

asar: :CHEATSHEET

Partially automate a U.S. fisheries 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 CLI 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 (shown here) OR .rds file)

Standardized framework format (dataframe in .rda file)

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

📘 See “Standardizing Assessment Model Output” vignette

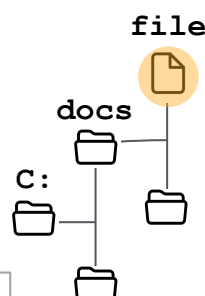
★ Tip

Use relative filepaths

- Saves time and effort
- Facilitates collaboration

Recommended tool: here R package

```
absolute_path <- "C:/docs/file"
relative_path <- here::here("file")
```

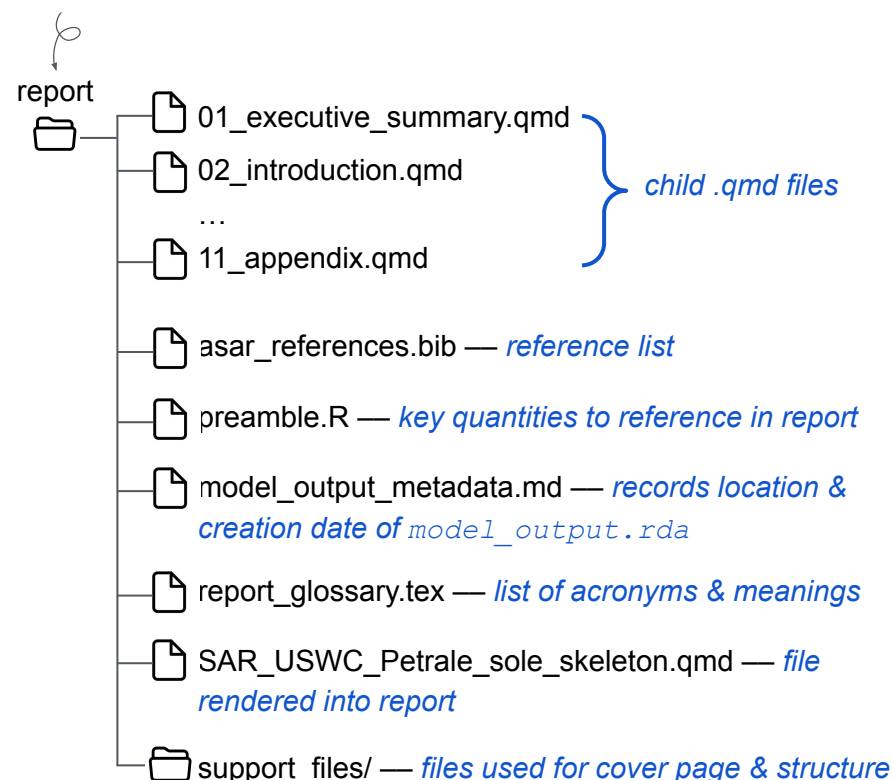


📄 Create report skeleton

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



🔍 03_data.qmd

```
# Data {#sec-data}
For 'r end_year', composition data was
obtained from the \gls{pacfin}
Biological Data System
[@star\_1999].
```

End year calculated in preamble.R

Acronym in report_glossary.tex

Citation in asar_references.bib

📊 Add tables & figures

Steps:

1. Create tables, figures with stockplotr or other method
2. Place table .rda files in “tables” folder
3. Place figure .png, .jpg, or .rda files in “figures” folder
4. Add code chunks to report/08_tables.qmd that import and display tables in “tables” folder:

```
asar::create_tables_doc(
  subdir = here::here("report"),
  tables_dir = here::here())
```

“tables” folder location

5. Update 09_figures.qmd with similar workflow:

```
asar::create_figures_doc(
  subdir = here::here("report"),
  figures_dir = here::here())
```

Location to save 09_figures.qmd


🔦 Render report

Options:

- Use R console

```
quarto::quarto_render(
  here::here("report",
    "SAR_USWC_Petrale_sole_skeleton.qmd"))
```

Report skeleton

- RStudio “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 = "SAR_USWC_Petrale_sole_skeleton.qmd.tex",
    dir = getwd(),
    figures_dir = getwd(),
    compile = TRUE
  )
)
```

with_dir() sets “report” as the temporary working directory

LaTeX file produced when report was rendered