NetLogo: use AI to catch the most fish

The goal of the project is to catch the most fish. (more details on fishingBoatExplain.docx)

1. The boat has a limit of 20 ticks or steps per trip and at the end, it must be back to the port.

2. Moving 1 patch will be counted as 1 tick and catch a fish will use 1 tick.

3. This “world” is a 5 by 5 grid with (0,0) at the bottom left corner.

4. The number on the right part of pairs on the game screen is a reading number, and this number will not change if fish decrease. It is random number from 1-100.

5. The really number of fish will be the random number from 0 to reading number. As you can see for this game, the first part of pair numbers is less than the right part.

6. If fish are more than 10, just use 1 tick to catch 10 fish, if fish are less than 10, then fish all, and move to the next patch.

7. The boat will use radius to find the closest patches and to check if the reading number is more than 10 if more than 10, then catch the fish, otherwise, move to the next patch. At the meantime, it keeps track the number of total fish and the ticks. Need to save enough ticks to go back to the port.

8. The game shows total number of fish it has caught;

9. the fish has caught at each patch;

10. and the reader list where have the record showing the reading fish if the boat has been there before.

11. Each trip will catch the most fish.

