

PROBLEMS IDENTIFIED DURING STAKEHOLDER WORKSHOP ON LOCAL WATER CHALLENGES

Kozhikode, India

15 July 2022 (problem identification) and 4 March 2023 (problem interrelation)

PROBLEM CATEGORISATION

problem

TOPOGRAPHY

challenging landform

GROUNDWATER

depletion due to over-extraction
depletion due to lacking groundwater recharge and rainwater harvesting
depletion due to excessive outflow
lacking use of traditional water knowledge and practices
salt water intrusion
droughts
contamination due to sewage discharge
contamination due to leaking septic tanks in proximity of open wells
contamination due to waste dumping
increasing remote water resource dependency

WATER BODIES

encroachment
lacking conservation and maintenance
underutilization for recreation and transport
contamination due to waste dumping
contamination due to sewage discharge
algae growth

DRAINAGE

flooding
water logging
lacking drainage infrastructure
lacking maintenance drains
lacking disaster resilience planning
encroachment drains
siltation

SEWERAGE

lacking or absent sewage treatment plant
lacking liquid, fecal, and commercial waste (water) management
lacking household facilities
mixed with stormwater drainage

SOLID WASTE

lacking solid and commercial waste management
costly

SUPPLY

lacking supply network
lacking water quality testing
lacking legislation and charging of use
over-use
inequitable availability
increasing remote water resource dependency

TRANSPORT

underutilization canals for transport
requires deepening canal

GOVERNANCE

lacking data availability, reliability, management
lacking enforcement of regulations
delays administrative process
siloed departments

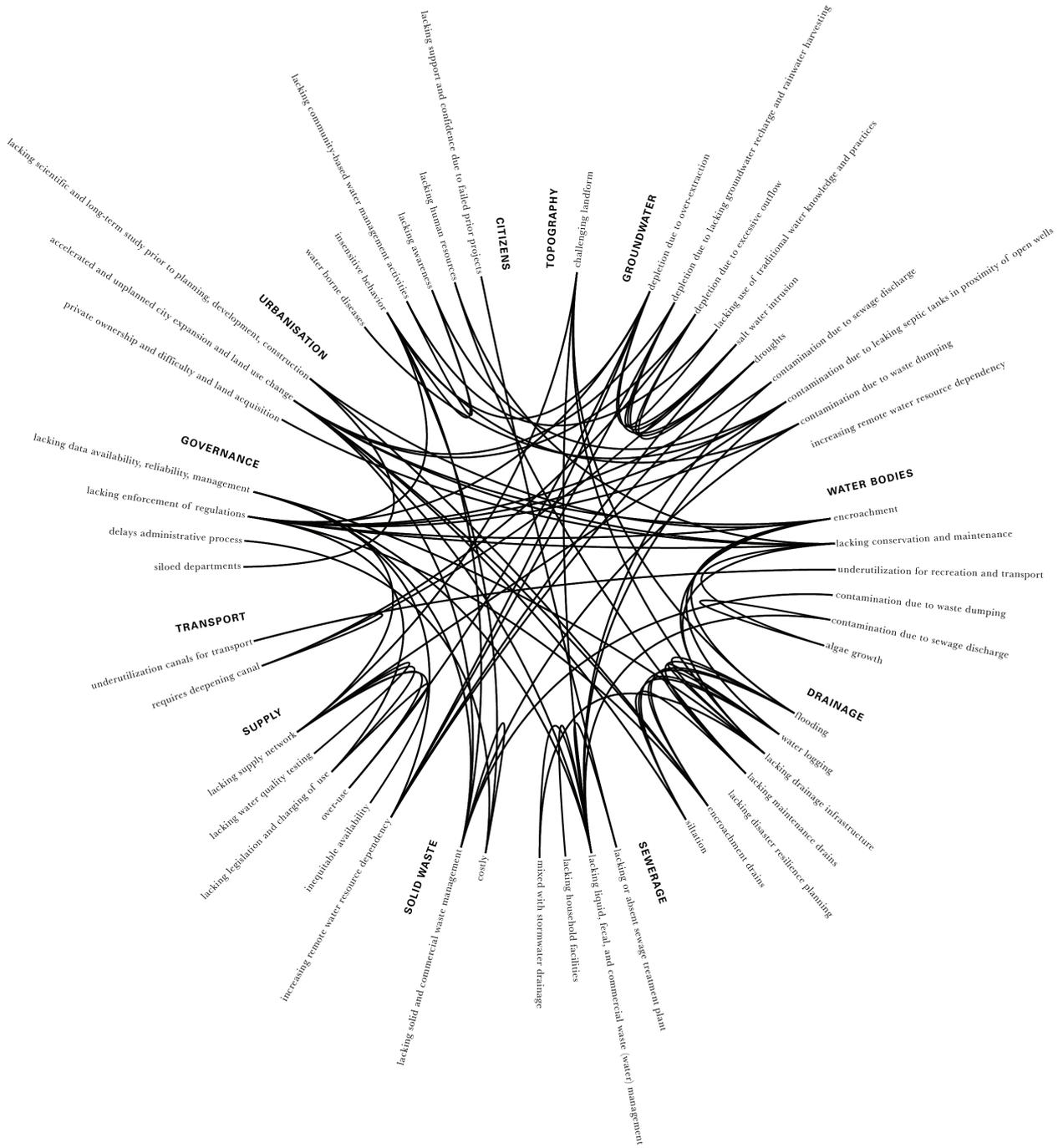
URBANISATION

lacking scientific and long-term study prior to planning, development, construction
accelerated and unplanned city expansion and land use change
private ownership and difficulty land acquisition

