own work!

What are the main concerns of scientists?

You may be reluctant to comment on a topic that you do not feel an expert on. In the public eye, even within your broad area of research, you will be deemed an expert – if you have not published on a specific topic you will at least be familiar with the wider context.

You do not want to speculate on an area that you are not sure about. It is acceptable to state that you are unable to comment on a particular matter, as you do not know the full facts, but you could discuss the wider issues instead. You could also recommend a colleague who may be more suited to the particular topic. Developing a media presence is better than taking no action at all.

You do not have time. If you indicate that you are available for media engagement, but do not make the time, journalists will need to speak to someone else - potentially a non-scientist. The media rely on quick turnarounds and tight deadlines and it is important to make yourself available.

You do not trust journalists. While the vast majority of journalists try to report your research stories accurately, if you are in any doubt, contact your university press office for assistance. To more effectively report scientific research, journalists need the help of scientists.

2 From paper to press release: preparing your work for the news media

This guide focuses on the development of a press release, but much of it is applicable to other media engagement such as: interviews; outreach articles; and less formal discussions with journalists.

The role of a press release

A press release is a means of communicating the main findings of your research to the media in a short and concise format. It provides a very efficient way of disseminating your work to a wide audience via the media.

Do not worry about producing the most scientifically accurate account of your work. Often, to make your message coherent to the wider public you will have to simplify your findings and draw out the key messages, rather than focussing on the fine detail.

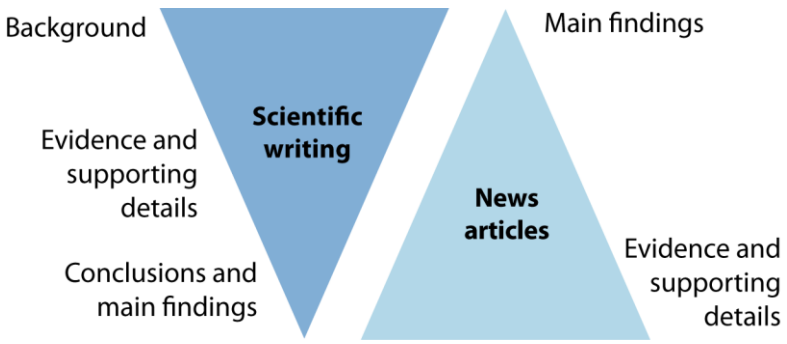
News articles always lead with the *conclusions* of their report – providing readers with the key findings upfront. **This is the direct opposite of scientific papers**, which start with basic principles and background (Fig. 1). For example, if someone is presenting new data on recent Arctic warming trends, a newspaper article will not begin with an outline of the methods used, or their accuracy and precision. It will begin with the take home message – the headline – and then explain the details of the study.

You need to consider if your story is newsworthy otherwise, it will not be selected for print. Some key questions to consider at this stage are:

What are the implications of your study?
Who will it affect?
Is it of broad or local appeal?

These may determine the newspaper and audience that you target. Just like a research grant proposal, you will need to package your story appropriately.

Figure 1: Scientific writing vs. news media articles. Scientists need to invert the structure of their writing when converting their research papers into news stories. Unlike scientific papers, news articles place less emphasis on the background context and more on the key findings at the outset (adapted from Somerville and Hassol, 2011 – available at www.climatecommunication.org).



Writing an effective press release

Writing for the news media is the same as writing a journal paper – it is the same process of condensing and clarifying. Just like academic writing, practice makes perfect!

Keep is short and concise. One page is ideal (two at the most), containing around 300-500 words.

Begin with an engaging headline/title. Keep it simple and concise, while providing an overview of your findings. Do not be tempted to include vast quantities of detail in the title. The aim is to encourage the journalist to continue reading the main text.

Provide the key findings and implications at the outset. Journalists may only have a minute to establish whether your story is worthy of a larger news article. It is important to grab their attention immediately, before going on to provide further details.

Ensure that your press release is clear and provides enough information (and factual evidence) to allow the journalist to follow your argument and determine the credibility of your study. This can save the journalist a lot of time and will establish you as a reliable and reputable source.

Avoid using material that you have already written for a different outlet – such as a faculty newsletter or website summary. Start from scratch and write your press release specifically for the newspaper. This will ensure that it is focused on the target audience.

Write your press release like a news story. This will reduce the workload for the journalist, increasing the chances of your story being selected.

Provide some key quotes. These are a good way to emphasise the major findings of your work. Make them usable - keep them brief and factual to maximise their impact. Quotes can act as a form of 'interview' if the journalist is unable to contact you directly, so use the quotations wisely.

Consider whether you have included the 'five Ws': What; Where; When; Who; Why
The first two paragraphs should deal with: what; where; when; and who.
The remaining four or five paragraphs can elaborate on: why, and how.

