

# ECMWF Feature article

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## VIEWPOINT

Discussion about the  
ECMWF Newsletter and  
communicating science



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## Discussion about the ECMWF Newsletter and communicating science

Angeles Hernandez, Bob Riddaway

The following is a record of **Bob Riddaway**, the Editor of the *ECMWF Newsletter*, being interviewed by **Angeles Hernandez** from the Satellite Data Section.

### Background

**Angeles Hernandez (AH)** *How did your interest in meteorology start? Are you one of these people that bought a barometer with their first savings when they were a ten-year old?*

**Bob Riddaway (BR)** When I was fifteen years old, my geography teacher had a friend who worked for British Antarctic Survey, and he came into the school to give a talk about being in Antarctica. He showed us some slides of Antarctica, and I thought, “This is just wonderful!”. At the end, I asked my geography teacher “Please Sir, who goes to Antarctica?” And he said, “Meteorologists do.” I thought, “Right, I’m going to become a meteorologist”. So I wrote to the Met Office asking what I needed to study and I was told to gain a degree in maths or physics. This was a complete change because history was my great interest at that time. A few years later I went to Edinburgh University to do a degree in physics with a view to becoming a meteorologist.

**AH** *For how long have you been the editor of the Newsletter? What attracted you to it?*

**BR** I’ve been the editor of the *Newsletter* since I retired from the UK Met Office over six years ago. In the early 1980s I worked at ECMWF as education officer within the Research Department on secondment from the Met Office, and I enjoyed it very much. So I was delighted when I had the opportunity of returning to the Centre. Also it was during my previous period at the Centre that I got involved in editing so returning was a kind of “coming home”.

### Bob Riddaway

Bob Riddaway’s career in meteorology started in Edinburgh University, where he did first a BSc physics and followed by a PhD in meteorology. He then joined the UK Met Office to do research, but after spending 18 months working as a forecaster he decided that direct involvement in operational meteorology was more to his liking. He held a wide range of posts in the UK Met Office concerned with managing and developing the forecasting process. Also he had a very enjoyable six years as Principal of the Met Office College. During that period he became involved in a variety of education and training activities under the auspices of WMO and this has continued to the present time.

His introduction to editing occurred when he was on a three-year secondment to ECMWF. As the education officer, he edited workshop and seminar proceedings. On his return to the UK Met Office, he became editor of the

*Meteorological Magazine*, a house journal. He was also the first editor of the *Meteorological Applications*, a journal published by the Royal Meteorological Society – a position that he held for seven years.

On retirement from the UK Met Office he became editor of the *ECMWF Newsletter*. This part-time post still leaves time for a variety of other meteorological activities, both on a national and international basis.



## Role of the Editor

**AH** What is your role as editor of the Newsletter?

**BR** Essentially, my role is to help the authors make the contents of their articles more appropriate for the intended audience. Initially I act as a scientific editor to try to make sure that what is written is scientifically correct and can be understood by the readers of the *Newsletter*. There is the tendency, especially for people involved in research, to be too technical and write articles almost as if they were for scientific journals. For a journal, readers of a specific article tend to be experts in the subject, but the *Newsletter* is aimed at a broader readership. This means that the scientific content needs to be made more accessible. I don't mean simplified, but things need to be explained a bit more.

As editor I also look at the structure of the article and, if necessary, I make suggestions about how to improve the English. I was once told that for any article submitted for publication the editor should immediately send it back to the author with a note saying, "Reduce by one third and resubmit". Articles can often be improved by them being shorter and more concise.

**AH** Are there other ways in which Newsletter articles differ from those found in scientific journals?

**BR** In a journal, typically you introduce the topic, then provide the research evidence, and finally move to the conclusions. In a *Newsletter* article, as with a magazine, the reader should get most of the information from the introduction so as to know why it is worth reading that article. The introduction is almost like a summary of the article, not just the background. Then, as you get into the article, you get into more detail.

**AH** Do authors volunteer to write articles for the Newsletter or do you volunteer them?

**BR** After ECMWF's Scientific Advisory Committee has met, Erland Källén, Director of Research, suggests topics that are going to be of interest in the following year. Also I contact others in management positions within the Centre to get ideas. I then prepare a publication plan for the whole year. But what helps me most is that, instead of me contacting people and asking "Would you like to write an article?", I can say "Erland has suggested that you might write an article" – that makes a difference.

## ECMWF Newsletter

The purpose of the *ECMWF Newsletter* is to make users of ECMWF products, collaborators with ECMWF and the wider meteorological community aware of new developments at ECMWF and the use that can be made of ECMWF products.

To satisfy this purpose the *Newsletter* will be published four times a year and will include:

- Features about new developments and systems at ECMWF, collaboration in international projects, case studies of important meteorological events, and uses of ECMWF products.
- News items about:
  - Changes to operational systems and progress with projects and other ongoing activities.
  - New activities, including recent initiatives and decisions of Council and new European Union or EUMETSAT supported projects.
- Information about publications, changes to the web site, and plans for ECMWF workshops and the education programme for the coming year.

