# Simulation resources

## MSEs using Stock Synthesis as the Operating model (OM)

* [International Pacific Halibut Commission (IPHC)](https://iphc.int/management/science-and-research/management-strategy-evaluation)
* [Pacific hake](https://github.com/pacific-hake/pacifichakemse)
* [North pacific albacore](http://isc.fra.go.jp/working_groups/albacore.html)
* [Tuna RFMOs](https://doi.org/10.1111/faf.12480)
* [Red snapper MSE](http://gomredsnappermsetool.fiu.edu/)

## Tools for running simulations with Stock Synthesis

* [SSMSE](https://nmfs-fish-tools.github.io/SSMSE/) - Set up MSEs from existing Stock Synthesis models. Directly uses SS as the OM and (optionally) estimation method. Check out the readme or the (still in development) User Manual to get started.
* [FLR MSE package](https://github.com/flr/mse) - Able to translate an Stock Synthesis model input/output into an FLR model to run MSEs with Stock Synthesis
* [DLM’s MSEtool package](https://github.com/tcarruth/MSEtool) - Able to translate a Stock Synthesis model input/output into a DLM operating model in R
* [ss3sim](https://github.com/ss3sim/ss3sim) - Run simulations to evaluate structural model assumptions using Stock Synthesis as the OM and EMs. Check out the readme or [vignettes](http://ss3sim.github.io/ss3sim/) to get started.
* [Decision support tool](https://github.com/nathanvaughan1/DST) developed by Nathan Vaughan. This is a Shiny app that extends the forecasting capabilities of Stock Synthesis.