Comparison and Contrast of U.S. and Dutch Water Management (IWRM in the North)

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History of Project

- Results from Technical Assistance Agreement between the Dutch Rijkswaterstaat and the U.S. Army Corps of Engineers
- Workshop of Historians at the Hague in November 2005
- Final product: a book that compares and contrasts water resources development in the two nations
Workshop Delegates

- United States
  - John Anfinson
  - Betsy Cody
  - Gerald Galloway
  - Martin Melosi
  - Martin Reuss
  - Peter Rogers
  - Todd Shallat
  - William Willingham

- The Netherlands
  - Eric Berkers
  - Toon Bosch
  - Nil Disco
  - Maurits Ertsen
  - Ruud Filarski
  - Wim van Leussen
  - Sander Meijerink
  - Bert Toussaint
  - Bart Schultz
Period One

- United States (1802-1865)
  - Limited Federal government
  - Support to Corporations/States

- The Netherlands (1800-1850)
  - Revolution and Consolidation
Similarities

- Dependence of military engineers. Engineers as elements of centralization
- Generally, a continuous development of infrastructure
- Cycles of economic expansion and relative stagnation
- International trade an important economic factor
- At the national level, an emphasis on navigation projects
Differences

- Limited govt (U.S.) versus semi-absolute power (Neth.)
- Slow expansion of railways (Neth.) versus rapid expansion of railways in U.S. after 1940
- Wood (U.S.) versus peat (Neth.) for fuel
- Industrial Revolution comes later to the Netherlands
- Centralization (Neth.) versus failure of centralized planning (U.S.)
Differences (2)

- Early formation of political parties in U.S. versus development after 1880 (Neth.)
- Higher priority for water resources management in The Netherlands
Period Two

- **United States (1865-1900)**
  - Active Federal government
  - Support to private sector/business

- **The Netherlands (1850-1890)**
  - Building the liberal state
Similarities

- Family farms dominate
- Immigrants seek employment
- Rapid capital accumulation
Differences

- Growth of liberal government in The Netherlands (reluctance to intervene in business matters); dominance of Republican congresses in the U.S.; intent on using government to promote business

- Development of government institutions and responsibilities in The Netherlands; continued concerns over power of central government in the U.S.

- Central government in U.S. assumes more control over water projects versus assumption of water management services by provincial governments in The Netherlands
Period Three

- United States (1900-1920)
  - Progressive Era

- The Netherlands (1890-1920)
  - Transition
Similarities

- Urbanization rapidly escalates
- Governments become more involved in social engineering
- Heightened awareness of social abuses
- Agriculture becomes mechanized
- Floods (Zuiderzee, Mississippi River) act as “trigger events” that lead to new policies and projects
Similarities (2)

- Electrification in both countries
- Scientific management
- Hydrology evolves from mainly a science of measurement to a science of mathematical rationalization
Differences

- Immigration contributes to substantial ethnic pluralism in the U.S.; cultural homogeneity in The Netherlands

- U.S. still has vast areas of unpopulated land versus a totally domesticated Holland

- Few natural resources to be developed in The Netherlands; an abundance of natural resources in the U.S.
Period Four

- United States (1920-1970)
  - Federal government primacy

- The Netherlands (1920-1970)
  - Planning and technocracy
Similarities

- Development of large-scale water projects
- Growing governmental “technocracy”; faith in technological solutions
- Highly mechanized and skilled agricultural and industrial sectors
- Crises (1953 in The Netherlands; 1927, 1936, and 1937 in the U.S.) lead to enlarged national flood control responsibilities
- Extensive development of research in hydraulics and soil mechanics
Differences

- Continued suspicion of national planning in U.S. versus emphasis on national planning in The Netherlands
- Several U.S. national water agencies versus one (Rijkswaterstaat) in the Netherlands
- Dutch water boards—the primary water managers in The Netherlands—subject to provincial and national legislation versus relative autonomy of state and local public works agencies in the U.S.
- Growth of hydropower in the U.S. versus little hydropower in The Netherlands
Differences (2)

- “Polder Model” of decision-making, involving all affected members of population versus greater influence of economic and political elites in the U.S.

- More emphasis on resource exploitation in the US. leading to construction of many high dams
Period Five

- United States (1970-present)
  - Jurisdictional transformation

- The Netherlands (1970-present)
  - Environmental participation
  - Internationalization
Similarities

- Increased emphasis on water quality and salinization
- Increased emphasis on non-structural flood control solutions
- Increased emphasis on integrated water resources management
- Increased attention to international water resources issues as they affect respective countries
Similarities (2)

- Stakeholders involved in the planning of projects
- Central government’s role in maintenance and operations increases
- Increased technical assistance to other countries
- Public involvement in water planning increases
Differences

- Centralization of water authority in The Netherlands; decentralization (U.S.)
- Decreased emphasis on federal water projects (U.S.); continued national attention (Neth.)
- Congressional budget; policy and budget consensus in The Netherlands
- Governmental concerns about climate change in The Netherlands; lack of official U.S. concern
Differences (2)

- More skill and expertise migrate to local and state agencies in U.S.; retention of outstanding capability in the Dutch national government.

- Continued emphasis on planning (Neth.); little centralized planning (U.S.).

- Multitude of jurisdiction issues in the U.S.—flow transfers, Native American rights, dam removal; more stable jurisdictional situation in The Netherlands.
Conclusions

What is Necessary for the Development of a National Water Infrastructure in Countries Such as The Netherlands and the United States?
Stable Government

- Structure that reflects a cultural consensus
- Constitution/laws based on broad consensus
- Institutional capacity to change and grow
- Clear understanding of agency responsibilities and accountability
- Freedom of expression
Necessities (Continued)

- Capital accumulation necessary to construct infrastructure from local to national levels
- Technical, ecological, juridical, economic and communicative expertise at all government levels
- Willingness to share expertise with “stakeholders”
- Educational system to develop technical and other relevant expertise and competent bureaucracy
Obstacles to Water Infrastructure Development

- Disasters
- Poor or inadequate planning
- “Turf-protection”—lack of coordination among agencies and governments at all levels
- Lack of capital and/or competing demands on budget
- Inadequate stakeholder input
Difficulties in reconciling economic development and environmental protection and in reconciling notions of active and limited government

Economic and political interests fighting over limited funds

Lack of leadership
To Be Determined. . .

- Disadvantages and advantages of command and control economies versus market economies
- Is there a “take-off point” in gross domestic product before national water infrastructure can be developed?
- Disadvantages and advantages of centralized versus decentralized governments
Questions?
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Project History & Workshop Delegates

Similarities and Differences by Historical Periods

Conclusions

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