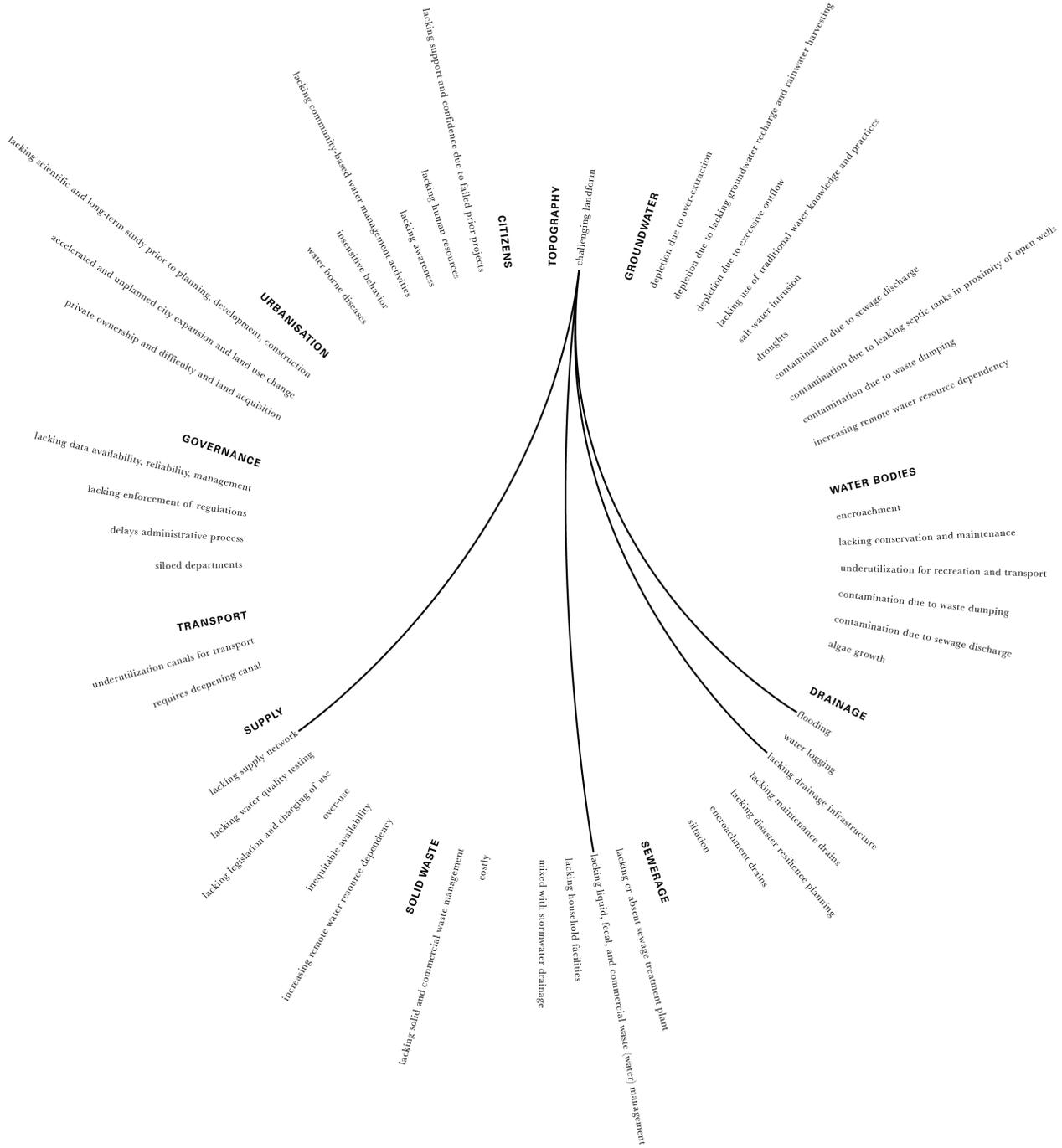
CITIZENS

lacking support and confidence due to failed prior projects
lacking human resources
lacking awareness
lacking community-based water management activities
insensitive behavior
water borne diseases

