

General Oceanography  
Geology 105  
Expedition 4 - Fisheries Science  
See Due Date in Greensheet or in Canvas

Name \_\_\_\_\_

### Expedition Objectives

- Learn about the scientific analysis of commercially targeted ocean fish populations
- Homework - post two multiple choice questions on fish stock assessment methods in your Expedition 4 Learning Group Discussion in Canvas,

This expedition will begin with a 37 minute-long lecture video on fish stock assessment at:

<http://youtu.be/uxEFO3pX86Y>

followed by four brief videos demonstrating four types of research surveying, lasting a total of 22 minutes,

and ending with Part II a 15 minute-long lecture on other methods of stock assessment that are described in more detail in required reading assignments

1. **What is fisheries science?**
2. **What is a resource? Marine fish**
3. **What is the decline in marine fish?**
4. **What caused the decline of fish stocks and its effects?**
5. **What is a fish stock?**



13. What is the interaction or feedback loop between assessment, models, and stock management?
14. How is fish stock assessment including changes in the ecosystem (and habitat) into stock assessment models?
15. What questions remain on the use of ecosystem data in stock assessment models?
16. What is research surveying?
17. Example 1 - Will the fish return? (4 minutes-long) (to Georges Bank off New England) at: [http://youtu.be/EoRq8SRBY\\_w](http://youtu.be/EoRq8SRBY_w)  
Describe this method of research surveying:
18. Example 2 - Research surveying with Cal Poly SLO: Assessing Monitoring Marine Protected Areas (4 minutes-long) at: <http://youtu.be/AlmLJgkE29c>  
Describe this method of research surveying:

19. Example 3 - Acoustic methods: National Public Radio: Herring School For Safer Sex (March 26, 2009) (4 minutes-long) at:

<http://www.npr.org/templates/story/story.php?storyId=102377928>

Describe this method of research surveying:

20. Example 4 - Visual Observations: One Fish Two Fish: Monitoring Marine Protected Areas - KQED QUEST (9 minutes-long) at: <http://youtu.be/P3esjOWQKJA>

Describe this method of research surveying:

We will continue our discussions of other methods of fish stock assessment and the application of these results to stock management in the next expedition.

**Check Canvas for any required reading assignments for this expedition that are posted online**

**Homework assignment** - Develop and post in your expedition learning group two multiple choice questions with answers (e.g. a, b, c, d, and e) on fish stock assessment in your Expedition 4 Learning Group Discussion in Canvas,?

You will also be asked to review the posted questions of other students in your learning group