# asar::CHEATSHEET

Partially automate a U.S. stock assessment report.

## Install

**Install 3 R packages: pak, tinytex, and asar**

```
install.packages("pak")
pak::pak("tinytex")
tinytex::install_tinytex(bundle = "TinyTeX-2")
pak::pak("nmfs-ost/asar")
```

**Ensure Quarto v1.6+ is installed**

```
quarto::quarto_version()
```

## Convert model output

**Convert output file to a standardized framework**

```
output <- asar::convert_output(
        output_file = "Report .sso",
        model = "ss3")
```
> **SS3** files supported

```
output <- asar::convert_output(
        output_file = "Report .rdat",
        model = "bam")
```
> **BAM** files supported

```
output <- asar::convert_output(
        output_file = estimates,
        model = "fims")
```
> **FIMS** files supported *(tibble in R environment)*
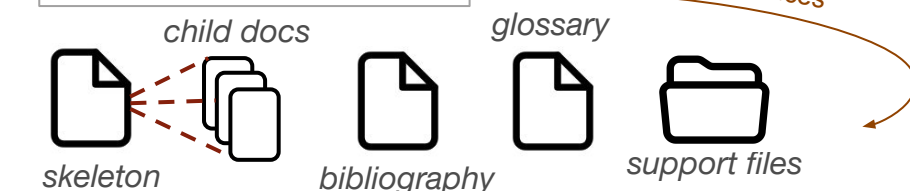
**Standardized framework format** *(dataframe in .rda file)*

| label | estimate | year | fleet | sex | ... |
|---|---|---|---|---|---|
| spawning_biomass | 2017090 | 2016 | *NA* | *NA* | ... |
| spawning_biomass | 2286740 | 2017 | *NA* | *NA* | ... |
| ... | ... | ... | ... | ... | ... |

ℹ See "Standardizing Assessment Model Output" vignette

## Create report skeleton

**Make a blank report**

```
asar::create_template()
```

*produces*

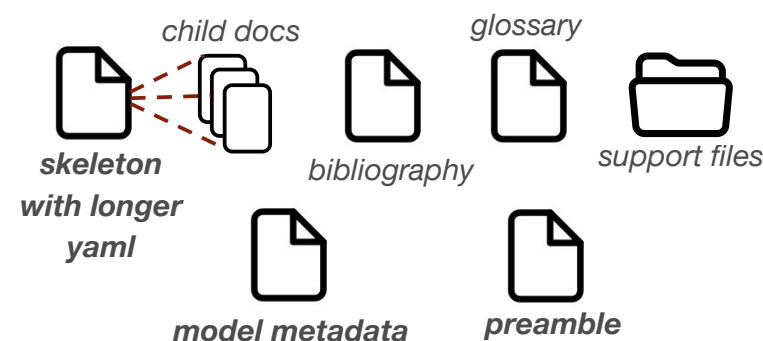child docs · skeleton · bibliography · glossary · support files

## Create report skeleton (continued)

**Make report with minimal recommended arguments**

```
asar::create_template(
  office = "NWFSC",
  region = "U.S. West Coast",
  species = "Petrale sole",
  spp_latin = "Eopsetta jordani",
  year = 2023, # specify if past year
  author = c("John Snow" = "NWFSC"),
  model_results = here::here(" model_output.rda")
)
```
> converted model output

child docs · skeleton with longer yaml · bibliography · glossary · support files · model metadata · preamble

## Add tables & figures docs

**Add existing tables & figures to separate child docs**

```
asar::create_tables_doc(
  subdir = getwd(),
  tables_dir = getwd()
)
```
> Location of "tables" folder containing .rda files

```
asar::create_figures_doc(
  subdir = getwd(),
  figures_dir = getwd()
)
```
> Location of "figures" folder containing image (e.g., **.png**, **.jpg**) and/or **.rda** files

ℹ See `stockplotr` R package to make tables and figures

## Render report

*Options:*

- Use console

```
quarto::quarto_render(
    here::here("report", " skeleton.qmd")
)
```
> Report skeleton

- Push "render" button in program pane [Render]
- Use terminal: `quarto render report/skeleton.qmd`

## Add accessibility features

**For PDFs: Add tags & alternative text for figures**

```
withr::with_dir(
  file.path(getwd(), "report"),
  add_accessibility(
    x = "skeleton.tex",
    dir = getwd(),
    figures_dir = getwd(),
    compile = TRUE
  )
)
```
> `with_dir()` temporarily sets the "report" folder as the working directory

> LaTeX file produced when report was rendered
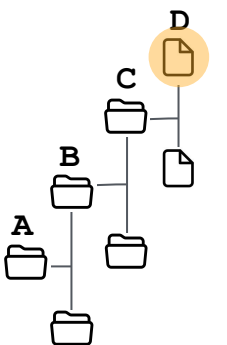
## Tips & best practices

**1. Set working directory**

*Options:*

- Make an R project  `Recommended`
- Use the `here` R package  `Recommended`
- Use `setwd()`

**2. Use relative filepaths**

- Saves time and effort
- Facilitates collaboration

*Recommended tool:* `here` R package

```
absolute_path <- "A\B\C\D"
relative_path <- "D"
```

**3. Overcoming problems**

- Browse open and closed issues on GitHub page
- Read FAQ vignette
- Attach a reprex when making an inquiry

| Resource | Description |
|---|---|
| Tutorial | Tutorial showing how to use the `asar` R package. |
| Vignettes | Articles with frequently asked questions, tips for increasing `asar` report accessibility, guidance for adding custom figures and tables into `asar` reports, and more. |
| Issues | Location where users can report bugs, look through already solved issues, make feature requests, and more. |
| Discussions | Location where users can engage in discussions with `asar` developers, learn about new releases, and more. |