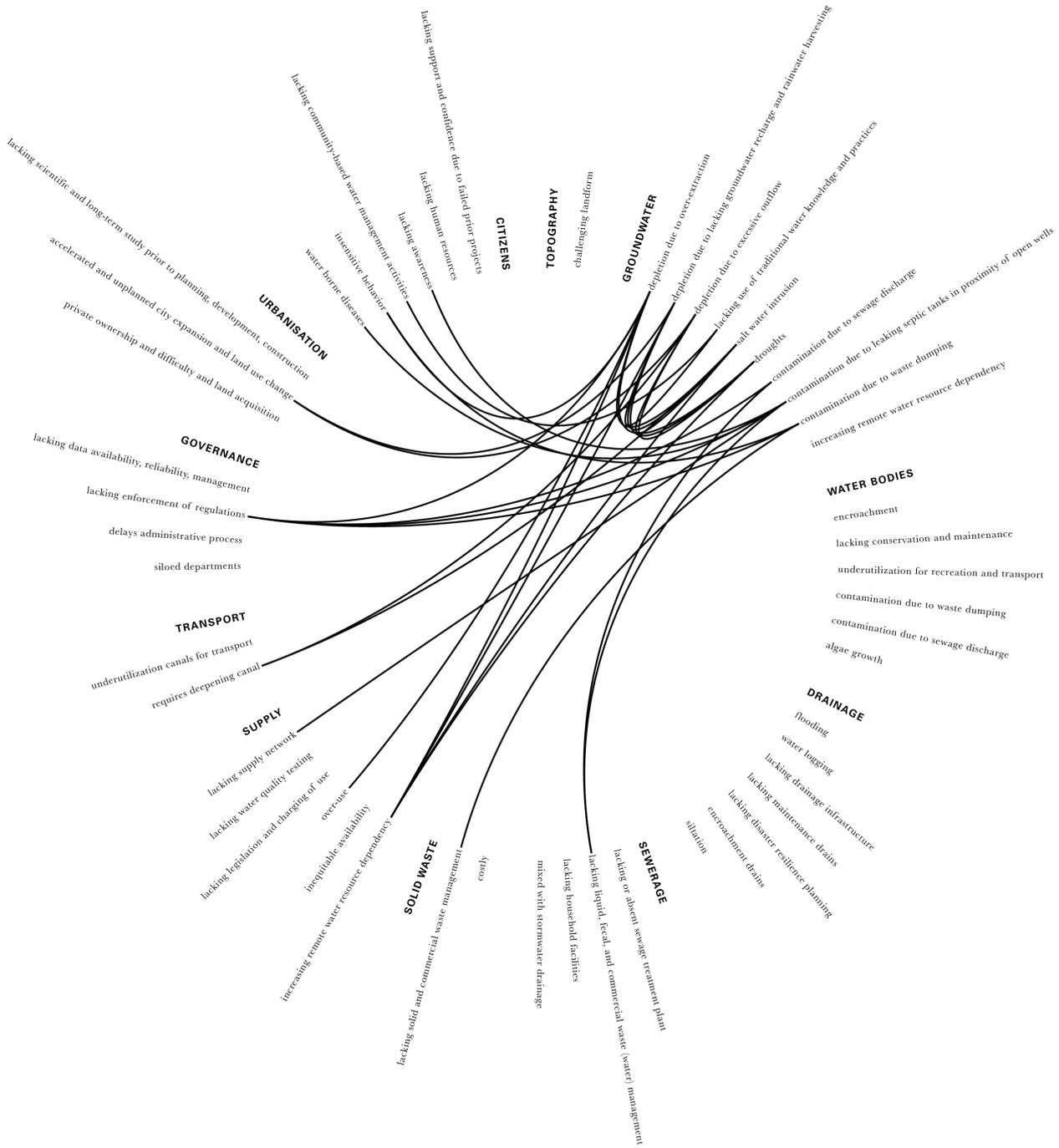
INTERRELATIONS OF IDENTIFIED PROBLEMS



