

Warm-Up

25JAN2016

1. On a scale from 1-5 (5 being an expert), how much do you know about food?
2. On a scale from 1-5 how much do you know about food distribution on Earth?
3. Explain your answer.



- Klein Chapter 6 discussion
- The last 25 minutes will be the FRQ for 9/14
- Please read chapter 11: Feeding the World this will be our focus for the week.
- APES and Beyond is moving to Thursday due to lack of attendance on Tuesdays

Warm-Up

26JAN2016

- Pick one item you have eaten in the last couple days and respond to the following:
- What is a food or food product?
- Where was it grown?
- How did it get from where it was grown to your plate?
- Was it grown “sustainably”?



Coffee:
The worlds most
traded commodity
(Behind oil)



Chapter Key Ideas

- Describe human nutritional needs and the challenges of overcoming hunger and malnutrition
- Explain the development of modern industrial agriculture and the consequences of modern farming practices
- Identify the benefits and costs of using genetically modified organisms in agriculture
- Describe alternatives to industrial farming methods
- Explain the environmental impacts of various approaches to raising and harvesting meat and fish

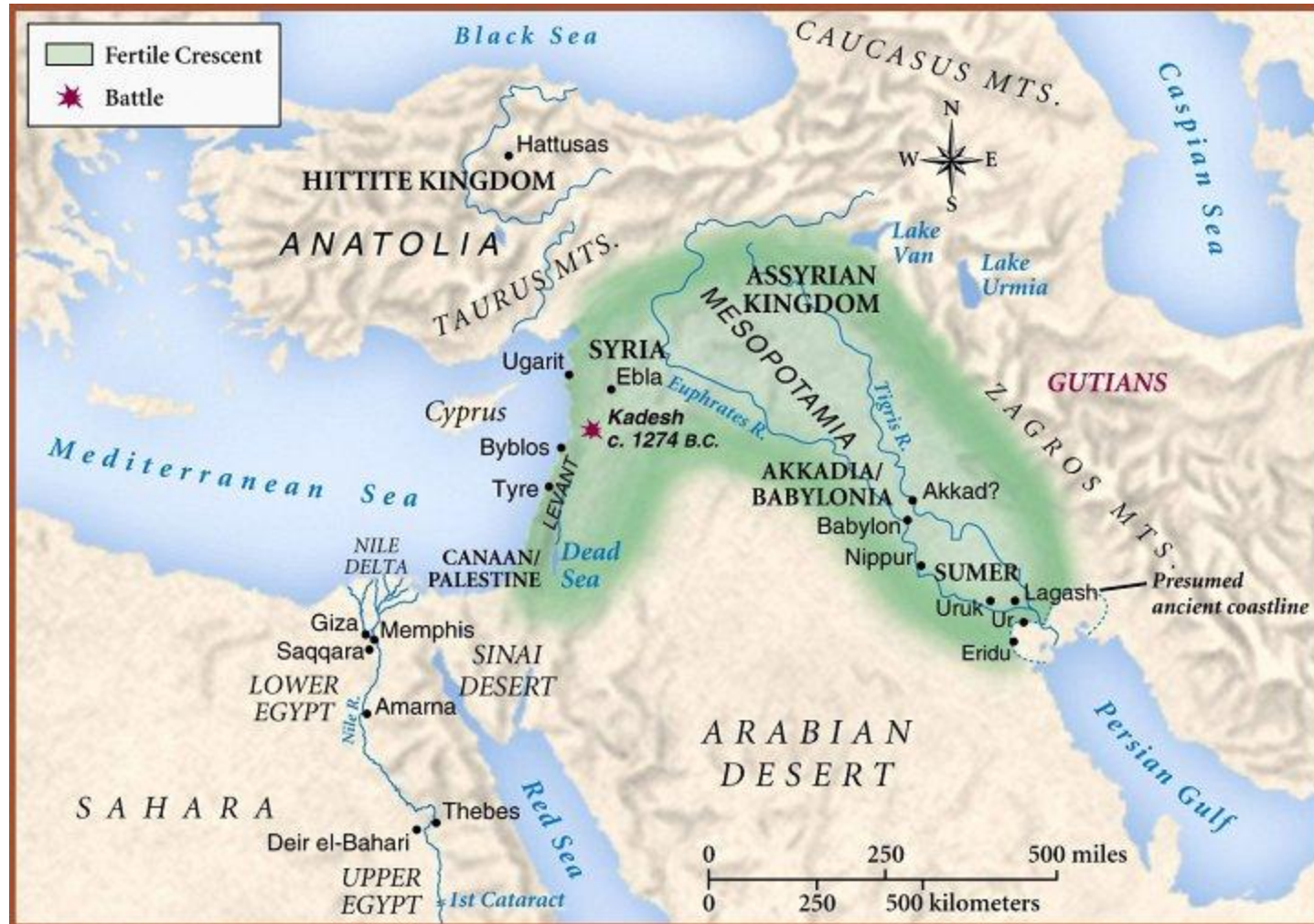


Chapter 11

Feeding the World

- A major theme in this class:
 - Anthropogenic activities ALWAYS have environmental, social, and economic consequences

- Humans were primarily hunter and gatherers until 10,000 years ago



- Over the last 10,000 years humans have transformed agriculture
- Despite all the advances 24,000 people starve to death every day (8.8 million a year)



Global Undernutrition

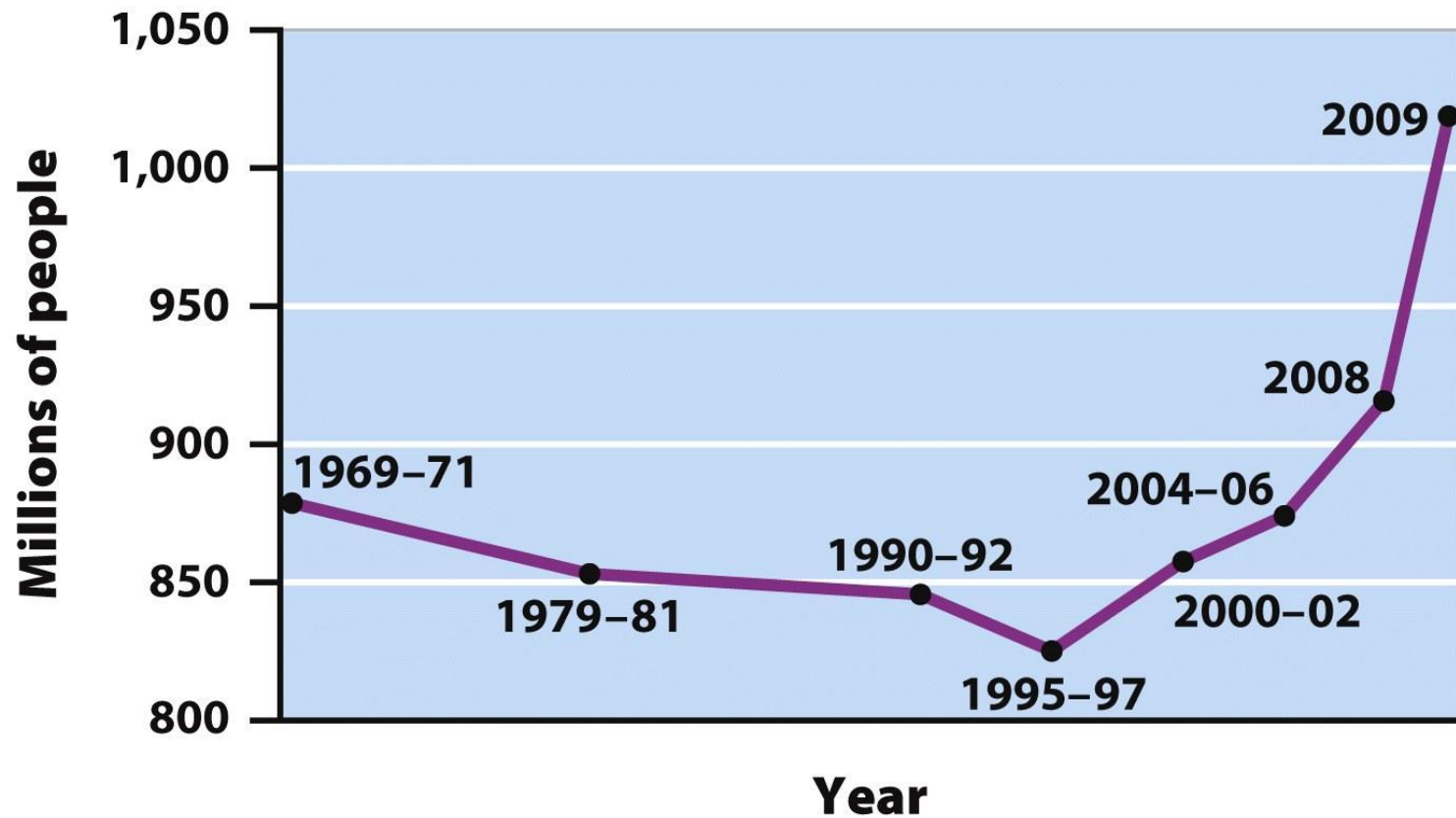


Figure 11.1
Environmental Science
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- Chapter 11 will explore human nutrition needs and how these needs are met or not met.
- Also WHY they are met or not met

