Engaging the public with your research
This leaflet will give you some ideas for getting your research out there.

Whatever opportunities come your way, whether it’s a request for a written piece of information or a call to do a radio interview in an hour’s time, you’ll find advice in this leaflet about how to make the most of it and get your point across effectively.

Remember to contact the NERC communications team early on to discuss any aspect of your public engagement plans. We’re here to help shape your ideas and can point you towards sources of funding, training and further information.
What’s public engagement?

Telling the public about your research typically used to be a one-way process called science communication. The idea was to educate people about science. But as the field has developed, communicators have realised that science communication isn’t necessarily just about telling; it can also be two-way and include listening, debating and interacting. Today, communicating your research to a general audience embraces a wide spectrum of activities, broadly known as public engagement.

Some of these activities, like radio interviews and magazine features, tend to come at the end of a piece of research. Others, like interactive events and activities, can take place at any time – even at a stage when people’s questions and opinions could influence your approach to your work, and perhaps even improve it.

Some will be things you have planned and are running yourself, others will be opportunities that come out of the blue.

How you engage with the public will depend on the nature of your research and your personal style. But any activities you take part in should help people learn about, consider, question and debate scientific issues, inspire people and help them understand the benefits that science brings to society.

As a publicly-funded researcher, you are expected to engage the public with your work. But don’t see it as a hoop you have to jump through: engagement can be a highly productive and enjoyable part of every research project – as a generation of environmental scientists has already discovered.
ENGAGING THE PUBLIC WITH YOUR RESEARCH

What’s in it for you?

Public engagement can raise your personal profile as well as your institution’s.

Developing your communication skills will give you an advantage in almost every aspect of your work. You’ll be able to write more compelling funding applications and reach potential new research partners. It can even open up new career directions.

Seeing the public’s reaction to your work, and answering their often unexpected questions, can lead to new perspectives on your research, reinvigorate your own interest in what you’re doing and boost your job satisfaction.

Engaging the public can enhance your research by raising questions you might not have considered before, and increase its impact by showing you the best ways to communicate your results.

And if you work with schools, you could be inspiring the next generation of researchers by encouraging more young people to choose environmental science as a course of study and as a career.
Activities and events

Along with the other research councils, NERC expects its researchers to engage actively with the public at both the local and national levels about their research and its broader implications. Within this obligation, there is lots of flexibility around what form the public engagement takes.

NERC takes a strategic approach to public engagement and all funding applications must now include a ‘Pathways to Impact’ plan. This is where you identify all the potential beneficiaries of your proposed research, explain how they will benefit and how you are going to reach them.

When you plan your public engagement it will help if you ask yourself some basic questions:

- What do you want to achieve from your public engagement?
- Identify your audience – who do you want to engage with?
- What activities are going to work best with that audience?
- What activities are most appropriate for your particular research?
- What will you feel comfortable doing? (It’s probably wise to avoid things that will push you too far out of your comfort zone.)

At the planning stage you should also find out what resources already exist to avoid duplication or wasted effort. If the type of activity you are planning is already running elsewhere you might be able to piggyback on that, or call on existing expertise.
Deciding what to do

If you are new to public engagement you might want to begin with something less interactive, like writing a blog, and get involved in more hands-on activities at a later date. You might also want to take part in one of the many existing public engagement schemes rather than designing your own activity: examples of these are given in the ‘What next?’ section of this leaflet.

If you want to design your own activity, there are a number of tried-and-tested routes to public engagement:

- Working with schools/teachers/young people
- Public lectures/events/debates
- Café scientifique
- Festivals and exhibitions
- Theatre/performance
- Co-produced research
- Public dialogue
- Media work
- Workshops
- Competitions
- Demonstrations
- Open days
- Social networking
- Videos/podcasts
- Consultation
- Attitude study

When you are planning what to do, bear in mind that these have varying levels of interactivity and some are much more time-consuming than others.

Some research translates really well into hands-on engagement activities – but for others it might not work so well (or even be safe). It might be appropriate for the public to collect data for some research projects, but in other circumstances it might not be ethical or even legal to work with the public like this.

If your public engagement plans involve working with young or vulnerable people you may need to have a DBS (Disclosure and Barring Service) check carried out. You should also check that your organisation’s insurance covers you and the activities you are planning.

