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*	
...	...	...	...	...	...

ℹ️ See “Standardizing Assessment Model Output” vignette

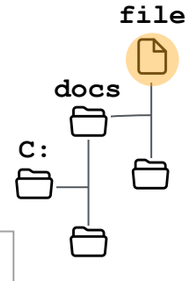
Tip

Use relative filepaths

- Saves time and effort
- Facilitates collaboration

Recommended tool: `here` R package

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

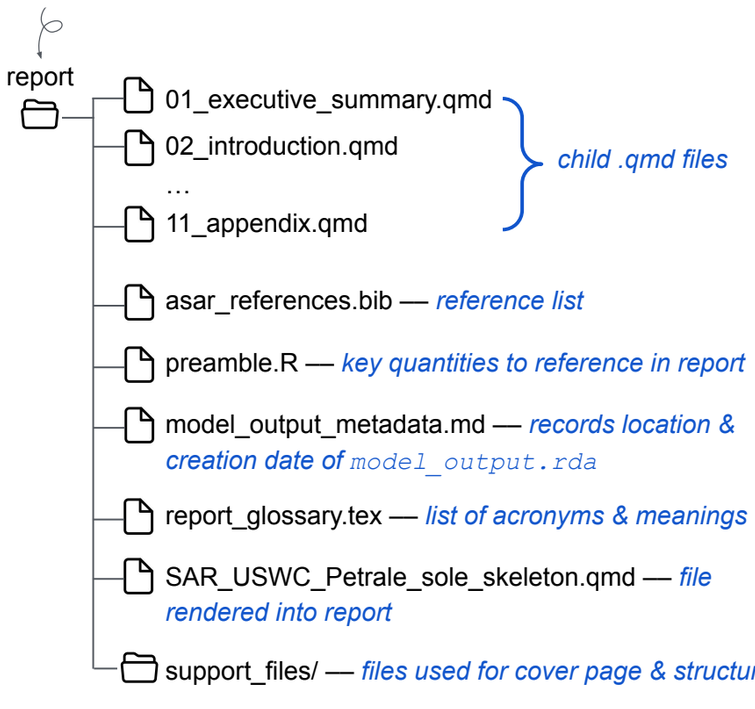


Create report skeleton

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 

- 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