GUIDES TO BETTER SCIENCE

PROMOTING YOUR RESEARCH

BRITISH ECOLOGICAL SOCIETY

Contents

BRITISH ECOLOGICAL SOCIETY

British Ecological Society
Charles Darwin House
12 Roger Street
London WC1N 2JU, UK
hello@britishecologicalsociety.org

Part of the ***BES Guides to Better Science***. In this series:
Peer Review
Data Management
Getting Published
Reproducible Code
All are available electronically at **britishecologicalsociety.org/publications/guides-to**

Cover image: Leejiah Dorward
Guide design by Cylinder

Introduction

Promoting your research, and yourself as a researcher, is important for all of us. It is vital to communicate what you do to the general public, bringing your paper to the attention of your peers, and having your name come up when people are discussing research in your area. We all need to do this but few of us are lucky enough to be taught how a research article can end up in a newspaper, or how to make your online profile actually represent you. The purpose of this guide is to give people a way of using the different tools that are available, to make sure their research reaches the people it needs to.

Jane Hill
Chair Publications Committee, British Ecological Society

Promoting your research

For everyone working in science, be it as a researcher, practitioner, student or citizen scientist, promoting your research, and yourself as a researcher, is increasingly important. That might mean getting the attention of your peers and other scientists, getting your work in the press, talking to interested non-scientists (or uninterested non-scientists), talking to teachers or students, or engaging policymakers to inform policy. Most of the time, it will be a mixture of these, so it is important to know how to get the attention of different groups and, once you have it, how best to get your message across to them.

There are many ways of doing this, including working with professional media officers or journalists, using personal social media (such as Twitter, Facebook, Instagram and other related platforms) and using digital media (blogs and podcasts, etc.).

This guide is designed to help people at all career stages find the best way to promote their research.

Jennifer Meyer
Senior Assistant Editor, British Ecological Society

Before you start

There are many ways of communicating your research and they all have some trade-off of time and effort for rewards. How you use different media is ultimately influenced by your communication goals and target audience. You may want to discuss your work with other people in your area, educate people about a specific topic or just share your enthusiasm about your discipline.

Decide what aspects are most important to you and work out what your communication goals are before you start trying to fulfil them. This is especially important if you want to involve digital media channels in your professional life. Defining your goals and strategies (you should have different strategies for different outlets and platforms) means that the effort you spend can be more productive. You can also track, evaluate and report on your efforts more easily (useful for agency and funding reports if you are asked to show 'impact').

> *"You might think there is no point in identifying goals or strategy for your communication, but using social media to communicate science can seem like a burden with nebulous benefits when you don't have a strategy for how you will communicate with others on a day-to-day basis. At the very least, identify goals that inform and drive your content creation".* How to Develop a Social Media Plan - Dr Paige Brown Jarreau - www.fromthelabbench.com/from-the-lab-bench-science-blog/2016/7/31/how-to-develop-a-science-social-media-plan

Developing a plan

One-way communication is useful for reporting on your research findings or facts from your research. If you are looking to work together with others, including the public, to understand the issues that need to be addressed and find solutions, then two-way communication (such as social media) is probably more effective. Thinking about the audience you want to reach influences what you say, how you say it and where you say it.

To come up with your goals and strategies, consider the following questions:

Why do you want to share your research?

Do you want researchers to read your paper and use your findings to inform their own research? Do you want to change public opinion about something or change societal behaviours (for example reduce waste)? Do you want to change how people do something because you have found a better way? Do you want people to share in your excitement over what you have just found out? Do you want more

people to work in your area or to increase your professional network?

What do you want to share about your research?
Do you want to share the results of your research or the process of researching? Do you want to share the solutions or the problems you have encountered? Do you want to talk about what it is like being a researcher in your area or your experiences of fieldwork?

Who do you want to share your research with?
Do you want to share your research and results with the public, school children, policymakers, other scientists, or another particular group that might benefit from it?

If you are promoting your research to other colleagues in your field, you have the advantage of shared scientific language. Specialists in any area are accustomed to using shorthand or jargon to explain key concepts quickly. That can be very helpful… as long as you both know what those terms mean. You can both understand, for example, what you mean when you say something is, very plastic, or that 'alpine climate' does not mean 'the climate of the Alps'. In some cases, terms can have different implications outside of a scientific context (for example, 'positive feedback' is good in a job appraisal, but not in incidents of forest fires).

If you are interested in talking to (and with) the public, or specific subgroups within the public, such as school children or people over 65, it is important to recognise the different forms of engagement and knowledge that these groups might already have about the topic you are sharing with them. For example, someone might already know about migratory fishes because they watched *Blue Planet* or enjoy fly-fishing, so you might focus on the potential impacts of dams on the migration of salmon.

You will often decide the 'what to share' and 'who to share it with' simultaneously, because the message you want to share depends on the audience you are targeting.

And ultimately:

What is your objective?
After reading your post or listening to your podcast or radio interview, what do you want your audience to **think**, **feel** and **do**? If you have a clear objective, you can focus your communication, editing out anything that doesn't contribute to it.

Before you start

Know your audience

It is tempting to get stuck on your aim ('I want to promote my research'), but the best communicators switch their perspective to that of their specific audience. By putting yourself in the audience's shoes and asking 'what might others want to know about my research and why?', we can choose the appropriate language, format and context Some questions to ask are:

- Who are they?
- What do they already know?
- Why are they here in the audience, on this website, reading this?
- What do they need to know?

Not only do we use different language for different audiences, but we also may include a completely different level of detail and accuracy (for example, we might say '45m x 90m' instead of 'the size of a football pitch'). Words can also have different meanings in different contexts, so you may want to use 'scientific understanding' instead of 'theory', 'upward trend' instead of 'positive trend', 'increase' instead of 'enhance', and so on.

