**Foodprint**

**Understanding Connections Between Food Choices and Our Environment**

**Prof. Jennifer Jay**

**Session 3**

**Nitrogen Cycling**

**Class Plan**

**Introductions** **(10 min)**

Introduce yourself.

**Learning outcomes:**

After this class you will be able to:

* Briefly describe what happens to a water body after an input of excess nutrients
* Define “dead zone”
* Understand the role of the Haber Bosch process in the green revolution and its ties to greenhouse gas emissions
* Describe the ways in which humans have influenced the nitrogen cycle
* Identify the status of the planetary boundary control variable for nitrogen and phosphorus cycle disruption.
* Understand the importance of nitrogen fixing bacteria in agriculture and describe where they are found
* Describe some impacts on human health of nitrogen pollution
* Understand which foods have a relatively higher nitrogen footprint.

**Slides**

1. **Go through slides (20 min). Foodprint Chapter has the information useful for discussing slides.**
2. **Active learning activity (20 min)**

Have students go to the interactive National Geographic site, What the World Eats. You can give them 5-10 minutes for them to look around and find interesting things. They can report out some of their observations.

Then, you can give them another ten minutes to do some calculations having to do with nitrogen. Three choices for exercises are given near the end of the slide presentation.