Salmon Survivorship – Fixed Model

Salmon Stats Student Worksheet #5

Instructions

As you complete the scenarios in the model, answer the questions and record the returning number of spawners on this worksheet. NOTE: don't change anything on the model tab because it will mess up the formulas on the worksheet.

Step 1: Blue Box

1. Read the information in the blue box and write one thing you learned and one question you have below.

2. In the table at the top, what does the 40% harvest rate mean?

3. Look at the data in the lower right corner. How many salmon survived to spawn in the year 100?

4. Look at the graph to the right of the blue table. What does the simulation graph predict is happening to the population of Coho salmon in the next 100 years?

5. Draw a sketch of the graph below so you can compare graphs in the next step.

Step 2: Red Box

1. Read the information in the red box. Did your answer to question 3 above match what is stated in the red box? If not, how did it compare?

2. After reducing harvest in the river, how did the total number of salmon who survived to spawn in the year 100 change? How does the graph compare to the original graph?

3. After improving the spawning habitat, how did the total number of salmon who survived to spawn in the year 100 change?

4. After improving the habitat for juveniles, how did the total number of salmon who survived to spawn in the year 100 change?

5. Which of the management strategies worked the best? What happens if you do all three?

6. BONUS: If you improve the habitat, can you increase the allowable harvest of returning adult fish?