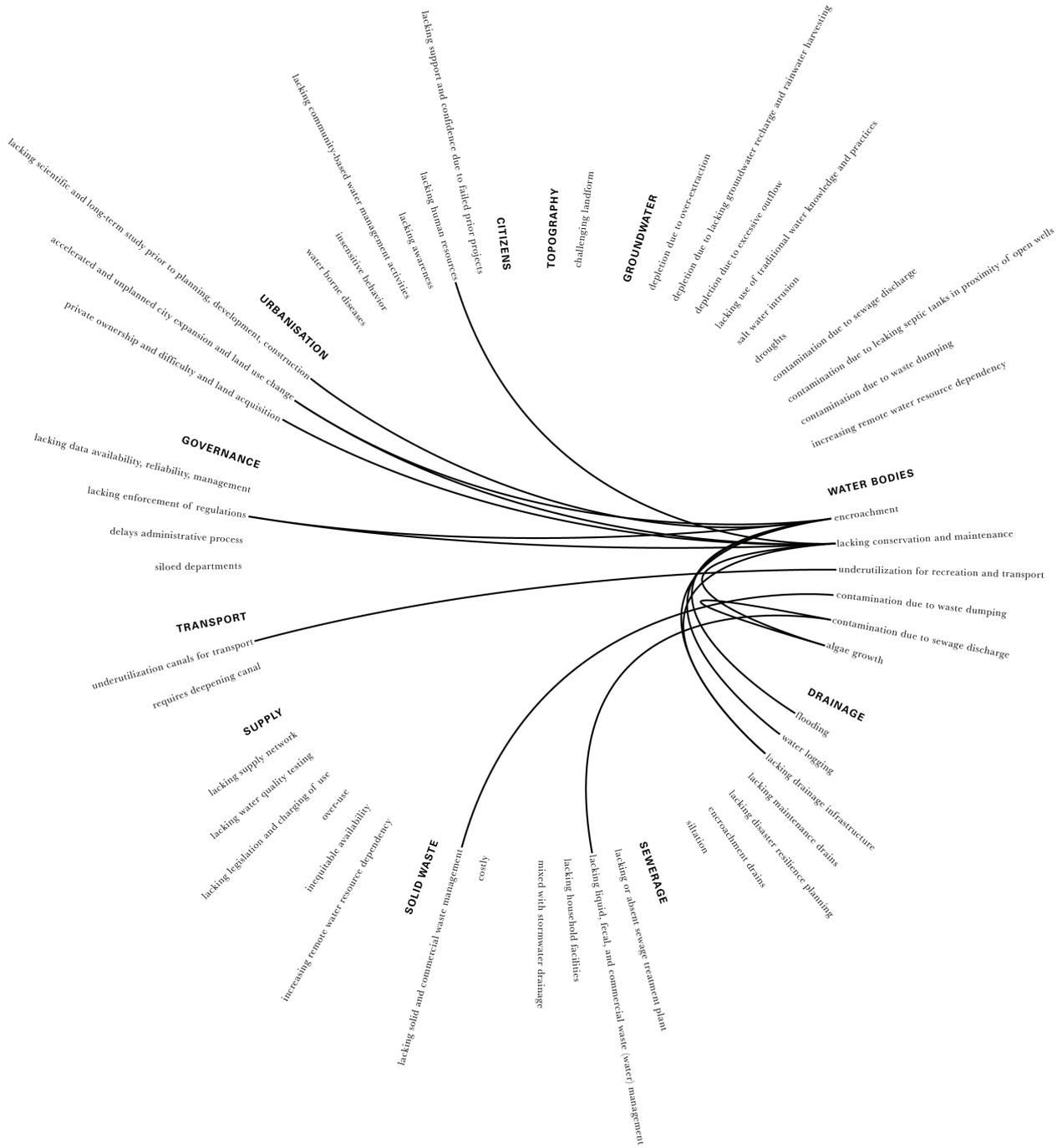
PROBLEMS RELATED TO TOPOGRAPHY



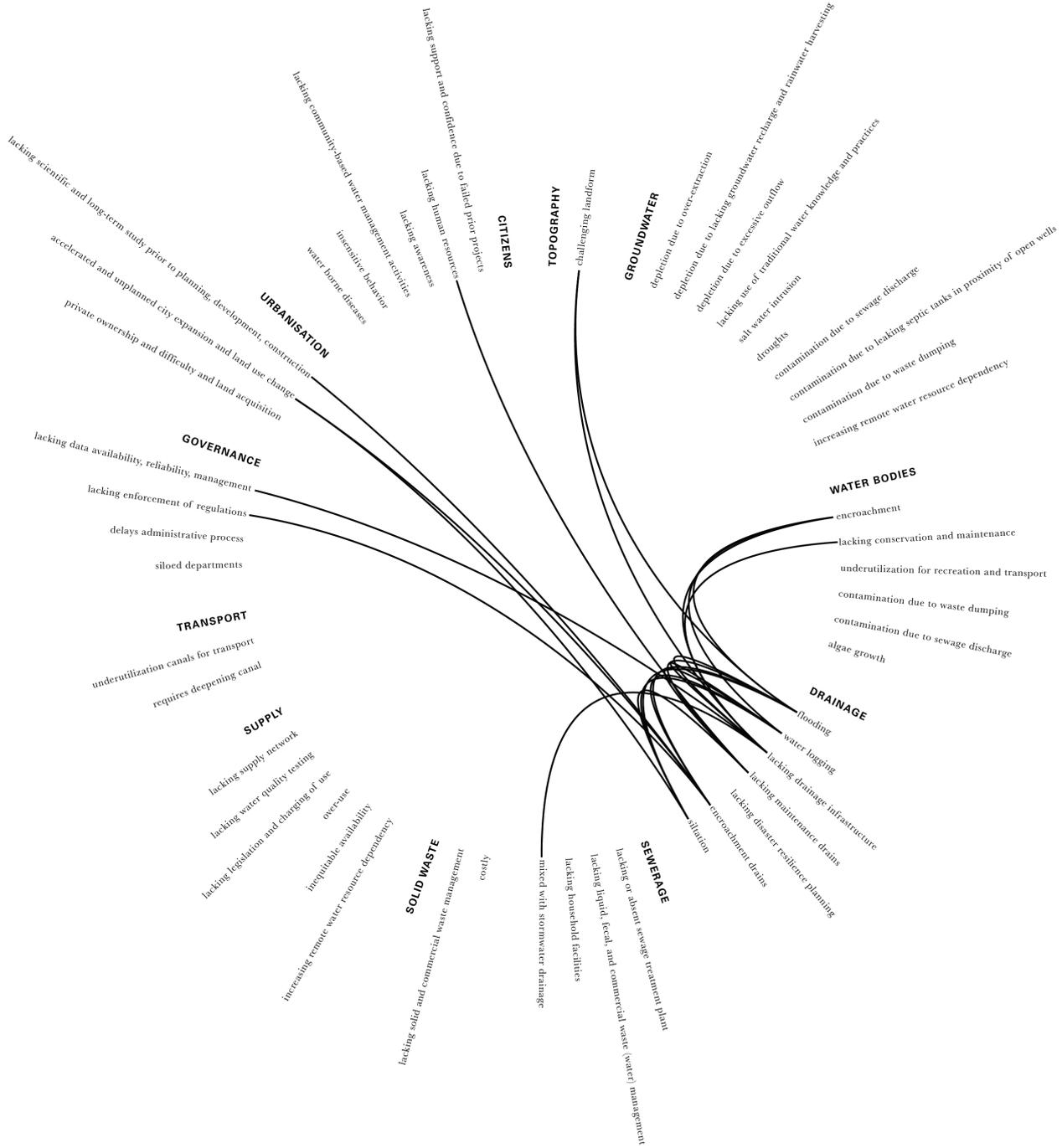
