

## Chapter 18 Highlights

1. Modern industrial agriculture has vastly increased our food supply, but at high social and environmental costs. We need agriculture to undergo *sustainable intensification* to reduce its impacts on land, water, air, and biodiversity while producing enough food for a growing population.
2. The majority of water use globally goes to growing food, meaning that agriculture is at least partly responsible for groundwater depletion and impacts on aquatic ecosystems—but these linkages are often obscured by the complexity of our food systems.
3. Over the next few decades, finding enough water—and doing so sustainably and justly—will be a central challenge for global agriculture, especially given the pressure to reallocate agricultural water to meet environmental flow requirements and satisfy growing urban demand.
4. The water it takes to grow our food is determined by 3 factors: what we eat, where we grow it, and how we use water to grow it.
5. Our choices of diet affect our health and the health of the planet, including water scarcity and its impacts. We can make some strong generalizations about what foods have high water impact (e.g., nuts, beef), although these generalizations are tempered by local variations in footprints and impacts.
6. Virtual water trade can save water globally and locally. But in practice it often exacerbates scarcity in LMICs by shifting water from local needs to export agriculture.
7. Large volumes of water can be saved by increasing irrigation efficiency, although we have to be careful in how we define efficiency and how we regulate what happens to the “saved” water.
8. Croplands and *CAFOs* can pollute surface and groundwater with salts, pathogens, *pesticides*, and *fertilizers*. The Clean Water Act has relatively weak mechanisms for regulating agricultural pollution.