Once you know what you’re going to do, you need to decide who will help you. Some things you will be able to do entirely by yourself, but for others you may need the help of other researchers and support staff. You may need practical help or advice from communicators, web developers, curriculum experts, event managers or exhibition designers. Take the time to explain your ideas and aims to them, and to explore different options.
Funding
Costs will vary depending on what you’re doing, and some activities may cost more in time than money. Remember you will need to pay for any support staff time, as well as your own, and for any external professional services. One source of funding is through ‘Pathways to Impact’ when you apply for a NERC award. The communications team will be able to suggest other sources appropriate to your needs, so get in touch at an early stage.

Training
Some of the existing public engagement schemes (listed in the ‘What next?’ section) include training, but it may be worth considering some bespoke training, particularly if you’ll be making media appearances. NERC’s ‘Engaging the Public with your Research’ course may be sufficient for your needs, but if you feel you need more support, get in touch with the NERC communications team, or check our web pages for up-to-date information and links.

Top tips
- Identify why you want to engage, who your audience is and what the best activities are.
- Find out what other people have done and what did and didn’t work.
- Ask for help when you need it.
- Make your activities as interactive as possible.
- Genuine enthusiasm is infectious, and a powerful way to communicate your work.
- Make sure you reap the benefits from doing public engagement – it’s not just good for your audience.
- Even if it's not immediately obvious what the wider 'impact' of your work is, public engagement is a great way to find out.
Working with the media

What do we mean by the media?
The media is the collective term for newspapers, magazines, radio, television and, increasingly, websites. Like any other business, media organisations have to make a profit by selling their products, or justify their funding by achieving high ratings.

And clearly they’re very good at it, because millions of us buy newspapers and watch television every day. Most people find out about science through the media.

This means the media carries a lot of clout – its stories can shape public opinion and influence policy.

Genetically-modified organisms, MMR and Climategate are good examples of health and science controversies in which the media played a central role in shaping public opinion. And when it comes to medical and science stories, media reporting can save or ruin lives.

Journalists and scientists both have a responsibility to make sure research is communicated accurately. So if you get your message across clearly to a journalist, you stand a much better chance of seeing an accurate article.

And there’s no doubt it’s a quick and effective way of reaching millions of people.

What’s news?
News can be simply defined as something that’s new and likely to affect lots of people, or something that’s surprising: ‘man bites dog’ is a classic example. But what’s newsworthy today can change tomorrow, depending on what else is happening in the world.

Winning funding might be great news for you and your university, but it won’t mean much to the general public – the national media is much more interested in research findings and what they mean for our everyday lives. There are exceptions – for example, if you have been awarded a large sum of money to research a high-profile problem or you’re providing an urgent response to a topical issue.

But, in general, it’s stories about potentially life-changing new developments that make the national and international news.
How the media works

Competition in the media means that headlines, and sometimes opening paragraphs, can be inclined to highlight any ‘sensational’ aspects of a story. A lurid headline can be really annoying; but remember, it’s there to grab the reader’s attention and it will be the work of a sub-editor, not the journalist. Remember that your news will be competing for space. If a major international incident happens don’t be surprised if your story gets cut. News editing always happens from the bottom up, to fit available space – sometimes just the first sentence will make it in.

For this reason, journalists always try to get the key points of a story across at the start: what happened, why it is important and who did it. This is as true of broadcast media as it is of the written press. Any other detail can fall by the wayside, but with this information the story still gets told.
The role of the media office

What’s it for?
Your own institution’s and your funding body’s media office (also known as the press office) should always be your first points of contact if you are about to publish a paper or if you’re approached by the media.

The media officer’s job is to identify the audience for your story and find the best way to reach them through the media. Your job is to explain your research to the media officer in straightforward language – just as you would if you were speaking to a journalist yourself.

The media officer will write a professional media release for any newsworthy research, and send it to the UK’s top science journalists. They can set up phone, radio and TV interviews, if appropriate, and advise you on how best to approach them. They will also coordinate promotional activities to make sure you get the most out of any media opportunities that come your way.

Tell the media office about any great photographs or video taken during the course of your work, or if you are about to do some fieldwork in an exotic or relatively unexplored location.

You must tell NERC’s science writers if you’re about to have a paper published too – at the accepted stage is perfect. As well as having media expertise they will know what will work well on NERC’s science news website, Planet Earth Online, which has daily news stories, features, audio/video diaries, blogs and podcasts.
The media release
Media officers know what makes your research newsworthy and will bring this to the fore in the media release. When people read about a piece of research they want to know what’s in it for them. Why should they care about your work? Who will benefit from it?

So a good media release needs to get the main points – the ‘5 Ws’ – of the story into the first paragraph.

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Journalists receive hundreds of releases each day and if they can’t see what the story is about and why it’s important in the first few sentences, this opportunity to get your work into the media will have been missed.

