

**Advanced Fisheries Management
2011**

This question list is provided as a guide to identify some key areas in National, Regional, and International Fisheries Management Policy and the Science of Management covered in this class to increase your understanding of fisheries management.

**At the conclusion of this term I would expect you to be able to answer these questions.
This pre test is a way to see what you might know already**

USA and Regional Policy

1. What kinds of fisheries are there in the USA and region? Where is the ownership and authority for each of these?
2. Discuss the history and goals of the Magnuson Stevenson Fisheries Conservation and Management Act?
3. What is the Bolt Decision? Explain the impact of this judgment?
4. What are the common terms used in Indian Tribal Treaties to define fishing rights.
5. Who is Judge Redden? What are some of the current conflicts in his court?
6. Discuss the use of fishery closures versus fishery reserves to enhance stocks? What are some of the drawbacks and advantages of each?
8. What are some of the considerations surrounding the use of propagated fishes in fisheries management?
9. Aquaculture production can compete with capture fisheries in market share. Discuss some of the conflicts and regulatory issues in aquaculture versus capture fisheries management.
10. Determination of threatened or endangered status in the USA is determined by what agency (S)? What happens after a listing occurs?

International Policy

1. What is the Law of the Sea? How does it work? What sort of authorities does it establish?

2. What are some examples of international treaties and conventions used for regulating highly migratory species or species of concern? What sort of authorities are established and how do they work?

3. Describe major vehicles that have led to the introduction of invasive species into different bodies of water. What sort of regulations are in place and at what level of government?

4. Discuss the FAO Code of Conduct for Responsible Fisheries and recent advances for helping developing countries.

5. Discuss the term best available science. How does this term work? Who determines this? What are some of the tools used to achieve the best available science.

6. What are some of the components considered in developing a management plan? Provide an example of how this process works in an international or regional setting.

7. Discuss the role of social and economic factors in determination of management of common resources at a state, regional or national level? How are conflicts resolved?

Science of Fisheries Management

1. What factors affect fish growth? What modeling tool is most used to understand growth in fish populations? What are examples of use of tools in fisheries management?

2. The stock recruit relationships can be established for fish stocks. What are the key defined components of such a relationship? Define the maximum sustainable yield and how does this relate to maximum economic yield?

3. How are fishing and natural mortality included in populations dynamics and models. What are some of the ways to understand survival in populations?

4. Discuss some of the different stock assessment methods and contrast approaches such as Production Models, Virtual Population assessments and Simulation for management

5. What are Bayesian models, and how do they differ from frequentist approaches?

6. What are some tools used for Risk Characterization, Risk Assessment and Decision Analysis?
7. Discuss the difference between the Precautionary Principle versus A Risk Assessment approach to Decision Analysis.
8. Explain “Fishing down the food web” Who coined this metaphor?
9. What are some of the decadal or larger ocean oscillations and what impact do they have on fish stocks?
10. Management under uncertainty and change is a challenge for natural resource management. What methods, tools, or approaches can help in anticipating changes, and to what extent are these or can these be used in local, regional, and international fisheries management?

Future speculation

1. As a result of class presentations lectures, discussions and readings, discuss the three most important problems facing fisheries management at either 1) regional, 2) national, or 3) international level? Provide details surrounding these issues and discuss present or future management options and their likelihood of success?
2. Ecosystem based approaches are popularly expressed goals for restoration and management of aquatic resources. Do you see regional tribes, states and provinces moving more toward ecosystem-based approaches? What are the constraints to achieving this goal? What changes should be made in the institutions that manage fisheries at the state, tribal, or province level to achieve an ecosystem based approach?