

*The Water and Urban Initiative is
focused on improving the water
environment of cities in developing
countries in Asia*

WUI

Water and Urban Initiative

An overview

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Pollution



Flooding

ช่องซ้าย
ผ่านตลอด

3



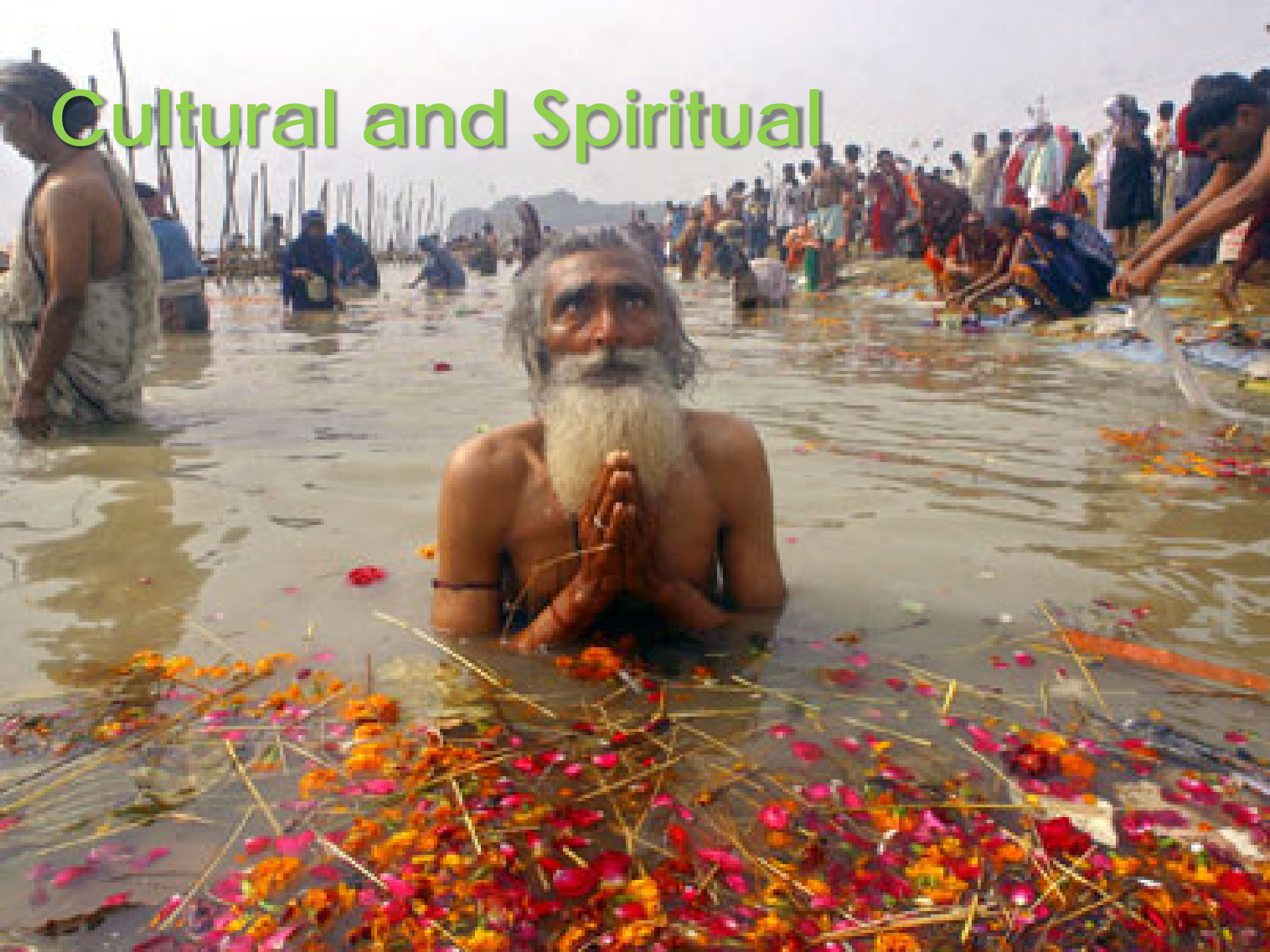
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Vulnerability