Media enquiries
If a journalist contacts you directly about your research, or would like your opinion on an issue, contact your institution’s and/or NERC’s media officers if you feel you need advice or support, and always let them know if you do speak to a journalist.

If you need to check information first, take the journalist’s contact details, find out what publication they are from and what they want to discuss, then arrange a time to call them back.

Be aware that some journalists will have an agenda, or will want to pursue a particular line of questioning. If you can find out their ‘angle’ ahead of the interview it will be easier to make sure what you say isn’t taken out of context.

The media officers will often know the journalist and will be able to advise you if they are likely to have an agenda. They will also be able to coordinate your interview with any other publicity on the story.
Radio interviews

If a journalist approaches you for a radio interview, you should contact your media office straight away. They can help you prepare for the interview, and they need to know it’s happening so they can coordinate any other relevant media activities.

Once an interview has been set up, the most important thing is to prepare thoroughly. Companies don’t just turn up on the radio and wing it in the hope of selling their product. Instead they spend months designing an advertising campaign. You should put as much effort as you can into your preparation too.

Your media office will help you prepare two or three key points about your research that you should try to get across during the interview.

Assume the journalist knows nothing about your area of research; their job is to get answers out of you that their audience will find interesting. Keep in mind the most important things to talk about in an interview are: what you’re doing, and why your research matters in the context of society as a whole.

Keep your language simple and sentences short, and if you have to use scientific terms, make sure you explain them.

A radio interview might seem scary, but remember you’re the expert – don’t be intimidated. Just because the journalist has a microphone in their hand, it doesn’t mean you have to answer their every question. Do what politicians are so adept at – stick to the key points you want to make.
Before the interview, find out:

- what the interviewer wants you to talk about
- what the programme is and who the audience is
- if it will be live or pre-recorded
- what format it will take and how long it will be
- what the first question will be, and what the interviewer’s angle on the story is
- is anyone else being interviewed, and who are they?
- what time your interview will be broadcast
- what the likely listener figures will be.

During the interview

- Stand up if possible (to expand your lungs), open your mouth properly and speak clearly.
- Smile! Strange as it sounds, people will hear it and you’ll feel more relaxed.
- Focus on the key points you want to get across.
- Use short sentences and simple language – ‘said’ not ‘indicated’.
- Try to create a picture for listeners with analogies: ‘the size of a football pitch’.
- Make the most concrete statements you can, avoiding caveats.
- Use active language - ‘I did’ not ‘was done’.
- Don’t answer questions that aren’t in your area.
- Don’t use jargon – it puts people off and the interviewer is likely to interrupt and ask you to explain it.
- Signpost your statements: ‘What I’m doing is…’, ‘What I found is…’, ‘For the first time…’
- If there is a long silence, don’t fill it! You are likely to gabble or say something you didn’t intend to say.
Writing about your work

You will probably be used to writing for an audience of fellow researchers who speak your language. Writing for a non-specialist audience is very different, but it’s not difficult – provided you bear in mind some important points.

Most magazines won’t accept unsolicited features – though they will probably welcome a simple synopsis of your idea. So before you put pen to paper, make sure you have a confirmed commission from the magazine’s editor.

The editor will probably send you some house-style and writing guidelines. MAKE SURE YOU READ THEM. Your feature may be rejected if the content and style aren’t right for the audience, and you will have wasted your time.

Understand your audience

If the magazine is aimed at the public you should assume readers will have no knowledge of your subject, and you will need to explain any scientific terms and concepts you talk about.

Use simple, everyday language. When scientists complain that something is ‘inaccurate’, they often mean that it doesn’t provide as much detail as they would like. But some simplification is needed in an introduction for laypeople. You’ll usually have a tight word limit too, so use every word to best effect.

Using everyday language doesn’t harm the dignity of your work. Saying ‘commence’ rather than ‘start’, or ‘negatively impact’ rather than ‘harm’, or ‘has the potential to’ rather than ‘could’, won’t make your writing more impressive – but it could put people off.

Put the most important things first. If there are four key points that people need to understand to grasp what you’re writing about, get them across near the start of the piece. Don’t try to save your most exciting material for the end; this isn’t a detective novel, and you need to convey the essential information before readers lose interest.

Explain why readers should care about what you’re describing. They won’t necessarily find your science fascinating for its own sake, or want the details of your methodology; most people want to know the benefits and applications it offers. Save information about policies, programmes, conferences and institutional frameworks for internal newsletters.