PROBLEMS RELATED TO GROUNDWATER



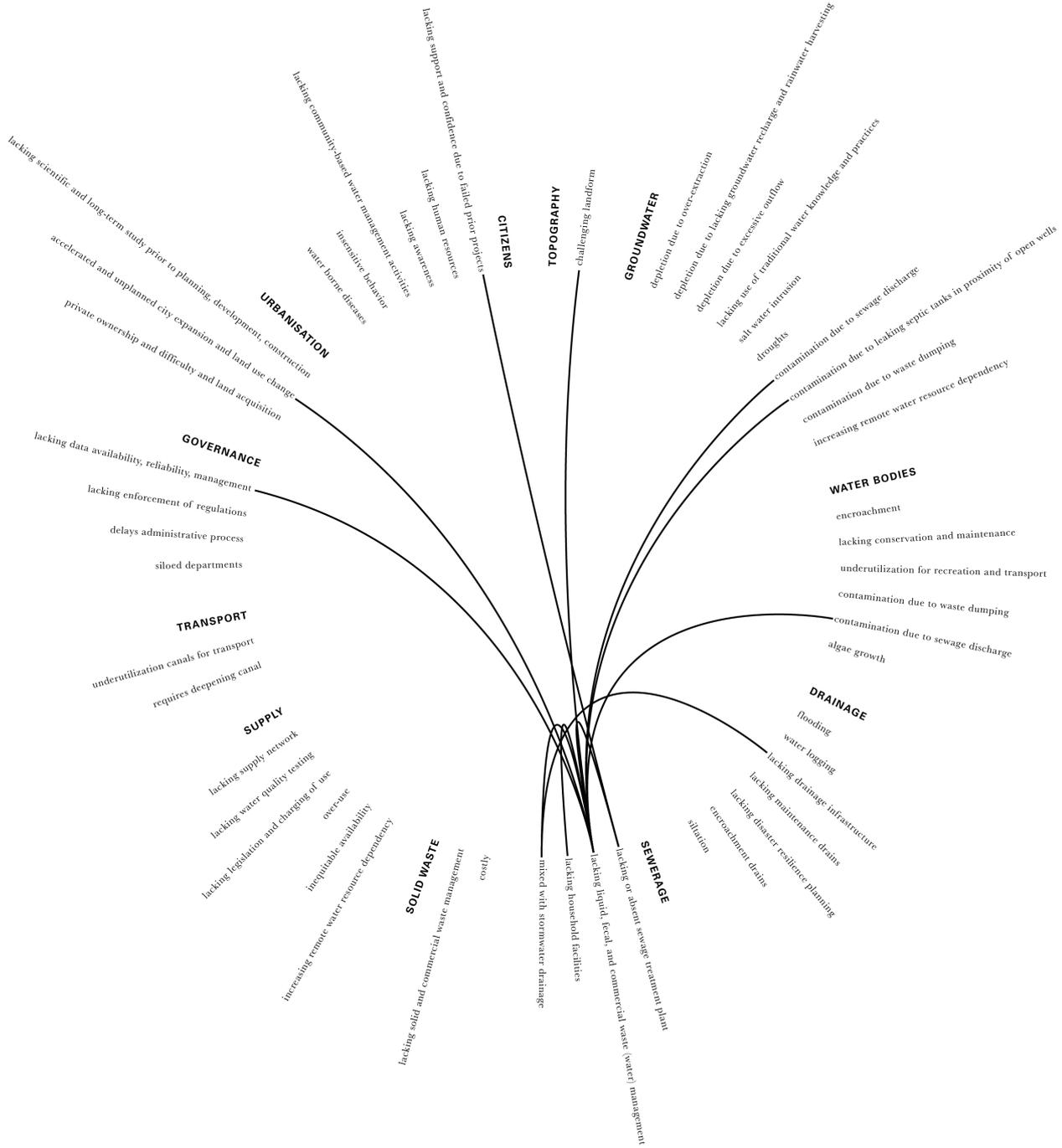
PROBLEMS RELATED TO WATER BODIES