Before you start

Audience examples

Other researchers

Who are they? Other researchers in your field? Researchers in related areas?

What do they already know? Probably have a certain level of background knowledge and understanding of scientific terms and methods.

What do they need to know? That your approach is robust, the results are sound and that you have made a useful contribution to the field (otherwise, they won't cite the paper!).

Policymakers

Who are they? 'Policymaker' is a broad term, encompassing all people involved in formulating, developing or amending policy. It can include elected politicians, their advisors, civil servants, Chief Scientific Advisors, their staff and so on.

What do they already know? Varying levels of understanding, depending on the person, their position and their level of experience. Staff working for government agencies with a scientific or environmental remit tend to have more expert knowledge of the field and play a critical role in informing the development of policies. Some policymakers specialise in science policy and/or have a science background, but many do not.

Why are they here? Usually looking for/needing information on a specific issue.

Policymakers consider multiple factors when making decisions, such as public opinion, manifesto pledges, social and cultural issues, and financial considerations. Scientific evidence is just one consideration of many that affect policy.

What do they need to know?

Policymakers can quickly become familiar with complex issues and topics, even ones which they do not specialise in. They need clear, accurate and concise information — policy can move very quickly, so policymakers usually do not have time to consider lots of very detailed evidence. Focus on highlights, key takeaways, practical impacts, etc. They also need to know that *you* know what you're talking about and are confident in your assessment.

The media (e.g. a press release or interview)

Who are they? Journalists, broadcasters, sometimes bloggers – and through them, members of the public.

Before you start

What do they already know? They may have peripheral interest in science, but may have no prior knowledge of your topic.

What do they need to know? The personal relevance of the research and how it might affect their readers, viewers and listeners. The news media in particular need to understand the potential for public interest in the research.

Educators (pre-university students)

Who are they? Teachers, tutors, (university graduates, usually with specialist training educating, but often no experience with ecology – yes, even science teachers.)

Why are they here? Most of the time, educators are reading to stay one step ahead of their students. They may be reading for their own learning and also looking at resources from a pedagogical point of view, asking themselves, 'can my students get what they need from this resource if I recommend it? Do I understand it enough to explain it to them'?

What do they already know? Generally relatively little in-depth knowledge, but can have general knowledge acquired through personal education, nature documentaries or their students' own interests.

What do they need to know? Key messages and findings of the paper, which need to be very easily accessed from the start. If they can 'localise' the science (find an aspect their students can relate to their own environment or experience).

Other examples:

children, family, students (primary school, secondary school, undergrad and graduate), lecturers, educators (post-secondary education), interview panels ...

"Recently I've written pieces about the leaf preferences of leaf-cutter bees, a reduction in the delay in tree leaf-out with altitude, how birds judge the speed of approaching vehicles, and the role of light pollution in recent moth declines. Given that gardening is only one of many ways into the popular audience for ecological research, I'd say the best advice if you want to promote your work is to find your audience – which may be far from obvious." – Ken Thompson (Senior Editor, *Functional Ecology* and Author of *The Sceptical Gardener*)

Traditional vs social media

Despite their differences, traditional and social media do have a lot in common. Both like stories that are new or surprising, both like stories that seem relevant to their users and both like lots of pictures, video or audio. They can also often overlap and reinforce each other—stories that are big on social media are also often stories covered in the press.

But there are also significant differences in the processes of using traditional and social media.

Traditional media (newspapers, TV, radio, magazines, etc.)

- Professionals (such as press officers, science media centres and journalists) to help communicate your message.
- Doesn't need ongoing work to maintain, as usually focussed on a specific (published!) paper/report
- Can be the most effective way of reaching a broad audience
- Can help you reach a global audience
- Can tell a detailed, complicated story
- Can be aimed at the general public
- Can include specialist outlets (*The Conversation, New Scientist, Science & Vie, Farmers Weekly, Scientific American*). which can be interested in longer features

But...

- Usually means working with more formal processes such as press releases
- Can have very rigid timelines (you usually need to be available to journalists at a specific time)
- Journalists and editors work to tight, often inflexible deadlines
- Often only interested in especially novel, surprising and accessible research
- Journalists are interested in their story... which might not be the story you want to tell
- Limited personal control over the resulting coverage
- Often needs you to have a published (completed) 'newsworthy' piece of research first

Traditional vs social media

Social media (Twitter, Facebook, WeChat, Instagram, etc.)

- You can tell your own story
- Less formal than traditional media
- You can choose your target audience (sort of!)
- You choose the tools or methods (e.g. written posts, infographics, images, videos, podcast interviews)
- More accessible, so good for people at every career stage
- Not limited to newly published research – you can talk about ongoing or previous research
- You can interact with your audience
- Can reach a different audience to traditional media
- Can reach traditional media through social media

But...

- You need to build and maintain an audience outside of your immediate circle
    - It takes time to build an audience
    - Can feel awkward to promote yourself
    - Can take a lot of work and investment and ongoing effort
    - Lots of competition for attention
- Can feel too personal
- Not everyone is prepared (or able) to create materials or content
- Can be too easy to post (and then regret it later)
- Harder to maintain a natural barrier between your personal and professional self

Different countries and regions use different social media, or use existing platforms differently –look into the types of social media typically used in the region or country you wish to reach. It is important to get a sense for which platform might be best for your communication purposes and goals.

Traditional vs social media

"I think a lot of people put the cart before the horse—e.g. 'I should be doing scicomm on social media' rather than 'I have this specific scicomm goal, and social media would help me achieve it'. I also think that people incorrectly treat scicomm as though it's this unusual, unique thing, when in fact it is not fundamentally different from other forms of communication, including teaching and even marketing."
– Dr Caitlin Kight, author and academic developer

General tips

Although you communicate differently to different audiences (and through different media), there are some general guidelines that always apply:

Be direct: 'I investigated…' is better than 'an investigation was conducted…'

Be active: 'We measured each bee' is better than 'each bee was measured'

Keep it jargon-free: Don't use technical terms when plain language works just as well. 'Reproducing only once or repeatedly' is better than 'semelparous or iteroparous'. If you struggle with this, try the Up-Goer 5 Challenge of explaining your idea using only the 1,000 most common words in the English language (http://splasho.com/upgoer5/).