Nutritional Requirements

- Undernutrition- not consuming enough calories to be healthy.
- Malnourished- a persons diet lacks the correct balance of proteins, carbohydrates, vitamins, and minerals even though they get enough calories.



- Food security: access to safe and nutritious food that meets their need for an active healthy life (*access* refers to the economic, social, and physical availability of food)
- Food insecurity: the condition where there is not adequate access to food

Famine

- When food security is so extreme and widespread that large number of deaths occur (5 per 10,000 or mortality rate of 18%)
- Can result from crop failures, drought, this clearly has social and economic impacts as well



Anemia

- Iron deficiency
- Most common nutrition deficiency in the world estimated 3 billion are anemic world wide
- Connected to diet as well as malaria, parasite infections, and AIDs

IRON-RICH FOODS



Tomatoes



Pumpkin
seeds



Quinoa



Green
peas



Brussels
sprouts



Collard
greens



Green
beans



Spinach



Bok choy



Broccoli



Kale

Nutritional Requirements

- Overnutrition- too many calories and improper foods that causes a person to become overweight





POVERTY IN
MOST OF THE WORLD

POVERTY
IN AMERICA

Annual Meat Consumption

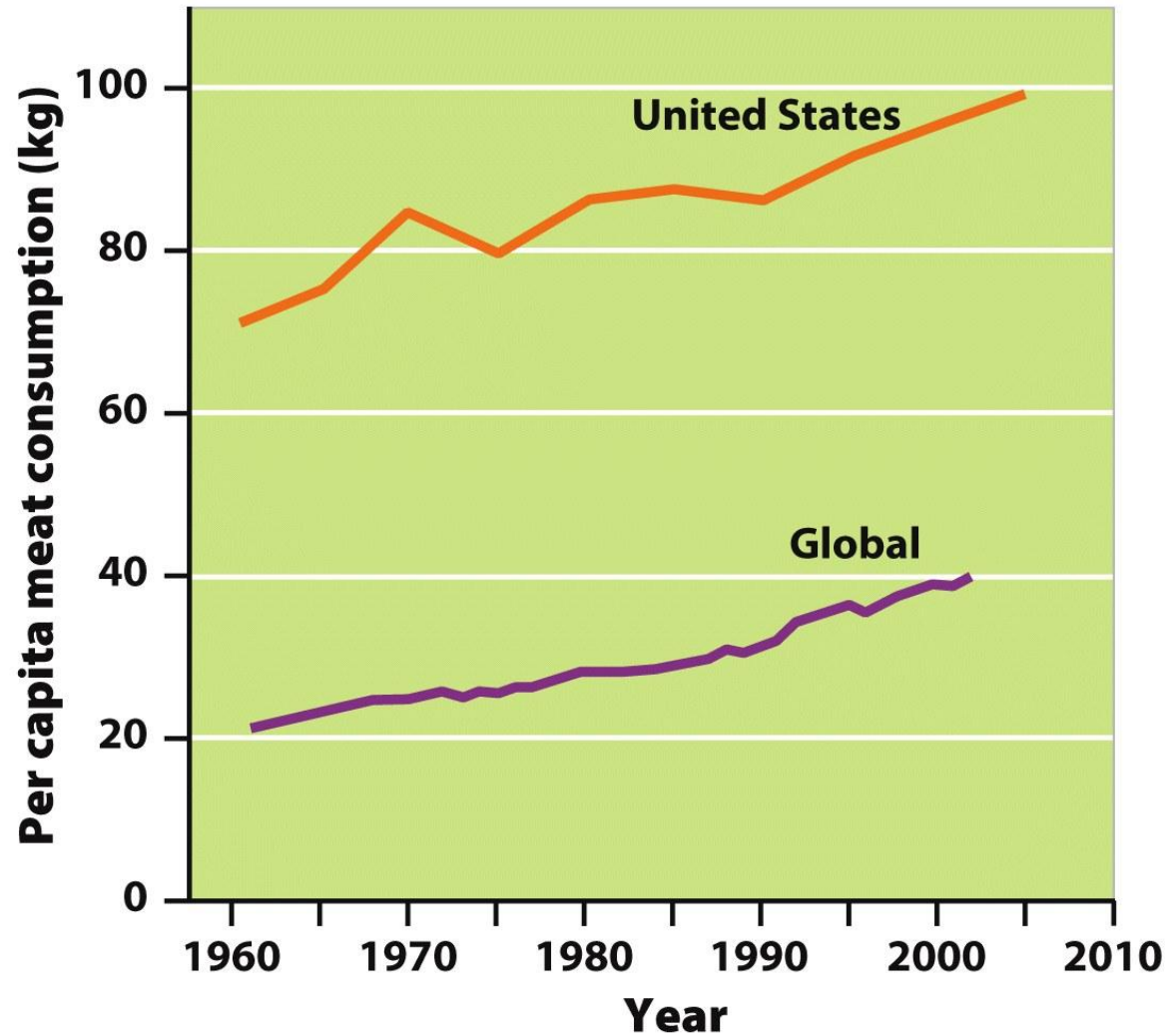


Figure 11.2
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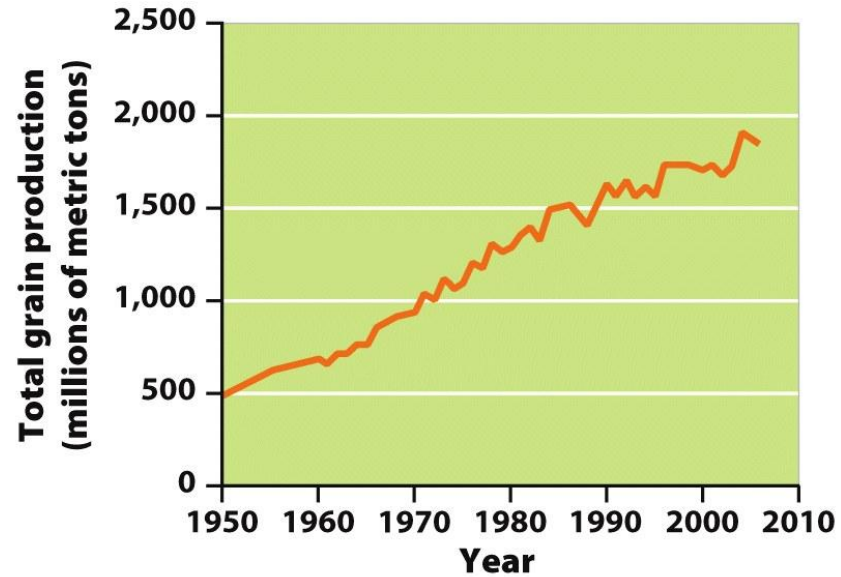
Reasons for Undernutrition and Malnutrition

- World farms grow enough grain to feed 8 billion people
 - Why does hunger exist?

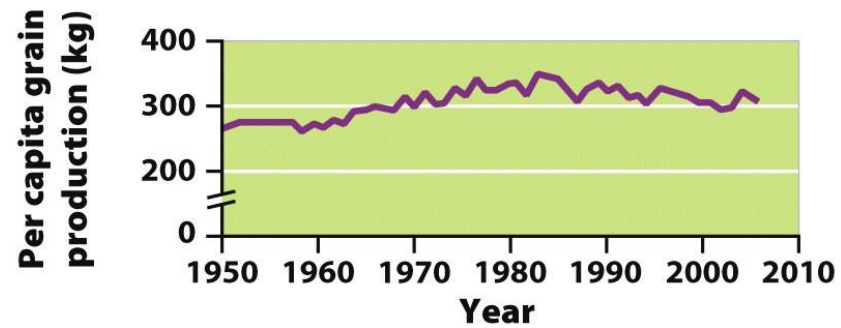
Reasons for Undernutrition and Malnutrition

- Poverty (lack of resources)
- Political and economic factors (refugee populations, political unrest)
- Agricultural resources being diverted to feed livestock and poultry rather than people

Global Grain Production, 1950-2006



(a) Total grain production



(b) Per capita grain production

Figure 11.3
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- What are undernutrition and malnutrition?
- What is food insecurity?
- What are some of the possible reasons for food insecurity in the world today?

- Craft a half page reflection
- Please take a moment (or two) to ponder what value food has in your home.
 - How do demonstrate or not demonstrate this value?