

# Thung Song & The Netherlands

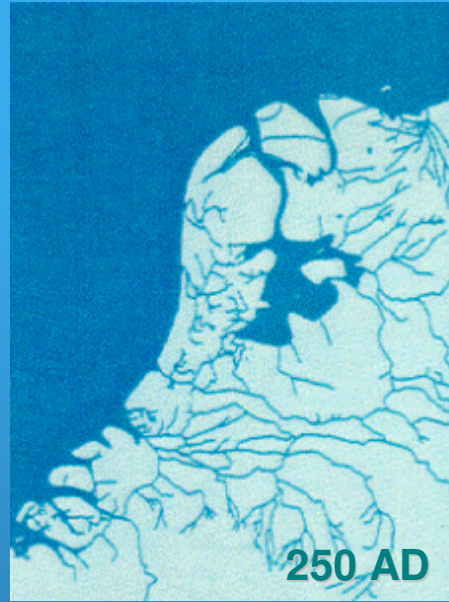
**Anne van Urk**

# Introduction

- Anne van Urk, M.Sc. Civil Engineering.
- Consulting in developing water.
- Ministry of Public Works and Water Management → Water, Flooding, etc.
- International: UNDP, UNHCR, WMO, IAEA, Vietnam, Bangladesh, Egypt, E-Africa, ...
- Scope
  - Integrated River, Delta and Coastal Zone Management
  - River & Delta Morphology
  - Emergency operation