Unless you’ve been told otherwise, write in the first person. When people read about your work they want to get an idea of what it’s like for you doing your research, whether you’re in the lab or the Antarctic. Tell them what inspired you, what surprised or disappointed you. And explain why your work is important in their world, not just to other scientists.
Top tips

- Write the way you speak. You probably have no problem talking about your work in a straightforward way to friends – use the same easy style when you write.

- Use short sentences. If it’s hard to keep track of your argument, break it into smaller sentences. You don’t need to get too much information across at once.

- Explain scientific concepts without using jargon – even things that seem elementary to you. Not everyone knows what biogeochemistry is, or that plants absorb CO$_2$ during photosynthesis.

- Put the main clause first, to let the reader know where you’re going with the sentence. Say ‘Our experiment showed that $X$ usually happens, although there are exceptions in very hot conditions’, not ‘Although very hot conditions seem to be an exception, our experiment showed that $X$ usually happens.’

- Avoid passive language – tell us you did something, not that it was done. It’s much more engaging to say ‘We’ve done some ground-breaking work’ than ‘Some ground-breaking work has taken place.’

- Start each paragraph where the previous one ended; don’t jump off into what seems like new territory and then try to circle back to explain why this is relevant at the end of the paragraph.

- Don’t be too wordy. Don’t say ‘this is the kind of geological structure that is known as a shield volcano’; say ‘this kind of geological structure is called a shield volcano’.

- Be wary of metaphors. Used well, they can enhance your writing but a stream of clichés will weigh your prose down. Beware canaries in coal mines, devils in details and perfect storms.
What's next?

Ready to publish?
If you’re about to have a paper published make sure you tell your institution’s media office and NERC’s media officers so they can coordinate a media release and any other media activity.

Media training
NERC’s two-day ‘Engaging the public with your research’ course is free to NERC-funded researchers and covers everything you need to know to get your research out there, including the role of the media and media offices, writing skills, radio interview techniques and public engagement.

The British Science Association runs a popular Media Fellowship scheme. Fellows spend up to eight weeks working with a national media journalist.

Write something
NERC’s quarterly magazine, Planet Earth, contains features written by NERC researchers about their work. Your university may also have a magazine that is aimed at a general audience.

Specialist magazines – gardening, fishing, diving, rock climbing, etc – may welcome popular articles on some aspect of your science which would interest their readership.

REMEMBER
Contact the editor before you start writing to see if they are interested, and let your media officer and the NERC media officer know if you have an article accepted.
Events and public engagement activities
There are many schemes you can get involved in if you want to do public engagement but don’t want to design a new activity. These are listed below and grouped according to the type of involvement you have – contact us to find out how you can take part:

Hosting post-16 student placements
Nuffield Foundation science bursaries

Classroom visits and mentoring of young people
The British Association CREST Awards (CREativity in Science and Technology)
STEM ambassadors

e-mentoring of young people
‘I’m a scientist – get me out of here’

Developing teaching resources and e-mentoring of teachers
Teacher CPD courses at the National Science Learning Centre

Podcasts and videos
If you like talking about your work, consider featuring in a podcast for NERC’s science news website, Planet Earth Online. The podcasts are produced by professional radio journalists, so you’ll get first-hand experience of working with the media.

If your research takes you to some far-flung destination, you could record a video for the podcast. Our producers will teach you how to use recording equipment and explain what sounds good on radio. They’ll professionally edit your recordings and you’ll receive a copy for your own use too.
NERC contacts

- Public engagement activities and events, working with schools
  
  **Amy Gilbert**
  Events and engagement officer
  Contact TBC

  **Hannah King**
  Public engagement officer
  hankin@nerc.ac.uk
  01793 411572

  **Naomi Smith**
  Events management intern
  naoith@nerc.ac.uk
  01793 411727

- Media/press enquiries: media releases, radio and TV interviews, or if you are contacted by a journalist
  
  **Tamera Jones**
  External communications manager
  tane@nerc.ac.uk 01793 411561 07917 557215

  **Mary Goodchild**
  News and media officer
  marodc@nerc.ac.uk 01793 411939

- Planet Earth magazine and Planet Earth Online blogs
  
  **Tom Marshall**
  Editor and science writer
  thrs@nerc.ac.uk 01793 412593

  For general enquiries about Planet Earth magazine and Planet Earth Online: editors@nerc.ac.uk

- Planet Earth Online news, Planet Earth podcast and video ideas
  
  **Tamera Jones**
  External communications manager
  tane@nerc.ac.uk 01793 411561

- Social media
  
  **Karen Christian**
  Digital communications officer
  karris@nerc.ac.uk

  **George Dibble**
  Communications and evaluations intern
  gedi@nerc.ac.uk