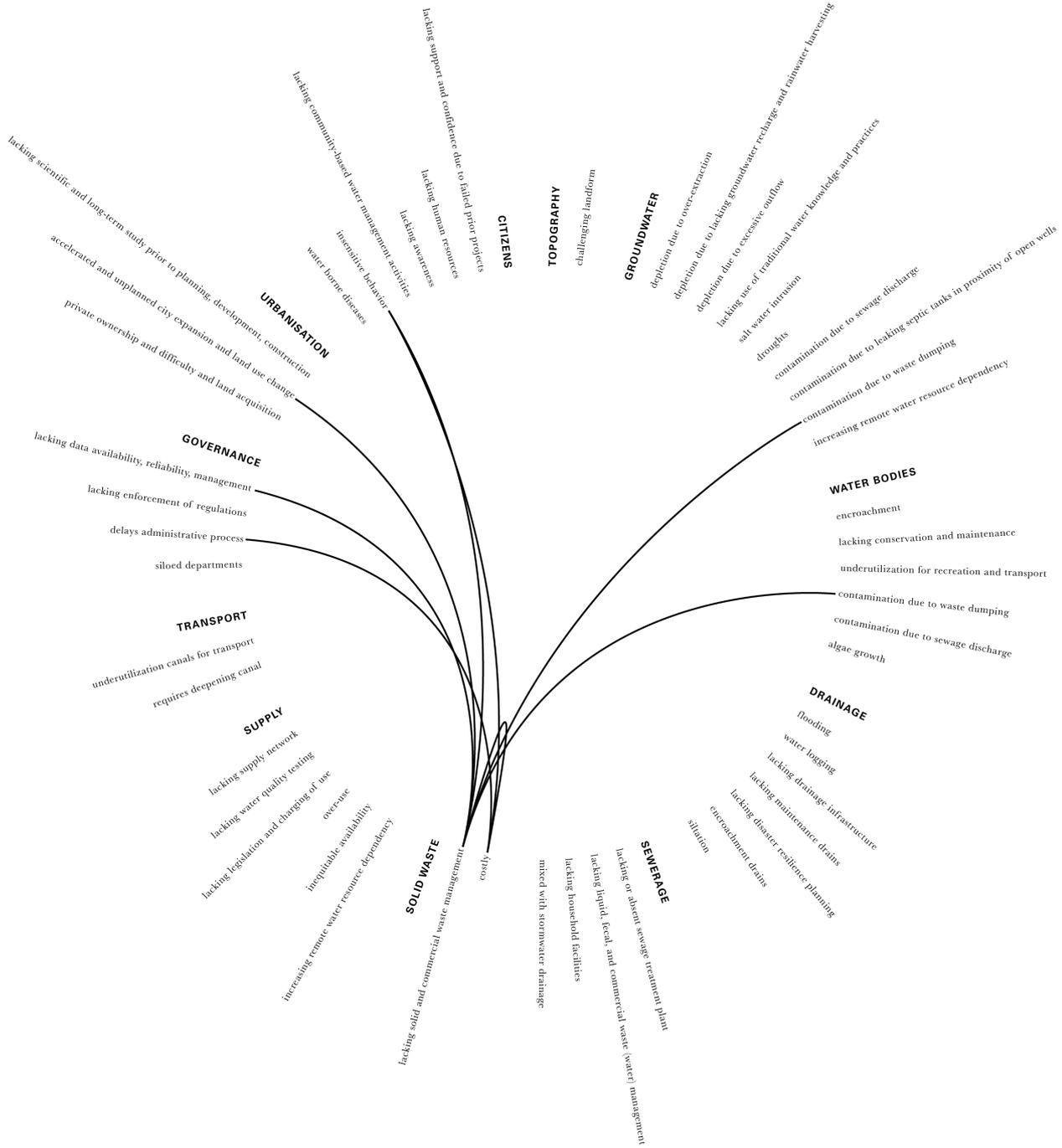
PROBLEMS RELATED TO DRAINAGE



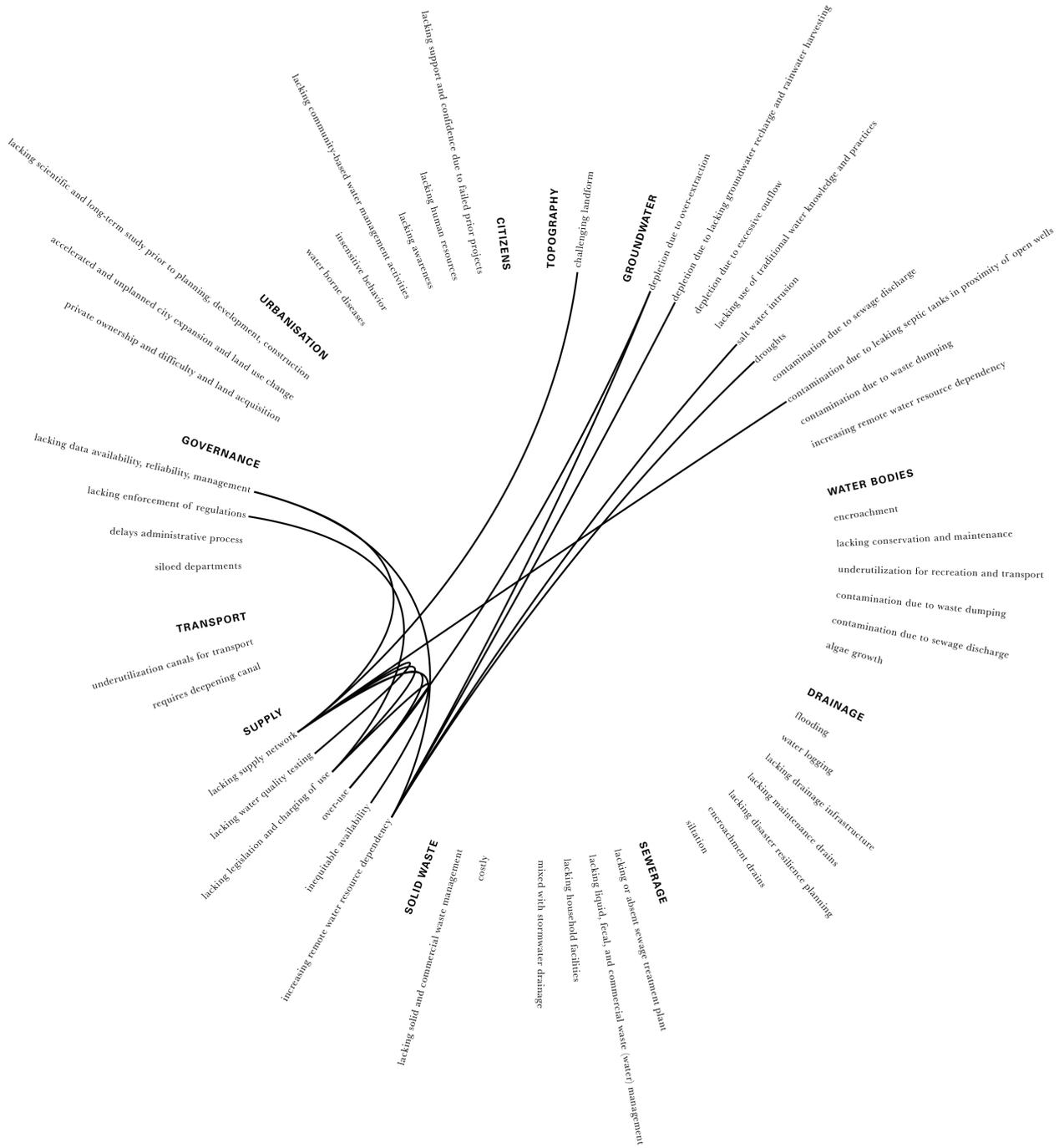
