

A botched experiment, a rejected article: in the sciences these things are soon labelled failures. As for talking about them — not the done thing. But that’s just what WUR scientists do in this column. Because failure has its uses. This time, we hear from **Ingrid Luijkx, associate professor of Meteorology and Air Quality.**

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‘Day in, day out, we emit carbon dioxide by burning fossil fuels, and the oceans absorb some of it. Exactly how much they absorb was what I researched for my PhD, using apparatus of my own design that took air samples and measured the carbon dioxide and oxygen concentrations in them. I installed the apparatus on a remote oil rig 200 kilometres north of Den Helder, so that emissions from urban areas didn’t affect the measurements. Instead of the planned one

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year, it took me three years to get the measuring apparatus operational. There was a series of technical hitches: one time the pump didn’t take in any air, and another time the system leaked. I couldn’t just fly up and down to the oil rig; I was dependent on there being an empty seat on scheduled helicopter flights. That was frustrating enough in itself, but it also caused a much bigger problem later in the research process. ‘Due to the delay, I could only start writing up my results after three years. And the

writing process plays a very big role in the learning experience. Because science isn’t just a matter of carrying out experiments and cobbling together measuring instruments, but also of data interpretation, literature studies and publicizing the results. When you write for publication, you delve deep into the literature to position your work in relation to previous research. You learn an awful lot from that and at the same time, it deepens your connection with your subject. Because I planned my writing for my final year, I benefitted a lot less from that. ‘Nowadays I make sure that the students I supervise start writing early on. That gives them a more profound understanding of the subject than I ever had. What is more, it greatly reduces stress levels in the final year. Ironically enough, I now have enough data for a publication, but I can’t find the time to write it.’