4



Cultural and Spiritual



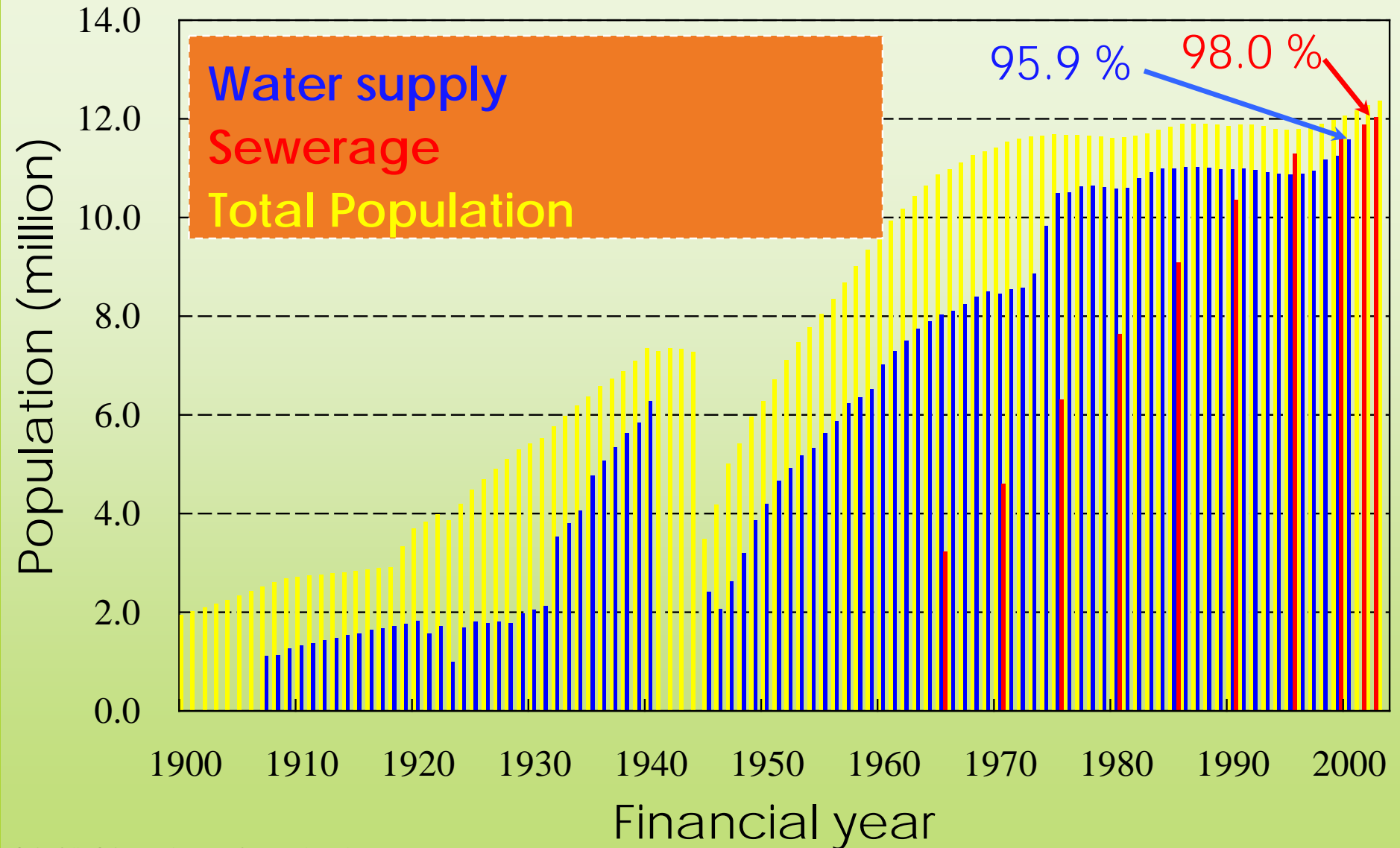
Problem on water in developing urban cities

- ▶ Water shortage by human activities
 - ▶ Urban water shortage
 - ▶ Loss of biodiversity
 - ▶ Damage of water landscaping
- ▶ Water degradation by human activities
 - ▶ Unable to use water
 - ▶ Loss of biodiversity
 - ▶ Odor and landscaping damage

