**FISH 458 ONLY – Stock Assessment Case Study**

For this EXTRA CREDIT assignment, you will do a brief case study on a stock assessment for a fished species of your choosing. The species may be a fish or invertebrate that is marine, anadromous, or freshwater. The main objective is for you to describe the application and utility of the quantitative methods that we have been covering in class, in the context of a stock assessment.

As part of your case study, you should briefly include any pertinent life history details for the species, but focus on the assessment’s quantitative methods, the stock status (in terms of stock size and fishing mortality), and how the assessment informs fisheries management. Stock assessment reports can be very long (hundreds of pages!), but most will have an Executive Summary (typically 10-20 pages). You may focus on the executive summary, but skim the main report also for some of the details regarding the methods we’ve discussed.

Below is a list of questions that can guide your 800-Word report. You may not be able to answer all of them, but they represent the types of topics to address. Your case study should build upon and rely on the quantitative topics that we have been covering in class. Remember to not merely list answers to the questions below, but instead weave together a coherent case study!

**Goals of the assignment**

* Describe the application and utility of the quantitative methods that we have been covering in class.
* Investigate and describe the management of a fishery.

**Questions to guide you in your case study report**

1. *Background & general context (3 pts)*
   * What species and stock is being assessed?
   * What agency conducted the assessment?
   * What has been the history of the fishery and of the stock’s status?
   * What is the species’ life history?
2. *Quantitative methods (7 pts)*
   * What type of stock assessment model was used?
   * What growth models (e.g., Weight-Length, Length-at-age) and stock-recruitment models were used (if at all)?
   * Describe what values of natural mortality were used and how they were estimated.
   * What data are used for assessing/managing the stock?
   * How did the modelers assess or address uncertainty (e.g., running different scenarios, sensitivity analyses, etc.)?
   * Describe the reference points that were used and what they mean
   * What is the stock status? (are they overfished? Is overfishing occurring?)
3. *Recommendations (3 pts)*
   * What were the harvest or management recommendations?
   * What is the outlook for the assessed stock?

**Guidelines/formatting**

* Target length: 800 words (not including figures, tables, or references)
* 12 point type, 1 inch margins
* Should be in Word or PDF format
* Include references for any cited papers, using Transactions of the American Fisheries Society format (see posted guide)
* Including key Figures, tables, or images is encouraged and these can be included after the reference section (do not imbed in the text)
* The grading rubric is provided below

**Examples of stock assessment reports:**

* Federal (look at Management Council Websites, or science centers):
  + <http://www.pcouncil.org>
  + <http://www.afsc.noaa.gov/Publications/assessments.htm>
* States Agencies
  + [www.wildlife.ca.gov/Conservation/Marine/NCCFRMP/Halibut-Studies/Halibut-Assessment](http://www.wildlife.ca.gov/Conservation/Marine/NCCFRMP/Halibut-Studies/Halibut-Assessment)

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| **GRADING RUBRIC** | Max Points | Points lost | Final grade | Comments |
| Background and context | 3 |  |  |  |
| Quantitative methods | 7 |  |  |  |
| Management and Research recommendations | 3 |  |  |  |
| Citations & references | 1 |  |  |  |
| Grammar | 3 |  |  |  |
| Organization & clarity | 3 |  |  |  |
|  |  |  |  |  |
| TOTAL | 20 |  |  |  |