Be clear: 'It's important citizen scientists know how and why they're counting bees this way' is much better than 'the importance of understanding this methodology by non-scientists acting as data-gatherers can by no means be underestimated…'

Respect your audience: Don't assume they know what you know… but don't think that means they can't understand. This is true when talking to colleagues, and it is true when talking to everyone else

Be involved: Enthusiasm is contagious! 'Your story' is more interesting than 'a story'

Make it relevant: Why is this important? How does it affect that member of the audience personally, or other people?

Make it relatable: Give a frame of reference the audience can immediately comprehend ('the size of your thumbnail')

Working with the traditional media

Engaging with the media is one of the most effective ways to reach an audience of thousands, or even millions. Many people get most of their information about science from newspapers, news sites, TV and radio programmes, and trust those sources. Knowing how to get and use media coverage can be important for communicating your research to people outside the community.

Regularly talking to journalists is an excellent way of developing communication skills that can be applied to other areas of your work, from grant writing to public speaking. From a career perspective, media coverage can raise your academic profile (and that of your institution). Plus, there is a chance funding bodies or potential collaborators will approach you once they see your comments in the media.

What story do you have to tell?

- Are you about to publish some interesting or even unexpected findings?
- Have you reached a major milestone in your project?
- Is your fieldwork taking you to a remote location such as the Antarctic?
- Are you looking to recruit citizen scientists for your study?
- Are you using novel methods or technologies such as specialist cameras or apps to collect data?
- Have you received a large research grant or an important award?
- Are you organising a public event?

Journalists are likely to be interested in your work if the answer to one or more of these questions is 'yes'. Journalists are keen to know why your science matters and how it might affect their readers, listeners or viewers. Even if something is not of interest to national and international media, it might be worth contacting local outlets.

What are you an expert in?

Journalists are looking to speak to experts, especially on issues that regularly make the headlines and are complex and often misinterpreted. In ecology, these include climate change, biological invasions, conservation and human–wildlife conflicts. Expert comments add credibility to media reporting and can bring a story to life. They also ensure journalists cover stories accurately and fairly. You may not consider yourself the best expert on a topic, but to the general public, working in a certain area and being familiar with the scientific context makes you an expert. The more contested the science, the more important it is for the public to hear from the most

qualified experts. When speaking to a journalist, you should assume they know nothing about your area of research. Their job is to get answers out of you that their audience will find interesting. The public is fascinated by nature and curious about the world we live in. Tell them what your job entails and about the possible implications of your work for society.

Working with your press office

Universities, research institutions, journals, learned societies and funding bodies typically have press offices (or media offices) who can support you in telling your story. Promoting the work of their institution – which includes your research – is a major part of their job. Press offices have expertise in working with the media. They know what makes a story newsworthy and can help you identify the right audience and channels to communicate your research through. They can prepare a press release, organise a media briefing and may even offer training if you are new to media work or are working on a controversial topic.

Press offices, like everyone else, have limited time and resources and select stories that will likely attract media attention. They will consider multiple aspects of the research, including human interest, geographical proximity (of the study location, for example) and timeliness (research about droughts is more relevant in summer; reindeers may get more attention around Christmas).

When you have something to talk about...

The sooner you can alert your press office, the better—for research papers, this should be as soon as your paper has been accepted by a journal. This gives the press office time to prepare press releases, possible multimedia content (audio clips, infographics and short videos) and coordinate embargoes with the journal (fixing a date for the paper to be published).

It is important to let your press office know if you are not available to speak to journalists immediately before or after your paper is published. You may suggest someone else – one of your co-authors, for example – to act as a spokesperson in your absence.

Press offices like to work together. Let your press office know what other institutions were involved in your research so they can coordinate communications activities. And do not forget to mention your funders!

Working with the traditional media

Visualising a story

Make sure to tell your press office if you have taken photos or videos during fieldwork or lab experiments. These make a topic more interesting and usually easier to understand. Supplying these to journalists increases the odds of your story ending up in the news.

Press releases

One of the main tools that press offices use to communicate with journalists is a press release. Understanding how press releases work can help you to pitch your research to a press office (highlighting the aspects of your work that will be appealing to them).

Working with the traditional media

A press release acts like a teaser to attract attention and encourage journalists to cover a story. It reads like a brief news story, with key information at the top and additional details and background information further down. Press releases are generally written by press officers, who confirm details with the researchers.

Sometimes, press offices will post a news item on their organisational website and promote it via social media, but they may also:

- Email the press release to journalists they have a good relationship with, who they think may be interested in the story (making use of their own experience and professional networks).
- Post press releases through newswires (press release distribution services) such as EurekaAlert and AlphaGalileo, which both specialise in science news. Journalists register with these services to get access to information before it is publicly released.
- Work with the researcher to give them 'media training' in preparation for talking to the press.

Some smaller publications and news sites may publish the release in its original form, but most journalists will try to find their own story angle. Press releases aimed at national or international media will likely be more 'lay friendly' than those targeted at specialist science journalists. If the story has a strong local angle, they might consider a dedicated press release for regional outlets.

What makes a good press release?

Hundreds of press releases are issued each day and most of them are ignored - it is essential you highlight what your story is about and why it is relevant to your target media's audience.

Avoid jargon, acronyms and measurements that the public may not understand; if you are using scientific terms or statistics, make sure to explain and put them into a relatable context.

