

Conservation Reconsidered: Policy Legacies and Challenges in the Water Arena

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Three Take-Home Points

- 1) Institutions are key for efficient resource use**
- 2) Species protection versus production values - a continuing battleground**
- 3) Climate change will heighten the tradeoffs**

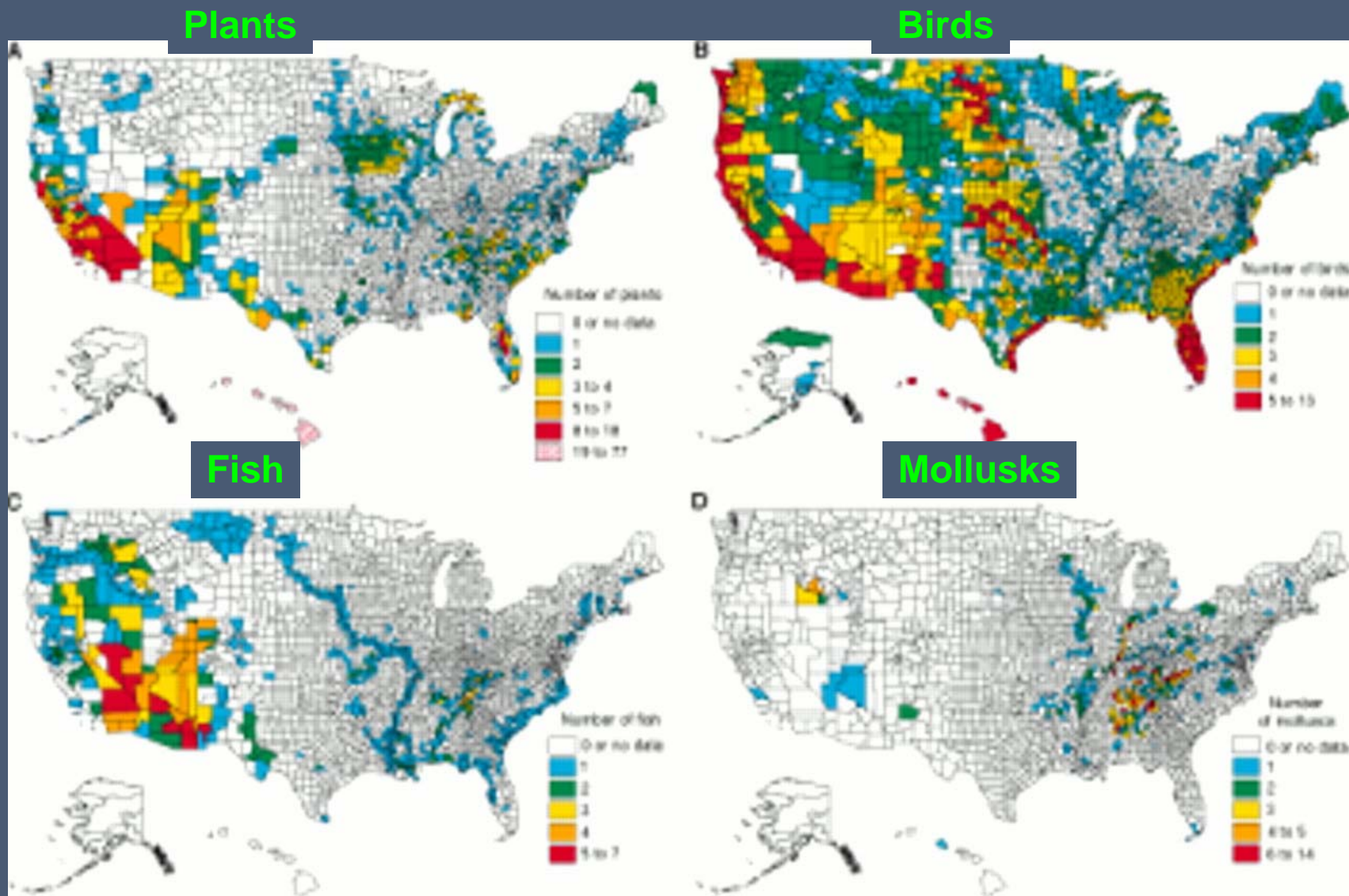
1. Technological Progress Is Necessary, But Not Sufficient, for Efficient Resource Use

- Krutilla's starting point: an emerging consensus that R&D would resolve natural resource scarcity problems
- Federal and state water policy reflects this thinking:
 - Subsidies for new technologies (desalination, recycling, conservation)
 - Technology mandates (plumbing codes)

Institutional Reform Is Probably a Bigger Obstacle to Efficient Water Use

- **In Western US, water scarcity is a persistent theme (and now also in Southeast...)**
- **Modeling exercises consistently demonstrate potential for more efficient water allocation**
- **Institutional obstacles:**
 - **Legal and regulatory barriers to transfers**
 - **Political barriers to efficient water pricing**
- **Feds, states could do more to encourage change**

2. Species Protection: Major Strides in Wake of Krutilla Paper (ESA, 1973)



Listed species, 1997 (Dobson et al., *Science*)

