Class 4a: Natural Resources and the Economy

- Primary economic activity
- Resource-based economies (Gabon)
- Agriculture and trade (Chile)

Economic geography

- How do people earn a living?
  - Physical environment
  - Cultural conditions
  - Technology
  - Politics/economic system
- How does that vary by place?
- How does it connect places?

Economic geography

- Primary economic activity
  - Closest contact with natural resources
  - Generally, lowest income
- Secondary: value added (manufacturing)
- Tertiary: services for primary or secondary
- Quaternary: information-based services

Primary economic activity

- “Gathering” industries
  - Fishing
  - Forestry
- Commercial vs. subsistence
- Potentially renewable resources
- Maximum *sustainable* yield

Fisheries

- Protein for 1 billion people
- Inland 6%, aquaculture 23%, oceans 71%
- Tragedy of the commons

Forestry

- Commercial use or fuelwood
- Coniferous (softwood) for paper, lumber
- Deciduous (hardwood) for furniture, etc.
- Tropical hardwood for fuelwood, furniture
  - And clearing land

Tropical forests

- Land and fuel under pressure from growing population
- Beef more profitable than timber
- Gone: Central America 70%, Asia 50%, Africa 50%, South America 40%

Tropical forests

- Forests as carbon sink
- Rain forests and biodiversity
  - Costa Rica birds = North America
  - 72 species of ant on Peruvian tree
- Medical resources
- Ecotourism

Primary economic activity

- “Extractive” industries
  - Mining
  - Quarrying (gravel, sand)
- Nonrenewable resources
- Huge capital investment: then what?

Resource-based economies

- Multiple scales (from countries to towns)
- Dependent on one commodity
- Volatile commodity prices
- Boom-and-bust cycles
- Need value-added activity

Example: Antofagasta, Chile

- Founded in 19th century for nitrate mining
- Wealth led to Chile's first banks
- Chemical substitutes by 1930s
- Port for Bolivia

Example: Antofagasta, Chile

- New technology made copper mining possible
- Nationalized in 1970s
- 1990 boom when reopened to private investment
- Today: 9% of GDP, 33% of world copper
- But: foreign investment, no value-added

Agriculture

- About 1/3 of Earth’s land
- Subsistence, traditional, commercial

Subsistence agriculture

- Your responsibility!
- Extensive vs. intensive
- Nomadic herding, shifting cultivation, intensive subsistence
- Where and why

Commercial agriculture

- Maximizing profit, not food security
- Specialization by location
- Off-farm sales
- Interdependence of producers and consumers

Agribusiness

- Focus on minimizing risk
  - Producers want standard products
  - Farmers want guaranteed markets
- Contracts between farmers and corporations
- Political pressure for subsidies
- Political pressure on health

Von Thünen's land use model

- German landowner in 1800s
- Noticed pattern of agricultural land use
- Three assumptions:
  - Isolated city (no trade)
  - Surrounded by homogenous landscape
  - All that matters is transport costs

Von Thünen's land use model

- So what?
- Connections between city and country
- General patterns of agriculture
- Can be applied to urban settings, too
- Decreased transport costs make the pattern larger