# The Netherlands

3



2/19/11

Anne van Urk; Thung Song November 23, 2011



# POSITION OF THE NETHERLANDS

**Densely populated low lying delta area**

**Dealing with water is of immense importance**

**Water issues are complicated**

- Competing interests
- National/ local

**The Netherlands as pilot:  
perspective for many countries in the  
world**

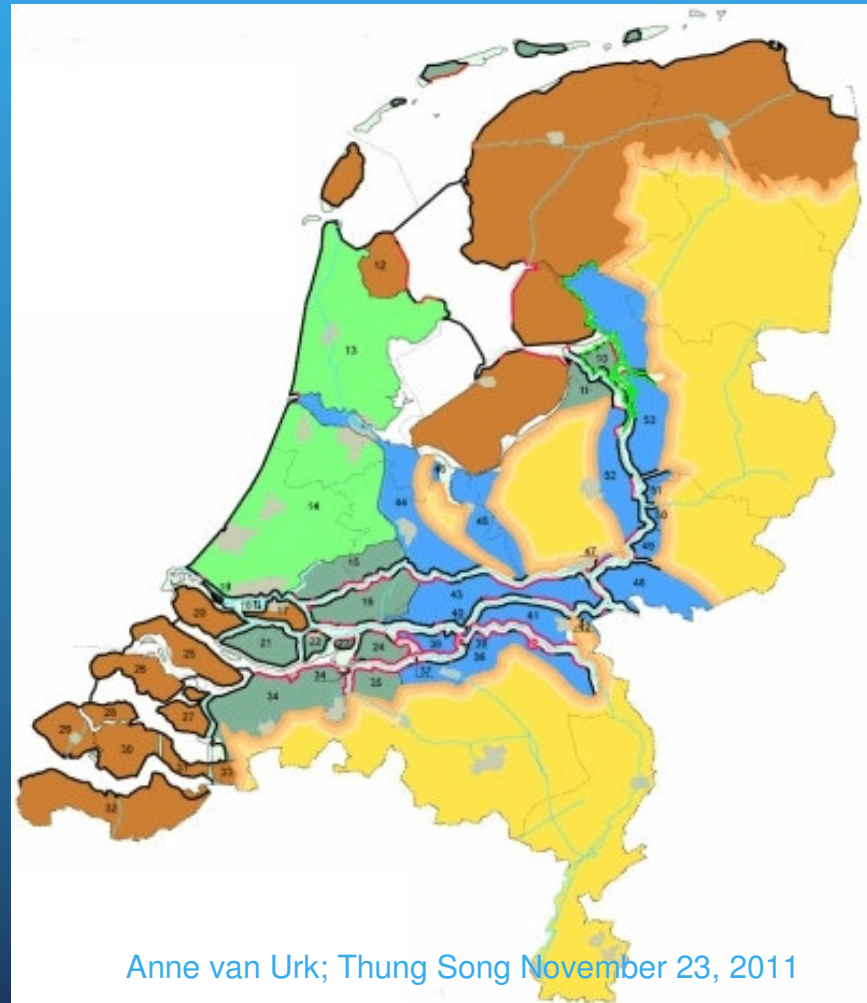
# PRIORITY 1 - FLOOD PROTECTION

Cost benefit approach

Early warning systems

Emergency plans

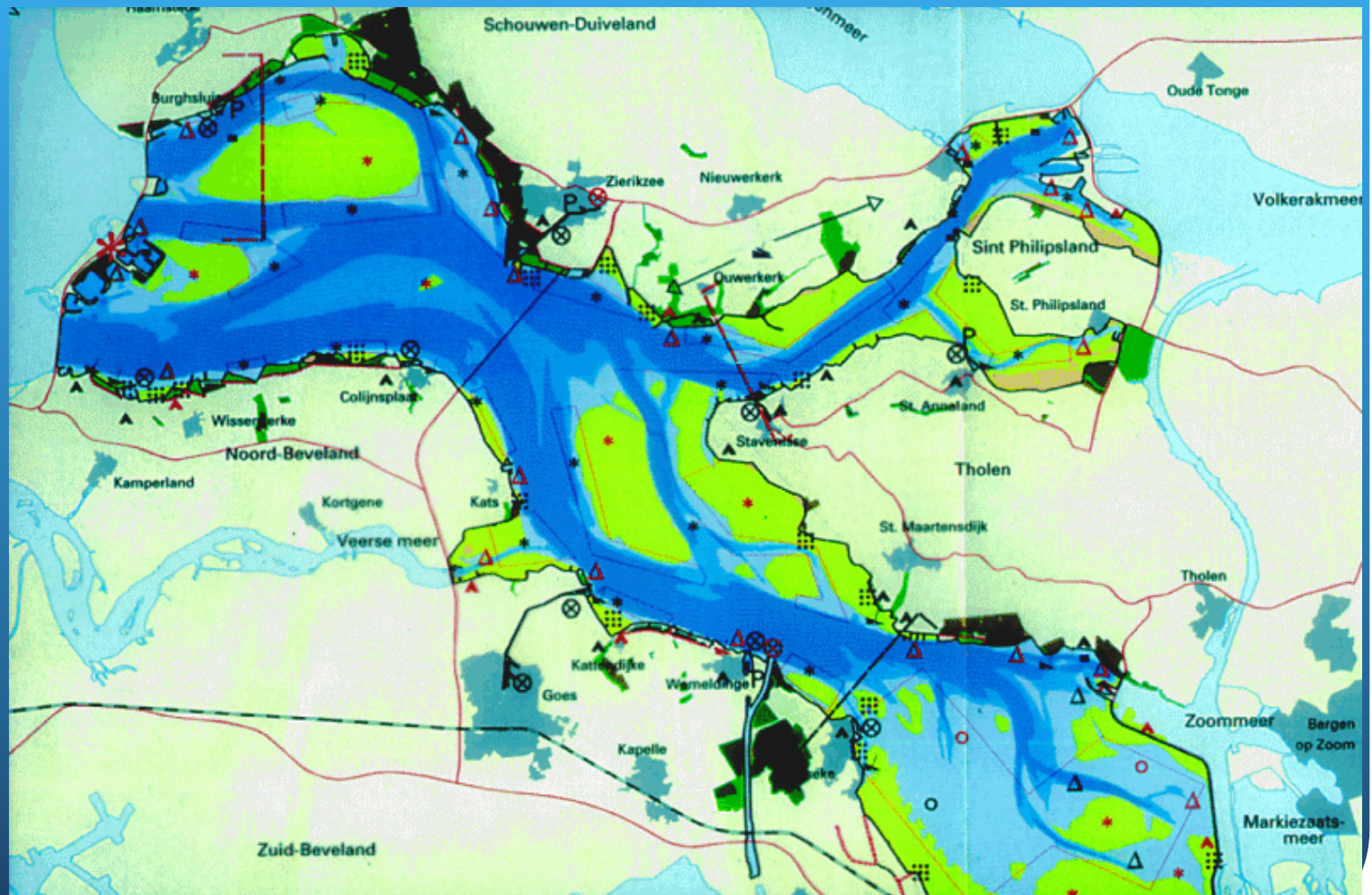
Space for water





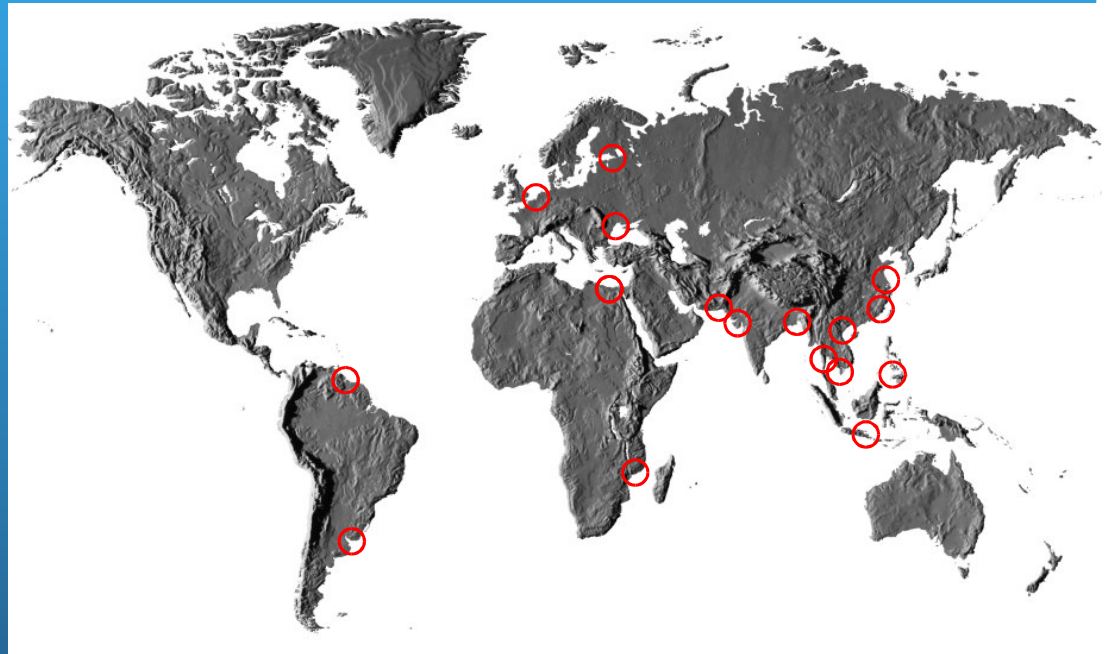
# PRIORITY 2

## INTEGRATED WATER MANAGEMENT



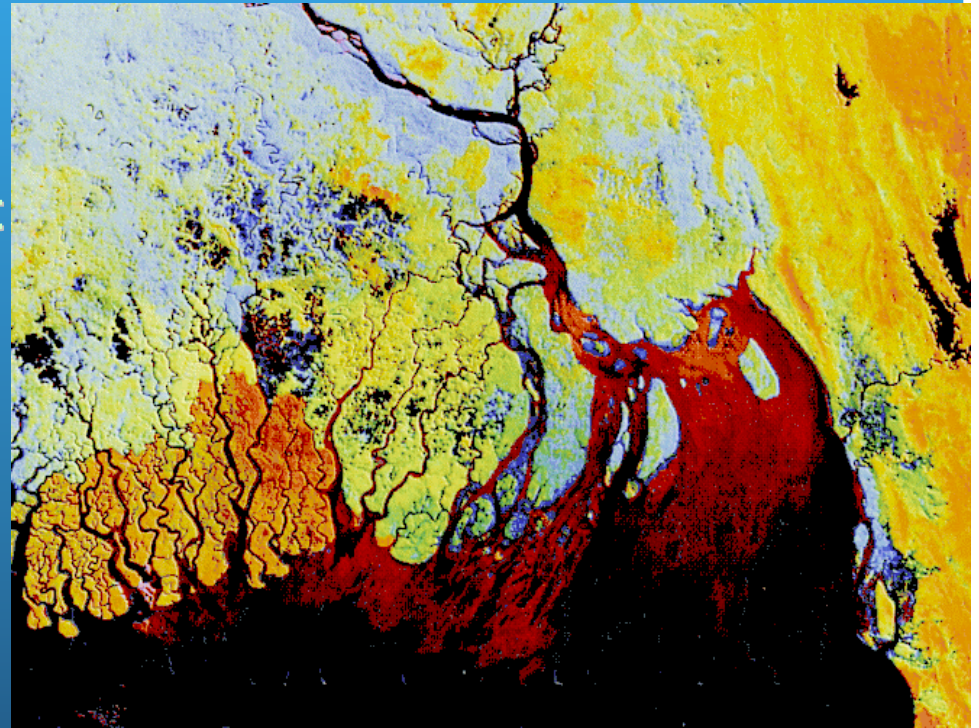
# GLOBAL INITIATIVES

- Sustainable development of delta's
- Stimulate water in co-operation.



# Exchange of knowledge and experiences

- Capacity building
- Institutional development
- Human resources development
- Open planning procedures





# Experience

- Water & Flood management in The Netherlands → all aspects
- International Organizations → WMO, UNDP, UNHCR, IAEA, e.g. guideline development , etc.
- Countries:
  - Egypt → Support research institutions on river Nile
  - Somalia → Improvement river Shebelle (UNDP)
  - Guyana → Safety issues
  - Poland → Coastal zone management
  - Vietnam:
    - Strategy and Action plan for mitigating water disasters (UNDP)
    - Coastal zone management planning
  - Kazakhstan NPP
  - Bangladesh → Implementation Master plan & Development plan
  - Etc.

# Thung Song - overview

- River courses
  - Network
  - Capacities
  - Discharges
  - Developments
- Present situation
  - Monsoon
  - Issues in town
  - Issues outside town
- Known!!

# Thung Song - observations

- Quick scan main water system
- Developments in area:
  - Deforestation
  - Forests replacement by plantations with open structure
  - Erosion with sediment laden water
- Future:
  - Deepening
  - By passes
  - Vegetation control
  - Reservoirs



# Thung Song - observations town

- Town situation → complex drainage
- Closed watersheds
  - houses
  - roads
  - gardens

# Thung Song - downstream

- Heavy vegetation
- Reduced discharge capacity
- Sedimentation
  - Local → by erosion
  - From erosion in the upstream
- Irrigation

# Thung Song → directions

- Increase discharge capacity
- Sedimentation control
- Vegetation control
- Solutions?
- Discussion on directions



# Thung Song

- What to add?
- Cooperation would be a challenge

Thank you