

Black Sea Bass Fishing Symposium

Below is an adaptation of the Squid Fishery Symposium (Lawrence Hall of Science GEMS: Only One Ocean 2001) lesson plan to be about Black Sea Bass and to incorporate information learned from Dr. Jensen's presentation and subsequent discussion.

Lesson Overview

Students explore the human side of the Black Sea Bass fishery as they represent views of different stakeholders and discuss fisheries management options.

Key Concept

Many people depend on Black Sea Bass for food and for their livelihood. More discussion among these people will help create solutions to the problem of diminishing Black Sea Bass populations.

Materials

- Historical Data Worksheet
- Black Sea Bass Interest-Group Profiles
- Black Sea Bass Interest-Group Chart

Procedure

Background Research

1. Discuss with the students what they know about Black Sea Bass. Why do people eat Black Sea Bass? Who are the people involved in catching and eating Black Sea Bass?
2. Tell students that the people who fish for and eat Black Sea Bass were deeply concerned in the 1990s; the demand for Black Sea Bass was going up while the Black Sea Bass population was going down. What should have been done to change the pattern? Share with the students the Historical Data Worksheet and discuss the graph and the dates.
3. Explain to students that they'll get to represent the viewpoints of different Black Sea Bass "interest groups" at a Black Sea Bass Fishery Symposium, and that the main purpose of the conference will be to discuss the problems with the fishery and consider possible solutions.
4. Divide the class into six groups, each representing one of the size different Black Sea Bass fishery interest groups on the Black Sea Bass Interest-Group Chart. Tape up the chart where everyone can see it, **keeping the questions covered for the moment**, and show the class the names of all the interest groups. Tell the student groups they'll be

given a description of the point of view their “interest group” represents. They’ll read the description and then answer questions from that viewpoint.

	Commercial Fisherman	Consumer	Restaurant Owner	Recreational Fisherman	Biologist	Environmentalist
How would we know if Black Sea Bass were overfished?						
How can we prevent Black Sea Bass from being overfished?						

5. Assign, or have each group choose, someone to do each of the following jobs:
 - a. **Reader**, who’ll read to the group the “interest group viewpoint” given to them.
 - b. **Recorder**, who’ll take notes about the group’s viewpoint as they discuss it.
 - c. **Presenter**, who’ll present the interest group’s viewpoint at the culminating Black Sea Bass Fishery Symposium.
6. Pass out the Black Sea Bass Interest-Group Profile cards and one sheet of lined paper to each group. The Reader should read the description to their group, and they should then discuss their point of view as the Recorder takes notes.

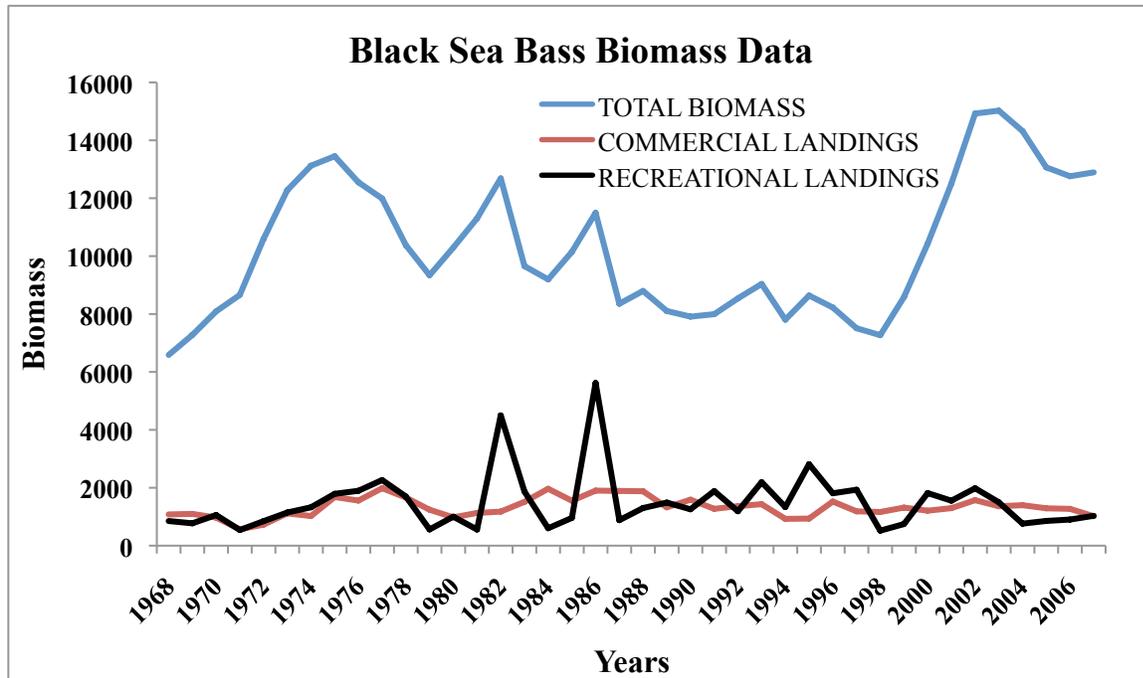
Share with the Class

1. After each group has discussed its viewpoint and made notes, have the Presenters from each group tell the rest of the class about their point of view. Rather than just read the card, they should use their own words to paraphrase their viewpoint, or act it out in a mini-drama with help from their group members.
2. Following each presentation, give the rest of the class a few minutes to ask the presenting group any questions they may have.
3. Finally, **uncover the questions on the Black Sea Bass Interest-Group Chart at the front of the room** and lead a class discussion to fill in the blanks. Any of the students in the interest groups may offer suggestions, and the questions don’t have to be answered in any particular order. As answers are given, record them in the appropriate place on the class chart.

