

Reproducible Documents with `{ rmarkdown }`

Some general tips and good practice

Instructor: [Selina Baldauf](#)

Freie Universität Berlin - Theoretical Ecology

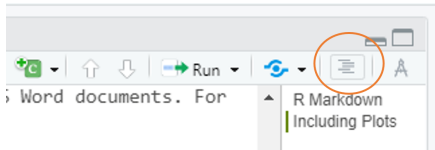


2022-22-03 (updated: 2022-03-28)

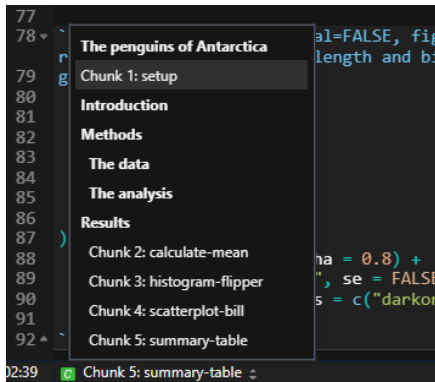
Tip 1: Keep your document clean

.Rmd documents can quickly become large and messy. To keep them clean, you can

- Use headers to mark sections in your document
- Navigate the file using the document outline



- Use names for your code chunks
- Navigate code chunks with the code and document outline (bottom left of script)



Tip 2: Source large data preparation scripts

- Related to Tip 1
- If it's not necessary for the document, do data preparation in a separate R Script
- Place that R Script in the project where the `.Rmd` is located
- Then source the script in a code chunk:

```
```{r prepare-data, warning=TRUE, message=TRUE}  
source("path/to/script.R")
```
```

- This runs all the R code in `script.R` and loads the results into the `.Rmd` document

Tip 3: Split larger documents into multiple `.Rmd` files

- Related to Tip 1
- Write separate `.Rmd` files e.g. for Introduction, Methods and Results
- Have on main `.Rmd` file that
 - Combines the sections into one
 - Controls YAML options of the output
- You can load an `.Rmd` file into another one using the `child` chunk option

```
```\{r load-child, child="path/to/child.Rmd"}  
```
```

Tip 3: Split larger documents into multiple .Rmd files

- 3 separate files `Introduction.Rmd`, `Methods.Rmd`, `Results.Rmd`
- The separate files control everything that happens on the lower levels of the documents, e.g.

First results

```
```{r result-plot, fig.width=3}
plot(1:10, 1:10)
```
```

- `Main.Rmd` (see right) controls
 - YAML options
 - Global setup options
 - Includes the sections via the `child` option

```
---
title: "My paper"
author: "Selina Baldauf"
output:
  pdf_document:
    toc: true
---

```{r global-setup, include = FALSE}
knitr::opts_chunk$set(echo = FALSE)
```

# Introduction

```{r intro, child="Introduction.Rmd"}
```

# Methods

```{r methods, child="Methods.Rmd"}
```

# Results

```{r results, child="Results.Rmd"}
```
```

Tip 4: Read through some online resources

- Read or scroll through some R Markdown books or tutorials to
 - See what is possible with R Markdown
 - Find things that are relevant for your own documents
- I recommend to start with the two books:
 - [R Markdown Cookbook](#)
 - [R Markdown - The Definitive Guide](#)
- You can also find some [resources on the workshop website](#)