It is assumed that the readers of the *Newsletter* have a professional interest in the activities of ECMWF, but may have little detailed knowledge of some of these activities.

Guidance for authors is available at:  
 • [http://www.ecmwf.int/publications/newsletters/Guidance\\_authors.pdf](http://www.ecmwf.int/publications/newsletters/Guidance_authors.pdf)



**AH** I guess it is not easy to follow that plan closely.

**BR** It's good to have a plan, but it needs to be flexible. Some people who say they are going to do something don't do it, or can't do it when they said they would, but other people come along and say they would like to write an article. Anyway the plan ensures that authors know when an article is expected, so it doesn't come as a surprise – although they often miss the deadline!

**AH** What do you enjoy the most, when you edit articles?

**BR** I find it very satisfying helping someone improve their article so that it is in a form that can be more easily read by the sort of audience that we are aiming at. What I've found, both with the *Meteorological Applications* journal and with the *Newsletter*, is that authors are very pleased when you help them

**AH** Is there something that you like or dislike particularly in an article? Do you have any pet hates?

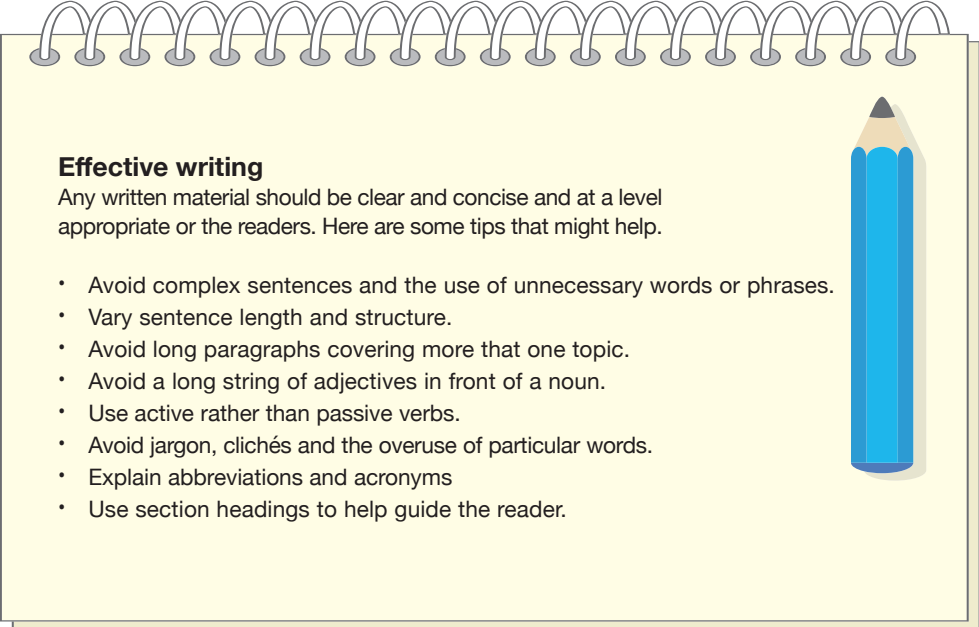
**BR** I suppose the most difficult situation to deal with is when the article is too technical, and the authors haven't really thought about "Who am I writing this for?". The author has put lots of effort into preparing something that is scientifically correct, but it's just not aimed at the right audience, and that often requires a lot of work. Problems also occur when there are too many figures, as they easily get displaced from the relevant text. The best is when I get an article which is superbly written, interesting, at the right level, and has an appropriate number figures – that makes my life easy. But if that happened all the time I would not be needed.

**AH** Regarding the language, what kind of things do you suggest – for instance, simpler sentences?

**BR** I try to improve the readability of articles. That means getting the structure right, ensuring scientific/technical terms are explained and avoiding complex sentences. If a sentence has to be read twice, there is something wrong – often breaking up long sentences or paragraphs is a great help.

**AH** About the English, are there any typical mistakes?

**BR** Sometimes a rule of grammar is correctly applied but in the wrong place. Perhaps the most common one is the use of *forecasted* as the past tense of *forecast*. Often I have to remove the final *ed* from *forecasted*, as *forecast* is both the present and the past tense. Also some people tend to put many adjectives before a noun, which is unusual in English, and the text doesn't flow. I find that what people have most difficulties with are the little words such as *at*, *in* and *on*.



**Effective writing**

Any written material should be clear and concise and at a level appropriate or the readers. Here are some tips that might help.

- Avoid complex sentences and the use of unnecessary words or phrases.
- Vary sentence length and structure.
- Avoid long paragraphs covering more than one topic.
- Avoid a long string of adjectives in front of a noun.
- Use active rather than passive verbs.
- Avoid jargon, clichés and the overuse of particular words.
- Explain abbreviations and acronyms
- Use section headings to help guide the reader.