4. Write the Key Concept for the activity on the board: Many people depend on Black Sea Bass for food and for their livelihood. More discussion among these people will help create solutions to the problem of diminishing Black Sea Bass populations.
5. Ask the students to think about their conclusions and then to look at the data for the 2000s. How did the total biomass, commercial landings, and recreational landings change in the 2000s in comparison to the 1990s?

Historical Data Worksheet

The data below are taken from actual fish catches in the commercial and recreational fisheries for Black Sea Bass in the Atlantic Ocean. The accompanying Historical Data provide an overview of human activity in the ocean, plus developing regulatory and management efforts over time.



Historical Data on Black Sea Bass Worksheet

Year	Action
1983	First Fishery Management Plan created which establishes the minimum size as 8 inches and that the mesh size in a net must be at least 4 inches wide
1989	Trawl nets are prohibited between North Carolina and Florida
1996	The total amount of Black Sea Bass allowed to be caught in the commercial and recreational fisheries and restrictions on some of the gear
1997	Minimum size is increase to 10 inches for both commercial and recreational fisheries, limits recreational fishermen to only catch 20 fish per day, and requires the pots to have parts that decompose if lost in the ocean (to allow fish to escape)
2009	Mid-Atlantic Black Sea Bass population considered rebuilt

Black Sea Bass Interest-Group Profiles

Black Sea Bass Interest Group – *Commercial Fisherman*

I've spent my life fishing for Black Sea Bass off of New Jersey. My boat used to be one of just a few commercial Black Sea Bass boats in New Jersey, but by the late 1980s there were many more boats. I'm proud of what I do. I work hard, and my catch helps to feed people. I love being on the ocean. I own my boat and support my family with the money I make fishing. My dad and grandfather were fishermen too, but a lot has changed since my dad and grandfather were fishing – including the fact that now there are women like me out there hauling nets, setting pots, and fishing with hook & line. I have two kids, and I want them to go to college. I don't know what I'd do if the Black Sea Bass fishery collapsed, because there aren't any open fisheries in New Jersey. Maybe they should limit the number of boats that can fish for Black Sea Bass – as long as they don't limit me! I don't know what else I'd do if I couldn't fish. Don't I have a right to support my family and make an honest living?

Black Sea Bass Interest Group – *Recreational Fisherman*

I have that bumper sticker on my truck, "A bad day fishing is better than a good day working." I've always loved to fish, especially on the ocean. There's nothing like spending a day on a boat. I don't catch enough of anything to damage any whole populations of fish. Recreational fishing does not need to be regulated. It's those big commercial boats that do the damage, the ones that catch tons of fish. I'm worried about how big the Black Sea Bass fishery has gotten. It seems like every time I go out, there are more and more boats out there.

Black Sea Bass Interest Group – *Consumer*

I really like Black Sea Bass. I order it whenever it's on the menu at a restaurant, and sometimes I even cook it at home. It's not that expensive, it's healthy, my kids like it, and you can cook it a thousand different ways. I heard a story on the radio the other day, though, that said the Black Sea Bass fishing industry was growing so fast that Black Sea Bass were being overfished in the 1980s and 1990s. Now I feel guilty buying Black Sea Bass, I feel like I have to do a research project on my entire shopping list to find out if things are ethical to buy. I wish more food had clear levels.

Black Sea Bass Interest Group – *Restaurant Owner*

Listen, running a restaurant is hard work. Not all restaurants make it. If I don't have things on the menu that my customers want to eat, and if my food isn't reasonably priced, my restaurant won't make it either. I can't keep track of how every fish in the ocean is caught and whether it's being overfished. A woman came in the other day and told me I shouldn't serve Black Sea Bass anymore until the fishery is better regulated. I told her, ya, when it's better regulated, it'll also coast her three times as much to order! If her conscience won't let her eat Black Sea Bass, fine, she doesn't have to order it, but it's not my job to make that decision for everyone who walks in here for dinner.

Black Sea Bass Interest Group – *Environmentalist*

It's hard to believe that another fishery may collapse. This has happened many times, but we never seem to learn from our past mistakes. If we put strong limits on the Black Sea Bass fishery now, it's still early enough that we can save it – and save all the animals that depend on Black Sea Bass for food. I know the fishermen are trying to make a living, but if the fishery collapses they'll really have trouble making a living. Everyone wants to “study the situation” before we make any decision. But by the time we're finished studying, the Black Sea Bass will all be gone. For once, let's take action before we have a disaster – not after. I think we should have an immediate halt: not let any more boats join the fishery until we know how much can be safely caught each year.

Black Sea Bass Interest Group – *Biologist*

It seems like the fishermen and the companies they sell to are only interested in making money...and that the environmentalists will never be satisfied until everyone is a vegetarian...and that the public is mostly unaware that the issues even exist...and that government agencies are just trying to keep everyone happy without taking a strong stand on anything. It seems no one's interested in the facts. If I just had the funds to put together a team to study Black Sea Bass biology for a couple of years, I could probably figure out a way to allow the fishery to continue without overfishing it. That doesn't seem likely, though. I hate to say “I told you so,” but it wasn't hard to predict that other fisheries would collapse. I'm afraid to say that Black Sea Bass are going the same way. The trouble is, if Black Sea Bass are overfished, it's hard to predict what'll happen to the ecosystem – there are so many animals that depend on Black Sea Bass for prey; it could throw the entire ecosystem out of balance.