Provide a contact name, direct phone number, and email address at the bottom of the page so that the journalists can contact you. **Be available once the press release has been submitted** in case the journalist needs further information.

Check for accuracy. Not only of spellings/punctuation/grammar, but also the factual content.

Your university press office can help you to manage the release. They may send the press release directly to journalists; via consultants; or via press release portals.

You can either specify immediate release or embargoed release. An embargo can be useful if you want to ensure that the news story does not precede the publication of your journal paper. Ideally, your press release will be published at the same time as your paper – the media (and the public) prefer fresh results that people do not yet know about.

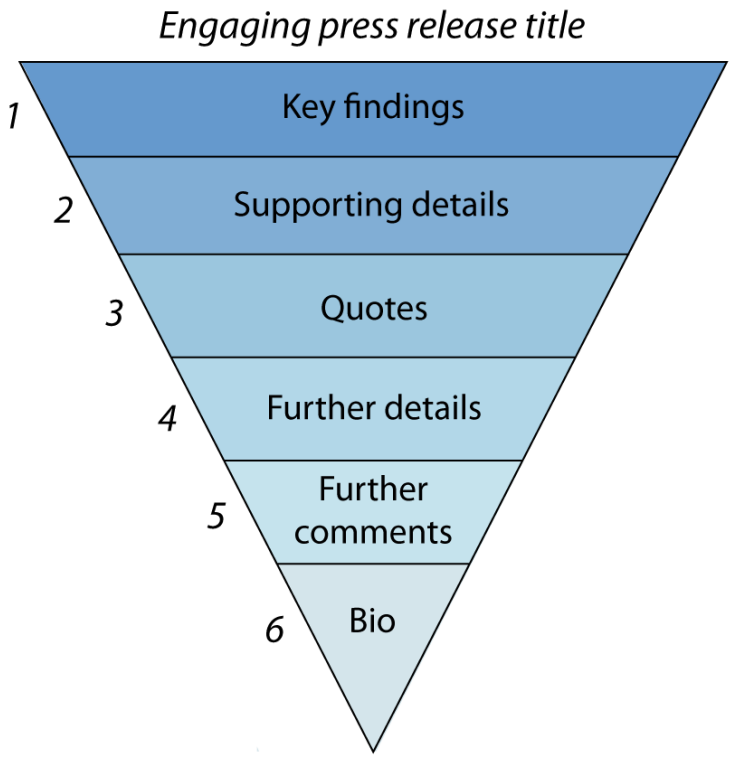
Follow up your press release. Contact the journalists to establish whether your story will be covered, and whether they require any further information.

Press release structure

As in scientific writing, it is important to use a clear structure when writing a press release. Depending on the page space allocated to your story, a journalist may have to cut parts of your press release. It is therefore important that all of the key information is presented at the beginning. You may want to follow a pyramid structure (Fig. 2).

1 – The introductory paragraph should contain the key findings.
2 – Then provide any supporting evidence and context.
3 – Provide a quotation from one of the research team to support your message.
4 – Provide any additional context.
5 – Add any additional quotes to expand on the implications and human impact of your work.
6 – Include a short biography of the academics, their research interests, and on-going work.

Figure 2: Suggested structure for a press release to ensure that the key information is presented at the beginning and important details are not cut from the final copy.



Press release language

It can be difficult to "turn off" your scientific vocabulary, as it is the most concise and precise way of communicating scientific information. If you are speaking to a journalist and cannot avoid the use of scientific terminology, then simply explain what you mean in the next sentence.

Some words have been identified as being best avoided when writing articles for the wider public. This is due to their potential for a dual meaning, especially to non-scientific readers. These are outlined, together with suggested alternatives, in Table 1.

Table 1: Scientific terms best avoided in press releases and when writing articles for the news media (adapted from Somervile and Hassol, 2011).

SCIENTIFIC TERM	PUBLIC MEANING	PREFERRED ALTERNATIVE
enhance	improve	intensify, increase
aerosol	spray can	atmospheric particle
positive trend	good trend	upward trend
positive feedback	good response, praise	self-reinforcing cycle
theory	hunch, speculation	scientific understanding
uncertainty	insecurity	range
error	mistake, wrong, incorrect	difference from exact true number
bias	distortion, political motive	offset from an observation
values	ethics, monetary value	numbers, quantity
manipulation	illicit tampering	scientific data processing
scheme	devious plot	systematic plan
anomaly	abnormal occurrence	change from long-term average

Press release template

Press Release

For immediate release: *Insert date*
or
Embargoed for: *Insert date*

Headline (an engaging and concise title)

Paragraph 1
The key findings of your research.
What, where, when, who.

Paragraph 2
Supporting details – scientific evidence and context.

Paragraph 3
Quotes from the scientific team to support your message.
Be clear and concise. Avoid using lengthy quotes – the journalist may split them up and lose the key message in the process.