Working with the traditional media

The key elements of a press release are:

1. Embargo: When issuing a formal press release, journals and institutional press offices usually set embargoes, which mean journalists can't publish a story until a certain date and time – that is, when a paper is published online or a study is presented at a conference. This gives journalists a few days to read the full study, contact the scientists with follow-up questions and seek reactions from independent experts in the field. An embargo of 00.01 a.m. works well for breakfast shows and print editions of newspapers; it makes it easier for these outlets to be first to report the story, increasing the chances of them covering it. If your paper has already been published, press offices can no longer set an embargo and many (but not all) journalists will no longer be interested in covering it. It is important to flag to the journal if you are planning a press release so that they can time the paper's online publication accordingly.

2. Headline: This sums up the story in one line and serves to catch the eye of the journalist. **Avoid puns and wordplay** - journalists often just skim the headline to judge whether it is newsworthy and relevant to them. They will have seen hundreds of 'Size matters' or 'Winter is coming' titles – punny headlines do not tell them anything about the research and often do not make sense out of context.

3. Introduction: The opening paragraph is crucial and needs to get the '5 Ws' – the full gist – of your story across.

- Who was involved in the research?
- What have you done or found?
- Where did you do it (where you are, where the research happened, where the paper is published)?
- When did it take place? This may mean when a new paper is published or when the research happened. Timeliness is important to journalists - the news media like new stuff
- Why is it important? Why should the reader care and who will benefit from the research?

4. Context: Use the second and third paragraphs to expand on your story and give more details about the study with key facts and figures. These can underpin the importance and relevance of your scientific findings. You should also explain how the research was carried out. The use of innovative or surprising methods

and technologies can provide an interesting story angle, especially when citizen scientists have been involved.

5. Quotes: Comments from one or two authors add credibility and bring a story to life. They need to be short, punchy statements in plain, but engaging language. It is also worth including a view from someone external, for example, one of your project collaborators.

6. Notes to Editors: This section provides background information for journalists such as a link to the research paper and information about available multimedia content and a link to the report or the paper's DOI. It should also include contact details for queries – usually for your organisation's press office, which can protect you from a barrage of calls and prioritise interview requests on your behalf. It should also include a standard '**Boilerplate**', an 'about us' paragraph that explains your organisation or project.

Working with the traditional media

Sample press release

Under embargo until 3 July 2018, 00:01 GMT 1.

TV coverage of cycling races helps document the effects of climate change 2.

Analysing nearly four decades of archive footage from the Tour of Flanders, researchers from Ghent University have been able to detect climate change impacts on trees. Their findings were published today in the journal Methods in Ecology and Evolution. **3.**

Focusing on trees and shrubs growing around recognisable climbs and other 'landmarks' along the route of this major annual road cycling race in Belgium, the team looked at video footage from 1981 to 2016 obtained by Flemish broadcaster VRT. They visually estimated how many leaves and flowers were present on the day of the course (usually in early April) and linked their scores to climate data. **4.**

The ecologists found that the trees had advanced the timing of leafing and flowering in response to recent temperature changes. Before 1990, almost no trees had grown leaves at the time of the spring race. After that year, more and more trees visible in the television footage – in particular magnolia, hawthorn, hornbeam and birch trees – were already in full leaf.

'Early-leafing trees can be good news for some species as they grow faster and produce more wood', says Prof. Pieter De Frenne from Ghent University, lead author of this study. 'However, their leaves also cast shadows. When trees flush earlier in the year, they shadow for a longer period, affecting other animals and plants, and even whole ecosystems.' **5.**

Notes to Editors

Pieter De Frenne, et al (2018) 'Using archived television video footage to quantify phenology responses to climate change' is published in the journal *Methods in Ecology and Evolution* on 3 July 2018 and will be available here.

For more information and/or to request high-resolution images, please contact:

British Ecological Society, Press Office
Email: press@britishecologicalsociety.org, Tel: +44 207 685 2523
www.britishecologicalsociety.org
Twitter: @BritishEcolSoc **6.**

Working with the traditional media

Getting your message across
Even if your institution is not planning a press release, drafting a press release for yourself is a good way to think about your key messages that can be used when talking to other external parties, such as policymakers, educators or members of the public. Although it is not a formal press release, it is a useful way of structuring a research announcement on your own blog or website.

As a researcher, you do generally have some control over what the press release says, but you do not have control over any news stories that result from it.

Once a press release is issued
You may now be contacted by journalists wishing to speak to you. They may be looking for more information about your work or clarification on a particular point. Journalists will likely ask about the implications of your findings for policy or the public; be prepared for them to ask for a personal opinion.

If you receive an unscheduled call from a journalist, feel free to take their contact details and arrange a time to call them back, even just a few minutes later. This will allow you to collect your thoughts and prepare a couple of key points to get across. Make sure to ask what publication they represent and what they want to discuss.

'[Journalists] Will want a response ASAP – I find stories quickly move on, and next day is often too late.' – Dr Jane Hill, BES Chair of Publications Committee

Broadcast interviews
If a journalist approaches you for a radio or TV interview, tell your press office straight away. They can help you prepare and rehearse key messages and advise you on the types of questions that will likely to come up during the interview. Press officers also need to know about interview requests so they can coordinate any other relevant media activities.

Radio interviews will be either live or pre-recorded. You will usually be asked to go into a studio or call in using your organisation's dedicated ISDN line, which broadcasts more clearly than a regular phone. If the interview is live, you can ask what the questions (or at least, the first one) will be.

Top tip: Smile before you speak. It will lift the tone of your voice and make you sound more engaging.

Working with the traditional media

Camera crews may ask to film in your lab or field site, and may want to pre-record footage a day or two before your research is published. Set some time aside for filming. It can take a couple of hours to film a piece that will only be a couple of minutes long. Although time consuming, TV news reaches massive audiences and can have a big impact; it can really be worthwhile.

