The political-economy of water scarcity

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What do economists mean by scarcity?

Drought: Less than usual (NL drought = floods in Sevilla)
Scarcity: Demand exceeds supply. Prices should adjust
Shortage: Results if price signals blocked or absent
Non-market? Non-market goods need different management
NB: Too much + bad management is also costly
Classic example of balance via prices

![Graph showing supply and demand]

- **Supply**
- **Demand**
Classic example of scarcity: price ceiling
Management depends on water characteristics

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<tr>
<th></th>
<th>excludable</th>
<th>non-excludable</th>
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<tbody>
<tr>
<td>rival</td>
<td>private good</td>
<td>common-pool good</td>
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<td>non-rival</td>
<td>club good</td>
<td>public good</td>
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markets  economics

gov’t or community politics
Why scarcity matters

- “Natural” scarcity fits ecosystems
- Human scarcity can fit design parameters
- Shortage is costly, e.g., near evacuation of São Paulo
- End of abundance suggests (costly) new institutions
- Inaction drops costs on environment and poor
- Rich cope with “inefficient” solutions, e.g., desalination
Drivers of scarcity

Urban: Water prices too cheap
Sprawl: Money today, problems tomorrow (Vegas)
Agriculture: Weak management/rights/monitoring
Everywhere: Subsidies (energy, infra, storage)
Corruption: Politicians give benefits to friends, costs others

NB: CC increases variation, making everything worse
Solutions to scarcity I

**Virtue:** Do the right thing? (but 80/20)

**Information:** “Scarcity!” (but inattention)

**Prices:** Effective to a point (20% indoors)

**Buffers:** Robust adaptive systems cost more but work
Solutions to scarcity II

David Zetland

Living with Water Scarcity
For more...

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