Rivers of Tokyo in 1970s



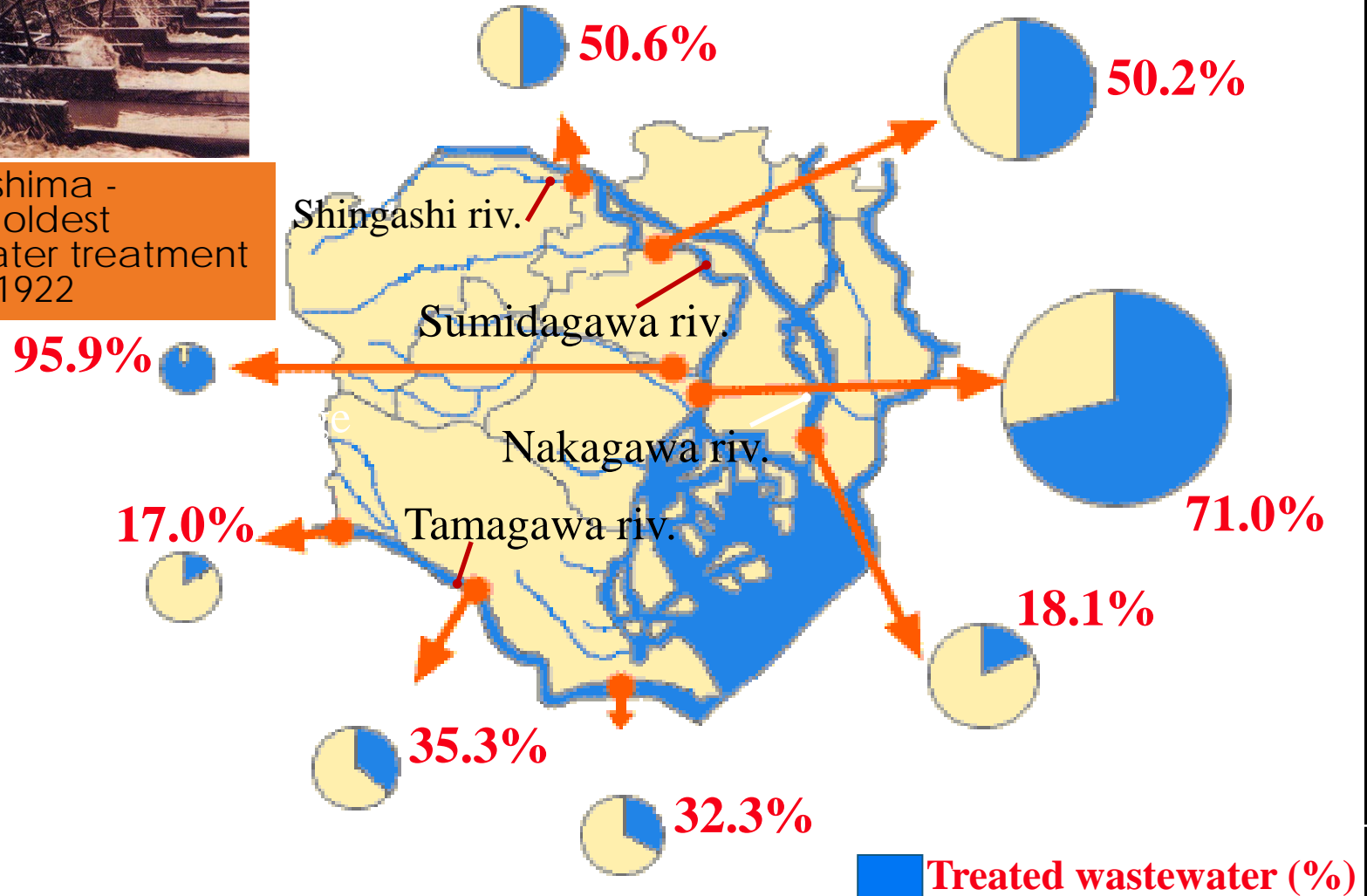
Population with water supply/sewerage in Tokyo



Large share of river water in Tokyo is treated wastewater



Mikawashima - Japan's oldest wastewater treatment plant in 1922



Restoration of natural ecosystems and landscaping with treated wastewater



Picture source: Bureau of Sewerage, TMG

Picture source: Mitaka Education Centre

Water environment in Tokyo



Ochanomizu station



Kandagawa river

Picture source: Tokyo Canal Project



Sumidagawa riv.

Picture source: Tokyo Canal Project



Nihonbashi

Picture source: Tokyo Canal Project

Objectives of WUI

- ▶ Investigate roles of water for sustainable urban development
 - ▶ Development of index to evaluate water value
 - ▶ Scientific evidenced
 - ▶ Tested by various actual cities
 - ▶ Evaluation by stakeholders
 - ▶ Water quality and quantity projection in future urban cities
 - ▶ Urban development scenario
 - ▶ Appropriate allocation of water-related infrastructures
 - ▶ Low carbon cities

Study cities



Project Work Plan

14

Data collection and estimation

Climate change | Land use | Population | Master plan | etc.

Model development

Water quality model

Water quality index

Inundation model

Risk assessment model

Scenario analysis

Simulation of future water environment

Benefit analysis

Economic evaluation of improving water environment

Dissemination and outreach

Database development | Capacity development | Publications

Asian cities – living with water

15

- ▶ Appropriate urban development over maintaining good quality of water
- ▶ Low carbon city through water management
- ▶ Improve resilience for climate and social changes
- ▶ An indicator to evaluate all above things as system
- ▶ Innovative finance system for water-related infrastructures through development of the index

Thank you

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