Whether you are targeting broadcasters, print or online journalists, remember your audience—you are talking to the public, not your peers. Your language should reflect who you are talking to and use terms that will be familiar to them (for example, use common names rather than Latin species names).

"The best tip I got as a scientist doing media interviews was: don't be afraid to ask for the questions in advance. They won't always give them to you, but it really helps you do a good interview if they will."
- Dani Rabaiotti, author of *Does It Fart?: The Definitive Field Guide to Animal Flatulence*

Working with the traditional media

When working with journalists, remember...
The job of a journalist is to tell a story to their audience. What is important to them, may not be important to you.

It is impossible to predict how much media attention a story will garner. Media have only a limited amount of space or airtime to fill and get inundated with press releases every day. Even if you have spoken to a journalist, there is no guarantee your story will appear. Some journalists write four or five stories every day, of which only one or two may be published. Radio or TV interviews may be pre-recorded and then cut; live interviews can be cancelled at the last minute.

When articles are shortened due to lack of space, editors cut from the bottom up. Sometimes just the first sentence will be published, so reporters will always try to convey the essential information at the start: who did what, when, where and why.

You like the published article but the headline makes you cringe? Remember, the headline will be the work of a subeditor, not the journalist, and is there to grab the reader's attention.

Because of time constraints and to maintain editorial independence, **journalists are not required to share their finished article with you before publication**. They may show you direct quotes for fact checking, but even this is not guaranteed.

Working with social media

Using social media can be a good way to build your own audience (see Traditional vs social media.) It can be a platform for your voice and a way to connect with others.

The 'social' part of social media is important— a lot of it is about making people feel personally connected. It is usually less formal than traditional media or journals and is (almost by definition), interactive. With social media (for better and for worse), there is less distance between you and the person you are talking to.

General advice for social media

- How much you share depends on both your personal preferences and goals for communicating your research. **You do not have to share everything about yourself or your work**.
- The content you create should reflect you, who are you are trying to reach and why you want to talk to (or with) them.
- Work out what you want from your social media presence. Why are you communicating your research, what is your niche, who do you want to reach and what do you want to achieve by communicating your work? Answering these questions can help you to begin to build your goals and strategy for different social media platforms.
- Learn from others. This is especially true if you feel overwhelmed when starting to build your profile. Looking at what others are doing that you find interesting and of value can help you decide what you want to want to do with your platform.
- Don't be afraid to try different things – while many people communicate science there is no one silver bullet and different approaches are needed to reach and engage diverse audiences.
- **You don't owe everyone a response (and you don't have to have the fight they want you to have)**. People only have so much time and energy and you do not have to reply or respond to every comment—for example, you do not have to debate climate change every time someone brings it up (unless you want to). That doesn't mean you don't have a response—it just means you know it is not worth the time for you.

Your research and career will change over time, so it is important to recognise when that happens and decide if you need to revise your communication goals as well.

Working with social media

Blocking/banning is not censorship

Social media usually has tools to let you block, ban or mute other accounts, preventing them from commenting on your posts, following your account, seeing your posts, etc. You can use those tools as much as you feel you need to, to make your own platform a place you feel comfortable in. People can have all the opinions they want, but you are not obligated to sit there and let them yell them at you.

You can also make your accounts private or with limited access (only pre-approved people can see your posts). If you have a blog or website, you can choose not to have comments. There is a trade-off as it can mean 'good' commenters can't reach you either.

"My advice would simply be if someone seems disingenuous or you don't want to deal with them, it is ok to block them. If you think that might make things worse, then mute them – that way they can't tell that they are 'blocked', but you also can't see anything they are saying. Don't feel bad about doing so – you don't owe anyone your time."
– Dani Rabaiotti

Effective communication on social media

There are things you can include in your tweets and posts that increase engagement.

- Visuals (photos, art of all forms, GIFs, short videos, infographics or emoticons).
- Hashtags - these can make your post part of a public conversation (eg. #FieldworkFail, #ActualLivingScientist, #BES2018) and put it in front of people outside of your network. Hashtags relevant to your research or work can also help others find you and follow what you are doing. Using unique hashtags is particularly helpful in this regard.
- Humour – it isn't always possible (or appropriate) to be funny, but if you can use humour, it really helps.
- Respond to engagement , for example by liking replies and replying to comments.

Working with social media

Beyond your own social media platform

- Journals, research institutions and funders can have their own social media presence. Have your materials reach others by tagging relevant groups, but do not expect everyone to share or 'like' your posts, and do not over-burden others with your content.
- You can also tag individuals you think will find your work interesting. But as above, limit tagging and recognise that others will not always share what you share – they are not obliged to.
- If you are presenting, put your Twitter handle on your slides – this can help others share your work for you, make it easier for you to find (and retweet) their tweets and can help grow your following.
- If you do not have enough time to commit to your account as you had hoped, or you want to revive or boost your following, consider hosting on a rotational Twitter account like @biotweeps or @realscientists. These accounts can be particularly useful if you are not sure about committing to science communication, or when you want to reach a larger audience than just your own with a particular topic (Biotweeps has >16,000 followers on Twitter, Real Scientists has >67,000 followers).

Infographics and graphical abstracts

An infographic is a visual representation of information, data or knowledge, intended to present information quickly and clearly. It can range from a simple bar graph to complicated, interactive illustrations with many details to navigate.

A graphical abstract is a kind of targeted infographic that showcases the main message from your article and gives an immediate understanding of the key points of your paper. It is an abstract, rather than the whole paper.