## Role of the Newsletter and how it could develop

**AH** *What is the role of the Newsletter?*

**BR** It is basically to inform the broad meteorological community about what goes on at ECMWF. There are lots of very exciting developments, and I think that an organisation like ECMWF has responsibility to tell people about what they are doing and why they are doing it. The aim is that anyone with a meteorological background should be able to understand what is in the articles, without being an expert in the subject. When you are a forecaster, occasionally you have a short period without much to do, waiting for the next run of the models. I'd like to think that at times like that, a forecaster somewhere in Europe will pick a copy of the *Newsletter* and spend some time reading something of interest. I don't know whether this really happens, but I'd like to think that it does.

Also I hope that the *Newsletter* helps people working at the Centre, along with their partners in universities, research institutes and meteorological services, keep up-to-date with developments, especially those outside their own specialist areas.

**AH** *Do you collaborate with others, apart from article authors?*

**BR** I collaborate very closely with Rob Hine, the Centre's talented graphics designer. He prepares the figures for publication and does the typesetting so that the material is presented in a logical and attractive way. It is amazing what he can do, and how good articles look after he has prepared them for publication. He tries different things from time to time: different fonts, different colours, etc., so that the *Newsletter's* appearance doesn't become stale. I work very closely with Rob, and it is an enjoyable partnership.

**AH** *How would you like to see the Newsletter changing in the future?*

**BR** Firstly I'd like to have more news items. I feel there is an enormous amount going on within ECMWF, but people are often too busy doing their jobs to think about preparing a news item. That's a pity, but over the years the *Newsletter* has increased the amount of news that is covered.

The second thing I'd like is to get more articles from users of the Centre's products in its Member States and Co-operating States, and from the wider meteorological community. At present most articles in the *Newsletter* come from the Centre's Research Department, but I'm very keen to have more articles about operational aspects that are of direct interest to forecasters and other users of the Centre's products.

### Effective presentations

The first step is to consider the objective of the presentation. This should be based on the characteristics of the audience. Asking the following questions might be helpful:

- What does the audience already know about the subject?
- What does the audience expect to get out of the presentation, and what do I want the audience to get out of it?
- How will they benefit from the presentation?

Also it is important to ensure the presentation material is effective. Adhering to six visual design principles will help make the material visually appealing and support effective communication.

- **Simplify.** Eliminate words or graphics that do not support understanding.
- **Contrast.** Use contrast to focus attention on the important things.
- **Repetition.** Be consistent with repetition of style, colour and layout.
- **Alignment.** Align headings, text and graphics.
- **Proximity.** Ensure that things that go together are placed together.
- **Images.** Use high quality images and minimal clip-art.

## Communicating science

**AH** *I'd like to move to the subject of scientists communicating with a broader audience.*

*Do you think scientists have the responsibility to explain what they do to a broader audience?*

**BR** Of course communicating with other scientists involved in research and development through peer-reviewed literature is very important. But also I think that any scientific work that is publicly funded brings with it an obligation to seek opportunities to explain what is being done and why to the wider community. For meteorologists this is particularly worthwhile as people are interested in what we do.

**AH** *What do you think scientists could do to communicate to a broader audience, for instance to attract young people to science?*

**BR** The Centre's website is a key way of communicating with a broader audience. There is a web project going on at the Centre which will eventually make it easier for people to find the information they want. Also it is important that information is made available in a timely and attractive way at the right level.

Another way to communicate with the broader community is looking for opportunities to explain to young people what it is that we are doing. So I think it is good that some people take the opportunity to go into their local schools or participate in other public events and talk about the weather or about science. Hopefully talking about the pleasure and the satisfaction from a career in science helps inspire another generation to follow the same path that we have taken.

**AH** *What do you think about scientists as communicators?*

## Are scientists skilled communicators?

**BR** For effective communication with both your peers and a broader audience the key is the same – think about the needs of the audience and how you are going to get your message across. In general it is best to keep things simple and avoid over-estimating the knowledge of the audience. There may be 5% of the audience who wish you had gone into more detail or in more depth about something, but you are not aiming your presentation at those people, you need to consider the other 95%.

**AH** *Are there any other pitfalls to avoid, something one should be aware of, when speaking or writing?*

**BR** When speaking, no matter how much you practise your presentation beforehand, when you do it for real it takes longer. It is one of life's mysteries. So when you prepare a presentation, don't prepare it so that it exactly fits the time you've been allocated, because it will take longer. Also, think beforehand "If I'm running out of time, what am I going to do – what bit am I going to miss?".

Getting the visual material right is also important. Sometimes the slides are too complex or contain too many words, so following visual design principles is worthwhile. Indeed presenters often try to fit in too many slides.

**AH** *Thank you very much, Bob, for this interview. A final question: did you ever go to Antarctica?*

**BR** No, I haven't been to Antarctica, but every so often I see adverts in newspapers about trips to Antarctica – I must go there one day!