## Data visualisation: Figures and tables in reports and publications

By Radovan Bast, UiT The Arctic University of Norway

ORCID: 0000-0002-7658-1847

Date: October 2020



## Manuscript:

In this video we will give practical recommendations for figures and tables as part of reports and publications. And let us start with tables. This table shows a fantasy dataset which we have discussed in the video about data formats: it reports observations of arctic animals on Svalbard. It's just an example. But notice that this table has a number and a caption. This is important so that the table can be cross-referenced. For tables, it is customary to place the caption above. "Tidy data", which we discuss in the data format lecture, is good for storing data but not necessarily for displaying tables in publications. Here we prefer the "wide format". Note that we don't use any vertical lines and data rows are not separated by horizontal lines. We use different alignment for text, numbers, and single characters, and header fields follow this alignment.

Also figures are numbered and have captions. Note that the caption is typically below the figure and each figure has a title, and the title is the first element of the caption. This is often forgotten: start the caption with a title. Axes and legends need titles as well.

When preparing figures for print we should remember that figures that are good for presentation slides may not be good for publications. In a presentation we have the whole screen. In a publication we may have very little space on the page. For print, increase font size and ticks and print the figure in a smaller size and check whether it is still readable.

Finally, copyright considerations: when you publish a manuscript you typically transfer copyright to the publisher, including figures. One way to keep the copyright of your figures so that you and others can reuse them without asking the publisher is to upload them to services like figshare or Zenodo under a creative commons license. You get a digital object identifier and can use and cite these figures in your manuscript and still use them outside (e.g. in your PhD thesis) without any problems.