Infographics and graphical abstracts should:

- Tell the key points at a glance
- Not be misleading or confusing
- Be credible

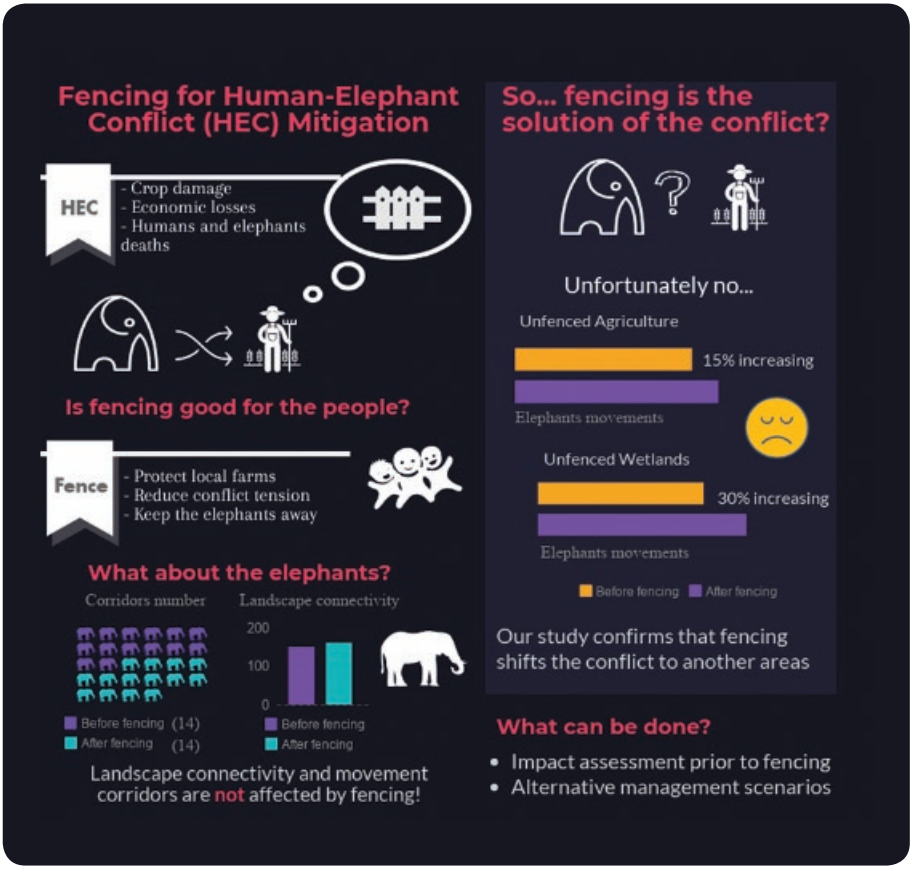
What this means for you:

- Know what it is you want people to know. Figure out one or two key points you want to get across and make sure they are prominent.

Working with social media

- Clearly label any graphs
- Cite yourself! Link to your paper and make sure your paper is referenced in the actual graphic

You can also do a mini-poster (a short, figure-heavy version of something you'd present at a poster session). A graphical abstract is often recyclable—it can be from your paper, used in presentations, on posters, etc.



Osipova et al 2018. Fencing solves human wildlife conflict locally but shifts problems elsewhere: A case study using functional connectivity modelling of the African elephant. J Appl Ecol. https://doi.org/10.1111/1365-2664.13246

Blogs and podcasts

Blogs and podcasts are similar in a number of ways and can fall somewhere between traditional and social media.

Some blogs have professional staff, including editors and writers, but most are written by people in their spare time, with no additional support. Podcasts can also be recorded in studios and edited by professional sound engineers, but many are recorded on a phone or over Skype and edited using basic (often free) software.

Blogs and podcasts can be used to focus on a theme and do not necessarily have to be only about recent or exciting research. This can include topics that people do not think or hear much about on a daily basis.

In addition:

- They are freely available online
- They tend to have a very distinct voice in terms of how and what they talk to their audience about
- They can have a range of styles (formal to very casual)
- They can be interested in broad or very specific topics
- They can reach an international audience (especially if in a commonly spoken language)
- Anyone can set up their own blog or podcast using freely available resources
- They can be subscribed to, making it easier to develop ongoing features

Starting your own blog or podcast

Starting your own blog or podcast means you have control over it—it can be about whatever you like and you can fit into your schedule. It can give you valuable experience in communicating your research, and also give you a place to discuss aspects of your work that do not fit into a paper. You have a very flexible and adaptable platform to use to promote your research and your professional self, which lets you inject more of a personal touch into communicating your research, collaborations and skills. You can be creative with it. For example, on your blog and personal website, you can expand your use of images and videos to capture key points you want people to take away from your page. They can also provide an outlet to show your professional connections (for example, people you have collaborated with or involvement with a society) and any related service you are involved in, such as editorial roles, teaching, mentoring or community programmes.

Blogs and podcasts

If your goal is to foster a community around a research topic or public issue, then you can use your blog to start discussions and get feedback from the community.

You can share any amusing or interesting anecdotes. Be conversational and add personal elements readers can relate to. You can also discuss blog content and receive feedback from others through social media. Running a blog or podcast can also give you a space to start a two-way dialogue with others about your work.

Tips for starting your blog or podcast

- It should have a catchy, clear and simple title and description that tells others who you are and what you are writing or talking about (at least broadly).
- If you have a blog or website, make sure it has a Welcome or About Me page that shows people who you are and what you do.
- If you have a podcast, your summary/profile should be very short and include your podcast name, an image or logo for your podcast, a few key words or tags, the language you present in and a short (3-5 sentence) description of the cast and the topics you cover.
- The logo or image of your blog or podcast tells potential followers who you are and what you do. It should be eye-catching, but also simple and distinct – something people can identify when it is a centimetre wide on their phone screen.
- If you have comments enabled, have a clear standard for what you will and will not tolerate and for your responses to people who break those standards. There is no one-size fits all policy, so it is important to find a way that works for you.

