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