

# Citations and Bibliographies

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## Introduction

RMarkdown has the ability to automatically format bibliographic information and manage citations. Using this is a little complicated because you need to have file with your bibliographic information entered in a certain format. Fortunately, RMarkdown can work with a wide variety of file formats, including those produced by many common software packages, such as EndNote, Zotero, and Mendeley. You can find further documentation about bibliographies and citations at [http://rmarkdown.rstudio.com/authoring\\_bibliographies\\_and\\_citations.html](http://rmarkdown.rstudio.com/authoring_bibliographies_and_citations.html)

## Bibliography Files

RMarkdown reads bibliography entries from an external bibliography file. To specify the bibliography file, you would just add a line to the header of your RMarkdown document: for instance,

```
---  
title: "My Lab Report"  
subtitle: "EES 3310: Global Climate Change"  
author: "Jonathan Gilligan"  
date: "Sept. 25, 2017"  
bibliography: "my_bibliography.bib"  
---
```

RMarkdown can figure out the kind of bibliography file it is from the file extension (.bib, etc.). I have provided an example BibTeX file, lab\_05.bib that has examples of entries.

For the examples here, I will work with a format called BibTeX because most common software packages can export bibliographies in BibTeX format, and Google Scholar can also provide citations in BibTeX format that you can copy and past from a browser. BibTeX files are plain text and you can edit them in RStudio.<sup>1</sup>

If you prefer, you can also use bibliographic software, such as Zotero,<sup>2</sup> Mendeley, or EndNote, and export your bibliography in RIS format (as a .ris file), BibTeX format (as a .bib file), or BibLaTeX format (as a .biblatex file). RMarkdown claims to support the following file types as well, but I have not tried them, so I would not be able to provide much help if you try them and run into trouble.

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<sup>1</sup> If you will use BibTeX files often, I recommend a free tool called JabRef, which lets you edit the information in a BibTeX file in a graphical interface without having to worry about the details of the BibTeX format. You can get JabRef from <http://www.jabref.org/>. It runs on Windows, MacOS, and Linux.

<sup>2</sup> I recommend Zotero, which is a free, easy to use, and very powerful bibliography tool that supports Windows, MacOS, and Linux, and has add-ins that integrate very nicely with most browsers (Chrome, Firefox, Safari, and Opera) and also has a good add-in to let you use it in Microsoft Word. Zotero has hundreds of bibliography styles for different uses, including standard ones, such as Chicago, APA, and MLS. You can get Zotero from <https://www.zotero.org>. One reason I like Zotero enormously is that the web browser add-in creates an icon in the browser's toolbar that recognizes when you are reading an article in a scholarly journal, a newspaper, a magazine, a blog, etc., and you can just click on the icon to import whatever you're reading in your browser into your bibliography database. You can also sign up for a free account on <https://www.zotero.org/user/register> that will let you back up your bibliography database to the cloud, synchronize your bibliographies across multiple computers, and share bibliographies with other people.

Format	File extension
EndNote	.enl
EndNote XML	.xml
RIS	.ris
BibTeX	.bib
ISI	.wos
MEDLINE	.medline
MODS	.mods
Copac	.copac
JSON citeproc	.json

You can export files in many of these formats (especially RIS and BibTeX) from most bibliographic software packages, such as EndNote, Mendeley, and Zotero.

## Citations

In your document, you can cite books, articles, etc. by the identifiers, or *keys*, that appear in the database.<sup>[3]</sup> For instance, in the example bibliography file `lab_05.bib`, the textbook, *Global Warming: Understanding the Forecast* has the key `archer.forecast.2011`.<sup>[3]</sup> In BibTeX files, the identifiers can be any sequence of letters, numbers, and any of the following punctuation: `_`, `.`, `:`, `,`, `;`.

I can insert citations in an RMarkdown document by putting them inside square brackets (`[...]`) and putting an `@` in front of the citation key: `[@archer.forecast.2011]` will become (Archer 2011). I can cite a specific page with `[@archer.forecast.2011, p. 143]`, which becomes (Archer 2011, 143). I can also add some preceding text:

```
[See, e.g., @archer.forecast.2011, pp. 75--78]
```

becomes (See, e.g., Archer 2011, 75–78).

I can cite multiple authors:

```
[@archer.forecast.2011, @nordhaus.casino.2013, and @pielke.climate.fix.2010].
```

becomes

(Archer 2011, Nordhaus (2013), and Pielke (2010)).

If I want to omit the name of the author (for instance, if I have named him or her earlier in the text), I can put a minus sign in front of the `@`:

```
Archer describes the water-vapor feedback [-@archer.forecast.2011].
```

becomes

Archer describes the water-vapor feedback (2011).

I can also put citations in-line by omitting the square brackets:

```
@jaeger.adams.fallacy.2008 argue that focusing only on the economic
impacts of climate change is misleading.
```

becomes

Jaeger, Schellnhuber, and Brovkin (2008) argue that focusing only on the economic impacts of climate change is misleading.

and I can also add page numbers or other text to follow the year in the citation by putting them in square brackets after an in-text citation:

@rogelj2013probabilistic [Fig. 2, p. 81] show that if political inaction causes even modest delays in reducing carbon emissions, it can dramatically increase the cost of mitigating climate change.

becomes

Rogelj et al. (2013 Fig. 2, p. 81) show that if political inaction causes even modest delays in reducing carbon emissions, it can dramatically increase the cost of mitigating climate change.

## The Bibliography

RMarkdown will insert a formatted bibliography at the end of your document. It will not automatically put a section heading, so you probably want to put a section heading called “Bibliography” or “Works Cited” to set this off from your text.

Below, I have inserted the line

```
# References
```

## References

Archer, David. 2011. *Global Warming: Understanding the Forecast*. 2nd ed. Hoboken, NJ: Wiley.

Jaeger, Carlo, Hans Joachim Schellnhuber, and Victor Brovkin. 2008. “Stern’s Review and Adam’s Fallacy.” *Climatic Change* 89: 207–18.

Nordhaus, William. 2013. *The Climate Casino: Risk, Uncertainty, and Economics for a Warming Planet*. New Haven, CT: Yale University Press.

Pielke, Jr., Roger. 2010. *The Climate Fix: What Scientists and Politicians Won’t Tell You About Global Warming*. Basic Books.

Rogelj, Joeri, David L McCollum, Andy Reisinger, Malte Meinshausen, and Keywan Riahi. 2013. “Probabilistic Cost Estimates for Climate Change Mitigation.” *Nature* 493: 79–83.