**Reading Guide for Springmann et al. (2018)**

**Options for keeping the food system within environmental limits**

**Nature**

* According to the paper, what is the global population expected to be in 2050 (it was 6.9 million in 2010)?

**Figure 1:**

* What is shown in the horizontal bars?
* What is being compared between the two horizontal bars for each of the five pressures?
* By how much will greenhouse gas emissions increase from 2010 to 2050, without dedicated mitigation efforts?

**Figure 2:**

The red bars show the expected change to each environmental pressure without dedicated mitigation. The colored bars then show how much the two different modeled scenarios in each of the three types of mitigation (waste, technological advance, and diet) can decrease the expected emissions. Blue bars show the combined reduction for all three types of mitigation.

* Which of the five pressures is shown to increase the most without mitigation, from current levels?
* Considering technological advances only, which two environmental pressures can gain the most from improvements in technology?
* Which environmental pressures will gain the most from diet shifts toward the dietary guidelines or toward flexitarian diets?

**Figure 3:**

For this graph, each row is a different modeled scenario. The top third all show the baseline diets (no diet shift), and then within that grouping you can see the different waste and technology scenarios. For each row, you can move across and see whether the modeled impact on the environment falls within the planetary boundaries for different socioeconomic pathways.

* For baseline diets (top third), which (if any) of the technology and waste scenarios are within the planetary boundary (light or dark green) for cropland use? Phosphorus? Greenhouse gases?
* For flexitarian diets (bottom third), which of the technology and waste scenarios are within the planetary boundary (light or dark green) for cropland use? Phosphorus? Greenhouse gases?

**Policy Implications:**

* Briefly discuss the policy implications. Give your opinion on what you think will work best.