PROBLEMS RELATED TO SEWERAGE



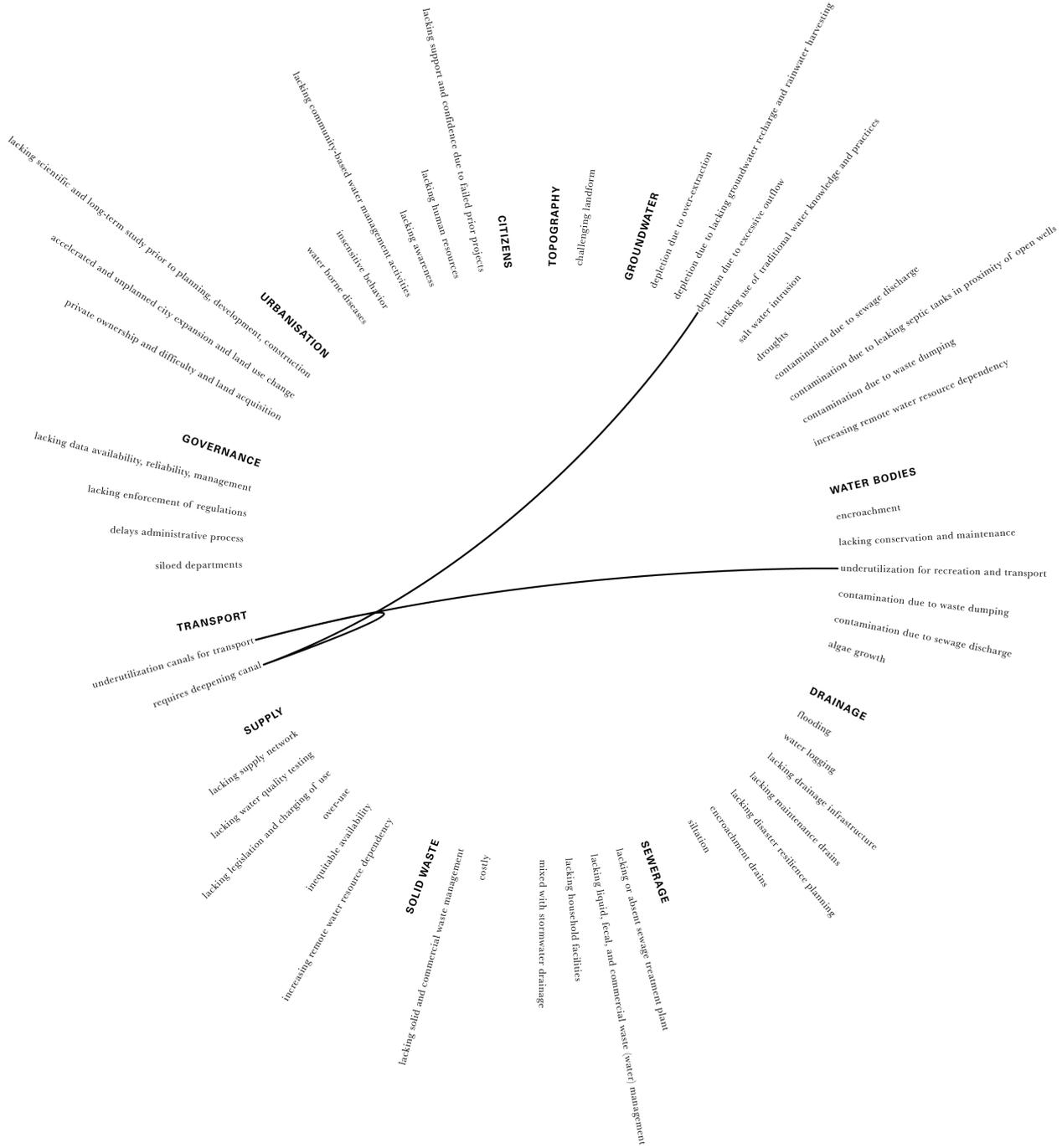
