Data-management plans must also state any constraints regarding confidentiality or copyright, for example. These might relate to collaborations between academic scientists and industry researchers or military services. "Carefully consider data privacy and ethical aspects when writing your plan," says Ainsworth, adding that ethical, legal or other constraints should be noted.

European research funders will address confusion over open-data policies by setting out minimum standards for discipline-specific data-management plans. The exercise should be completed in a year. "It just doesn't make sense that different bodies have different rules and requirements when the overarching aims are all the same," says Peter Doorn, director of data archiving at the Royal Netherlands Academy of Arts and Sciences in Amsterdam, who chairs a joint working group on the topic. "Researchers would rather have clear, not-too-detailed instructions all in one place."

Scientists needing guidance can check the EU-funded FOSTER portal for webinars and training material on data-management plans (see go.nature.com/2oq4byo). A toolkit, tailored for applicants to the EU's Horizon 2020 research programme — a 7-year, €77-billion (US$95-billion) research-funding programme — becomes available in May, says Rodrigues.

Etique, meanwhile, hopes that the data plan that she has submitted with her grant proposal will be reviewed favourably. She expects a funding decision about her project later this year. "It was an opportunity to consider my handling of my research data — it makes sense to think early on about the types and amount of data you will collect with each method and instrument, and how to organize those data for effective use," she says of her first foray into data management. Such a plan, she notes, can also help scientists to avoid potential problems with data loss and reproducibility. "It may save you a lot of unforeseen trouble," Etique says.

Unlike the volatile mercury compounds she wants to study, her data are designed to endure. ■ SEE EDITORIAL P.286

Quirin Schiermeier *is* Nature*'s senior correspondent in Germany.*

CORRECTION

The Careers feature 'Teen spirit in the lab' (*Nature* **554,** 559–561; 2018) wrongly stated that CERN has 12 member states. In fact, it has 22.

The Careers news story 'PhD career paths hold promise' (*Nature* **555,** 277; 2018) gave the wrong year for the start of the PhDs Project. It started in 2000, not 2002.

TURNING POINT
Benefit balancer

Jens Magnusson, a stem-cell biologist at the Karolinska Institute in Stockholm, works extensively with mice, despite becoming a vegetarian in 2012. He explains how he reconciles his personal values with his programme of research.

DAVID MAGNUSSON

Why did you become a vegetarian?

It was mainly down to environmental concerns. Meat consumption has a big impact on the environment, partly because animal-derived foods require a lot of energy and resources to produce. I think that as a society, we must shift to a more sustainable diet and that vegetarianism will be a crucial part of the shift. My vegetarianism is motivated by my utilitarian perspective. For me, the positive taste experience that accompanies eating meat is smaller than the negative environmental effect of meat consumption.

Your published research has involved working with animals. Does that pose a problem for you now?

I don't like the fact that biological research often requires experimentation on animals. However, it is not always possible to replace research animals with other systems such as cell cultures or computer models. For example, when developing pharmaceutical drugs for use in humans, we must find out how the drugs behave in whole organisms before we administer them to people. Similarly, understanding fundamental processes in biology requires the study of such processes in the context of living organisms. I think that the benefits of animal experimentation, which include increasing scientific knowledge and creating new medicines, outweigh the negative ethical consequences such as animal suffering. The advantages of animal research are sufficiently important to motivate experimentation on animals.

Do you have an ethical objection to eating meat or fish?

No. But the more that we learn about how the brains of humans and other organisms work, the more we realize that the subjective experiences of pain, stress and discomfort are not unique to people. I think that this will make it increasingly hard to argue, from an ethical point of view, that animals should be killed for food.

How do you reconcile your concerns with the need to conduct research?

I do not re-evaluate my fundamental moral position every time I do an experiment. Yet, at the same time, I aim to be guided by my concern for animal welfare. When I plan an experiment, I try to evaluate the level of discomfort that the animals would experience and I let that evaluation strongly guide the experimental design. I also attempt to reduce the total number of animals that will participate in experiments, for example, by using mice that are unsuitable for other researchers' work.

Do you try to persuade colleagues to become vegetarians?

When I initially became a vegetarian, I was eager to share my thoughts with other people. But I found that this did not really make any of my friends or family change their behaviour.

Has being a vegetarian had an effect on your career progression?

I don't think it has changed the kind of research projects that I want to be involved in. I feel comfortable with my decision that the benefits of animal research outweigh the moral costs. But I try to re-evaluate that decision occasionally, and if I were to change my mind, I would steer my career towards projects that do not require animal research, such as those involving cell culture.

How do your vegetarian or vegan colleagues balance their own concerns?

Different people have different ways of reconciling their beliefs, some of which seem incoherent to me. For example, one colleague feels guilty about doing research on animals, so they ask another colleague to perform the actual experiments. ■

INTERVIEW BY MARTA PATERLINI

This interview has been edited for length and clarity.