Keeping it going

Starting a blog or podcast is often easier than maintaining one – you can start a blog because you want to write something but, to keep it going, you need to keep coming up with something to write or talk about. Successful blogs and podcasts need regular updates – if they're not updated regularly, people will lose interest. For this reason, a lot of blogs have multiple contributors or regular categories and recurring features (for example, Q&As with authors).

Blogs and podcasts

You can also plan ahead, making sure posts are scheduled to allow them to appear regularly, rather than all at once. You are likely to get a lot of content coming through in batches (for example, several interviews from one conference). You can spread them out over weeks and keep a few posts or episodes in reserve, to run when you are too busy to upload content.

Guesting

If you are interested in starting a blog or podcast, but are not sure about the commitment, consider writing to the organisers of a channel you like and asking if they would like a contribution – many of them will be actively looking for contributors.

If you write a guest post (either a one-off or as a regular contributor) or appear on someone else's podcast, they will probably do all the logistical work (editing, recording, distributing, publishing) for you. You will also have access to their audience, rather than having to develop your own.

The hosts will know their audience and know what they want from you, and should also be able to give you guidance on your own contribution (recording or writing tips). They will often have set guidelines or a structure for your contribution, and will probably ask you to talk about a specific topic (your latest paper, for example).

Blogs and podcasts

Technical tips for writing a blog post

- Learn from others: read other blogs, get a sense for what you like, what seems to work for others and use what you learn to help you craft your blog post.
- Have a catchy title to draw the reader in (more like a headline than a paper title).
- Try to write short paragraphs and sentences that are easy to read on mobile devices.
- Split sections with subheadings. These can be picked up by search engines and are useful for Search Engine Optimisation (SEO), making sure your content comes up when people search for that topic.
- Lots to say? Think about splitting it into more than one post.
- Include pictures or videos—posts with images or videos tend to get more traffic.
- Consider including an infographic to summarise complex or hard to explain topics.
- Remember the blog's audience and write for them – especially if you are writing a guest post.
- Hyperlink to related content, rather than providing a reference list. This is easier for readers.
- Repeat important keywords, phrases and messages to emphasise the main points, but not to excess—if it sounds forced to you, it will sound forced to the reader.
- Add quotes from your co-authors or other people you have spoken to about the subject.
- Share any amusing or interesting anecdotes. Be conversational and add personal elements readers can relate to. What went particularly well? Were there any challenges that you had to overcome?

Still having trouble getting started?

Ask someone in your lab to interview you and write down your answers or talk to a non-scientist friend about your research - imagine that you're explaining the research to them while writing the post.

Blogs and podcasts

Tricks and tips for recording and interviewing for a podcast :
Interviews work better the first time round and recorded in one take, so it is important to make that first go count.

- Make sure you are somewhere you won't be interrupted. If you think someone might knock on the door, put a 'do not disturb' sign up.
- Try to find somewhere reasonably quiet. People can 'tune out' unimportant sounds - audio recorders can't (for example, people often do not hear how noisy air conditioning is until it is turned off).
- The microphone/recorder should usually be about a handspan away from your mouth for the most natural sound (this is especially important if you are recording anywhere noisy). If necessary, you can stack some books on a table as a mic rest to raise it close to your head.
- If you are recording over the internet (on Skype, for example), make sure your connection is good and if necessary, turn off video to save bandwidth and keep the audio quality high. Use headphones to prevent feedback.
- If you have the chance to do a podcast in person, take it—most interviews work better in person.
- Have a cup of water handy in case you need it.
- You may find it helpful to jot down a few notes ahead of time, but try not to rehearse too much.
- If you have any audio recordings from your research, try to have those to hand. It is easy for listeners to be distracted, so anything novel that can get their attention back to the podcast is useful—it doesn't have to be strident, just different.

Don't worry if you stumble over your words or misspeak occasionally—podcasts are more of a casual conversation than a formal interview, so the odd mistake can make them sound more natural.

"All I would say is - from the point of view of the person asking the questions - you just need to be curious, and never forget that your listeners aren't necessarily all ecologists. And even if they are, we're all so specialised these days that it's safest to assume they know nothing, which means there is no such thing as a question that's too dumb." – Ken Thompson

Promote and prepare before you publish

Start thinking about promoting your research–and yourself–well before your paper is published. If you only think about it when your paper is accepted (or published), it can make many of the ways you promote your research less effective, and rule out some options entirely. Some methods (such as press releases) will have hard deadlines to stick to and have to be finalised before a paper is published, so it is important to keep such timelines in mind.

Social media doesn't work as an afterthought. It may not have the same hard deadlines as working with traditional media, but to use it effectively, it is important to start well before your paper is published. Effective social media can be a long game, but with broad returns in terms of starting and maintaining a dialogue about your research and associated topics with diverse groups. Although more flexible (and fast-paced) than 'traditional media', social media also works better if you are prepared.

In all cases, there are a lot of things you can do to get ready while you're still working on your research:

Construct your profile

Having an online profile is pretty much unavoidable these days. If you are a part of a research or academic institution you will automatically have a 'profile page'. It can be as basic as a static single webpage (often these are provided by the university or other work place) showing an image of you, the department where you work, your education background and research interests in a single paragraph or a few bullet points, along with a list of your publications and link to other websites related to your work. The content is not likely to be updated regularly. You are also likely to be limited in what you can include there, and that is especially true if you are forming projects and research teams beyond your department.

Promote and prepare before you publish

Your wider online profile can include your 'official' profile page, but it will also include any social media accounts, personal webpages, blogs and even a podcast profiles. There are a few specific considerations to take into account when it comes to social media profiles. Whatever the platform, your professional/public profile on social media should include:

- **A username/handle that represents you** – This can be your personal name or something about your research that people can easily identify and attribute to you. Keep it simple, make it catchy or original, and do not be afraid to be creative.
- **Use image options to try to capture who you are and what you communicate about** – you can use software to create a photo collage or combine multiple photos to maximise the content you can capture in imagery (for example, your study site or species, specific skills, your communication focus or things you have published or are well known for). Make it eye-catching.
- **Your description of who you are and what you do** – this should be short, but also catchy and aimed at the audiences you want to reach. Include keywords that grab people's attention and hashtags to appear at the top of people's searches.
- **Optional extras** – links to your website, blog, podcast, etc., especially if these include 'news' from your research team, a recent paper or finding, or another timely message you think others should know about.