But Conflicts Over Species Protection Are Intense, Given Resource Competition

- **Krutilla foresaw these conflicts – hence argued for public acquisition of habitat**
- **Despite vast public acquisitions, private lands or water bodies shared by species and humans are often arenas for conflict**
- **Public support seems variable: not all “critters” are charismatic or “useful”**
- **Uncertain science of restoration can also raise public questions about costs**

The Klamath Basin: A Localized Conflict Over Federal Water for Salmon and Farmers



- Spring 2001 drought: water diversions to farmers halted

- Following year: policy reversal and massive salmon die-off
- Since then, continuing tug-of-war

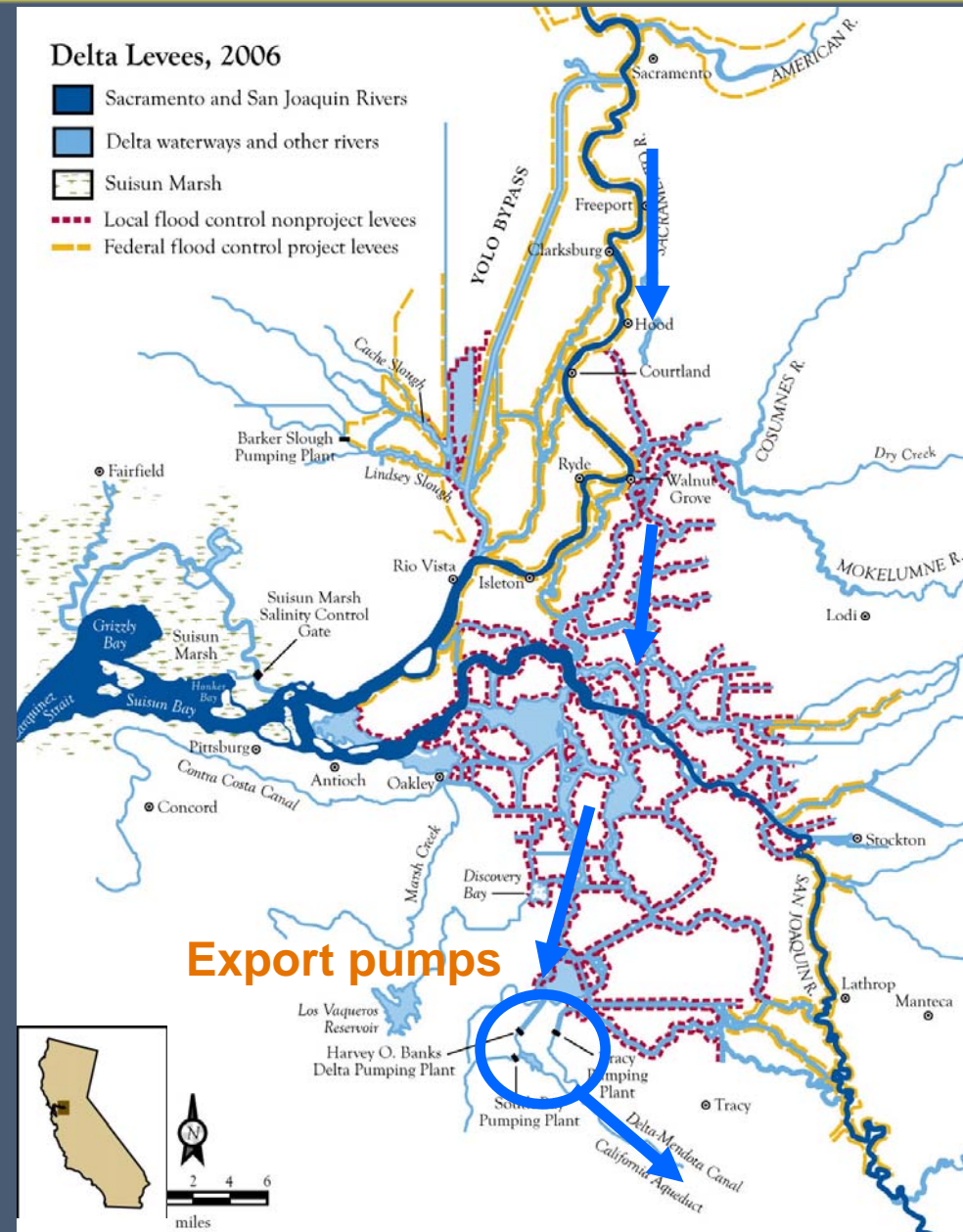


Sacramento-San Joaquin Delta: An Ecosystem Crisis with Statewide Economic Implications

- Endemic delta smelt on verge of extinction



- Summer 2007: major pumping cutbacks ordered
- Costly fixes exist, but no guarantees



3. Expect Climate Change to Heighten Such Tradeoffs

- **Species protection will likely become more difficult with climatic shifts, ecosystem disturbances**
- **Meanwhile, most climate scenarios predict declines in water supply & developable land with low flood risk**
- **Anticipatory steps likely needed to protect extended habitat corridors – heightening potential conflict space with human uses**
- **Will the public be willing to pay for these acquisitions, given uncertainties?**