Paragraph 4
Any additional supporting information/context.

Paragraph 5
Any further quotes to expand on the findings and implications.

Notes to the Editors
Provide key details about your research paper (title list of authors, and a full citation) and any further background information should they wish to produce a longer story.
Briefly highlight any additional supporting facts and figures that might be useful.
Outline other material that you could offer, such as: photographs, diagrams, interviews.

Biography
Information about the lead author and/or research team.
Some details of their research expertise and on-going work.
Always provide an email address and telephone numbers where you can be contacted.
If the journalists cannot contact you this may mean that your story will not be covered.

Ends.

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3 From press release to press: what are the news media looking for?

Content and style

Try to find the right balance of detail, context, and supporting material.

Different journalists will read with different intent – depending on the angle they want to take with the story, and their target audience, for example**. In all cases, a compelling headline and opening paragraph are the most important.**

Do not exaggerate or distort your argument to enhance its appeal – this will reduce the scope for misrepresentation. Ensure the key arguments are unequivocal in their message.

Consider the press release as a whole – try to give as much attention to the supporting information as the press release itself. These details should be clear and concise, and add value to your press release. Avoid excessive jargon or formulae – try to distil your results into a manageable format. This way the journalist has sufficient accessible information to *accurately* expand on your statements.

Scientist-journalist communication

Scientists and journalists can build very effective collaborations. Many journalists, particularly those writing for specialised science or environment columns, are familiar with current scientific knowledge, and have worked extensively with academics. They therefore have a good understanding of the scientific process. As scientists, we often have no exposure to the journalism process. Understanding the requirements of the press is important for maximising the benefits that the media can bring to your work.

Find out what the journalist's deadline is. If they need to speak to you about your press release, they may have only 10 minutes to do so and they will need you to respond immediately.

Take the journalist's contact details. You could offer to phone the journalist back, after taking a few minutes to formulate your response, but ensure that you stick to their deadline – otherwise the story may go ahead without your input. Or worse still, not be used at all.

Journalists rely on scientists who:

- Make themselves available
- Are quick to respond
- Can simplify their science

Time restraints mean that a journalist does not always check their copy back with the scientist before publication. Do not always expect to see a draft of the article before it goes to press, but do enquire with the journalist about the possibility of this. You can offer a polite correction to the journalist if you find that the story contains a mistake

If a journalist contacts you with an enquiry related to your press release/research field, but you feel that you are not specialised to answer, then recommend a colleague. It is better to maintain the integrity of your research field rather than letting the article run without a specialist voice!

4 Key considerations

Whether producing a single press release or planning a more long-term media presence there are many ways to enhance your science communication skills and gain valuable media contacts.

Contact your university press officer – they can offer expert advice on all aspects of media work, from press releases to television interviews. Make them aware of your research expertise – if opportunities arise in your research field they will know who to call.

If you are intending to do a lot of media work, you may also like to consider some media training. University press offices and external organisations (such as funding bodies and research academies) frequently host media short courses.

Seek advice from the experts: the EGU, the AGU, the Science Media Centre, and many other Earth Science bodies have excellent media divisions.

Practice speaking to a non-scientist about your research.

- Use the '60 second elevator pitch' technique
- Try to distil your research into 150 words
- Think of 3 key messages
- Avoid acronyms, jargon, equations, or complex measurements

Consider if there is anything controversial about your findings – formulate your response to any questions in advance.

It doesn't stop here – there are many other options for science outreach:

- **Publish short articles with Climatica.org.uk** – developed by Earth Science academics as a platform for science-public communication.

- **Research blogs –** whether in the field, in the laboratory, or as an on-going means of public interaction. Sites, such as Wordpress.com host free blogs. The offical EGU blog GeoLog also accepts contributions and the wider EGU blog community encourage guest posts on their own blogs (see links in section 5).

- **Schools outreach** – introducing the future generations of earth scientists to your work.

- **Public lectures and community talks** – these provide an excellent opportunity to guage the current level of understanding of, and public attitudes towards, your research field.

5 References and useful links

American Geophysical Union
http://sharingscience.agu.org/resources/#media

Climatica
www.climatica.org.uk

European Geosciences Union
http://www.egu.eu/outreach/
http://www.egu.eu/news/
http://geolog.egu.eu/submit-a-post/
http://www.egu.eu/outreach/blogs/
www.egu.eu/young-scientists/resources/?filterby=5&limit=50

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http://www.ipsos-mori.com/researchpublications/researcharchive/2764/Public-attitudes-to-science-2011.aspx

Science Media Centre
http://www.sciencemediacentre.org/

SciLogs
http://www.scilogs.com/communication_breakdown/does-media-boost-citations/

Somerville, R. C. and Hassol, S. J. (2011) 'The science of climate change' in *Physics Today* 64(10), 48.