Overall, you need to make sure that when people search your name, what comes up gives the information – and the impression – you want them to have.

Make your own media pack

People notice pictures and videos, and that includes journalists. Having pictures, audio or video to offer can make your research more appealing to traditional media outlets, and will also help get attention on social media. Take pictures and record audio or video as you go if possible. If your pictures or video contain people, make sure you have the right to use their image.

Practise writing about what you work on and topics that interest you so you have the key points prepped.

Promote and prepare before you publish

Talk about what you (and others) are doing

You can start promoting your research while you are still doing it—or even earlier.

- Blog about your fieldwork adventures.
- Tweet about your topic more broadly (e.g. if you work on primitive fishes, share images of the fishes, share research findings from other people that relate to your topic).
- Create a bespoke Twitter hashtag for your research. This can help you to both share information related to work and increase the chances of others finding your research and interesting stories that you share (e.g. #wilddogfact).
- Share photos (Instagram, Flickr...) and use them to tell stories about the species or process that you research. People connect with imagery, and others are likely to share images or stories with you too.
- Make notes as you go to help make sure you do not forget about any nice little details when you are talking about your project later.

Many professional societies, established blogs or Twitter accounts (for example, Real Scientists), and even popular science magazines like *National Geographic* or *Scientific American*, want to share your stories, and some specifically look for reports from the field. This can be through different written forms, imagery, and even art. The more you share about your research, the more likely it is others will find your work and help you promote it.

Acknowledgements

This guide was written by Jennifer Meyer, Senior Assistant Editor for Functional Ecology, with sections from Stephanie R Januchowski-Hartley (Ser Cymru Rising Star Fellow, Swansea University), Dani Rabaiotti and Sabrina Weiss (Press Officer for the BES). We would like to thank the following for their contributions and feedback whilst creating this guide: Emilie Aimé, Andrea Baier, Lewis Bartlett, Chris Grieves, Kate Harrison, Chris Jeffs, Caitlin Kigh, Kirsty Lucas, Pierre Mariotte and Ken Thompson. In particular, the BES would like to thank Steph Januchowski-Hartley and Dani Rabaiotti, who contributed heavily throughout the process.

Photography:


Cover: Leejiah Dorward


p2: Jesamine Bartlett,


p5: Adam Rees


p8: Nilanjan Chatterjee


p12: Irene Steves Negev


p15: Nick Harvey


p18: Tim Kasoar


p21: Leejiah Dorward


p22: Mark Tatchell


p24: Alex Slavenko


p29: Christopher Beirne


p30: Zoe Davies


p33: Sanne Govaert


p36: Roberto García Roa

JOIN OUR COMMUNITY

Our vision is for a world inspired, informed and influenced by ecology. Membership is open to anyone, anywhere. Speak to us about how you can be involved.

hello@britishecologicalsociety.org
@BritishEcolSoc

MEMBERSHIP

- Member-only grants:

  Large Research grants – £20,000
  Small Research grants – £5,000
  Training and Travel – £1,000
  Outreach – £2,000
  Ecologists in Africa – £8,000

- Free access to ALL our journal content on the Wiley Online Library
- 25% discount on open access fees when publishing as first or corresponding author in our journals
- 10% discount when publishing in Ecology and Evolution
- Mentoring opportunities
- Preferential registration rates to all our events
- Ability to network with a global community of ecologists
- Personal development – join a committee or Special Interest Group, take part in a policy initiative or education consultation, propose a symposium or thematic topic
- The Niche, our quarterly print magazine sent to all members and for everyone interested in ecology
- Your monthly eBulletin packed with topical news, deadlines and opportunities to get involved

How to join

Membership only costs £21 per annum for students, retired members and those from low to lower-middle income countries. Prices for ordinary members start from £42 per annum.

Students:
UK Student Membership is free for one year, for anyone studying an ecology or ecology-related Undergraduate or Master's degree or if they are in the first year of their PhD. You must be registered to a UK bank account.

britishecologicalsociety.org/join-us

PUBLICATIONS

Proud to partner with Ecology and Evolution Open Access

Journal of Ecology

journalofecology.org
@jecology

High-impact, broad reaching articles on all aspects of plant ecology (including algae), in both aquatic and terrestrial ecosystems.

Functional Ecology

functionalecology.org
@funecology

High-impact papers that enable a mechanistic understanding of ecological pattern and process from the organismic to the ecosystem scale.

Journal of Applied Ecology

journalofappliedecology.org
@jappliedecol

Novel, high-impact papers on the interface between ecological science and the management of biological resources.

Journal of Animal Ecology

journalofanimalecology.org
@animalecology

Publishing the best animal ecology research that develops, tests and advances broad ecological principles.

Methods in Ecology and Evolution

methodsinecologyandevolution.org
@methodsecolevol

Promotes the development of new methods and facilitates their dissemination and uptake by the research community.

People and Nature

people-and-nature.org
@PaN_BES

A broad-scope open access journal publishing work from across research areas exploring relationships between humans and nature. **Now open for submissions!**

Guides to Better Science

bit.ly/GuidesToBetterScience

Promoting research excellence across a range of topics including peer review, data management, reproducible code and getting published. These free guides contain practical tips for researchers all over the world.

Ecological Reviews

bit.ly/EcologicalReviews

Books at the cutting edge of modern ecology, providing a forum for current topics that are likely to be of long-term importance to the progress of the field.