PROBLEMS RELATED TO SOLID WASTE



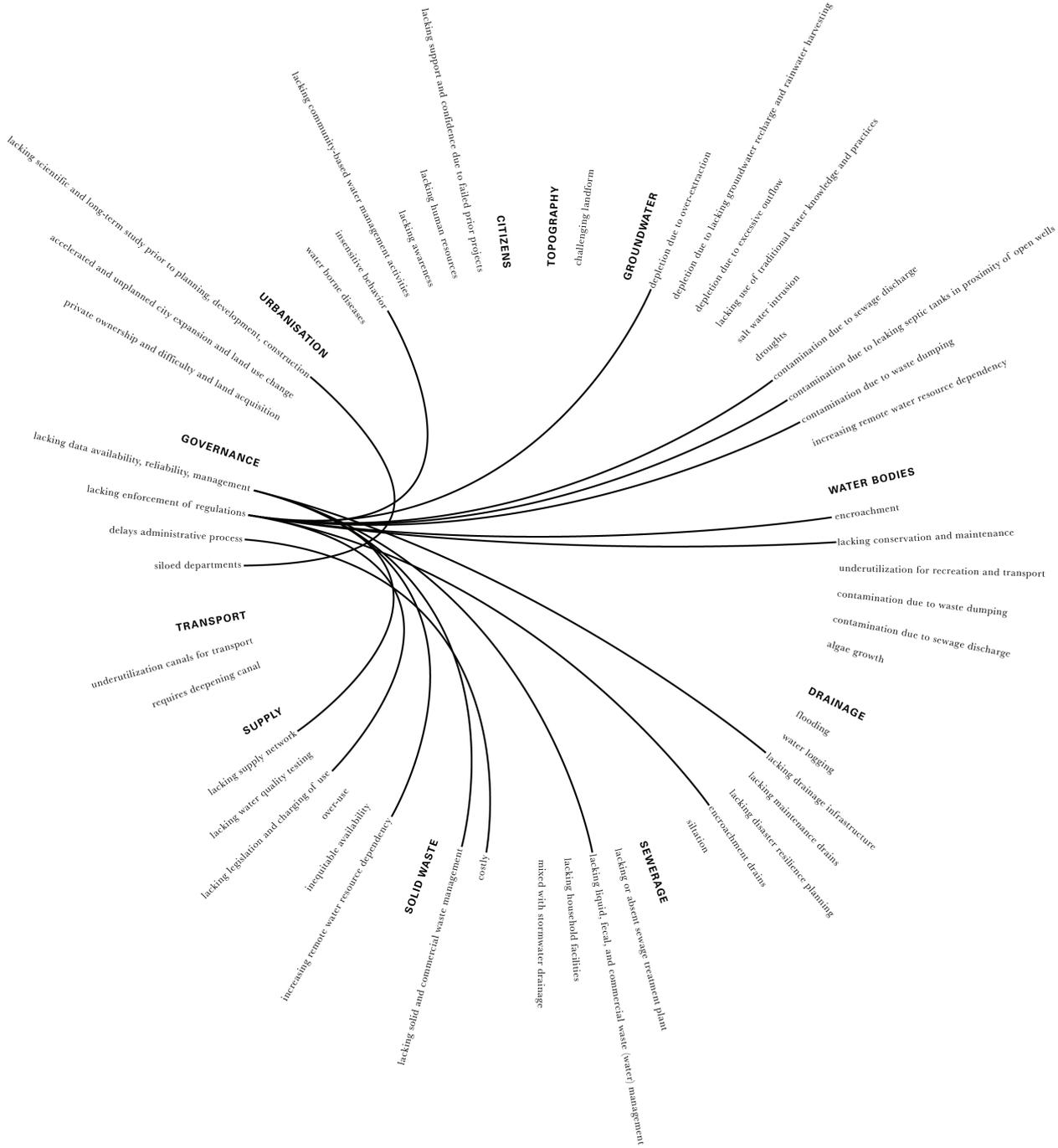
PROBLEMS RELATED TO WATER SUPPLY



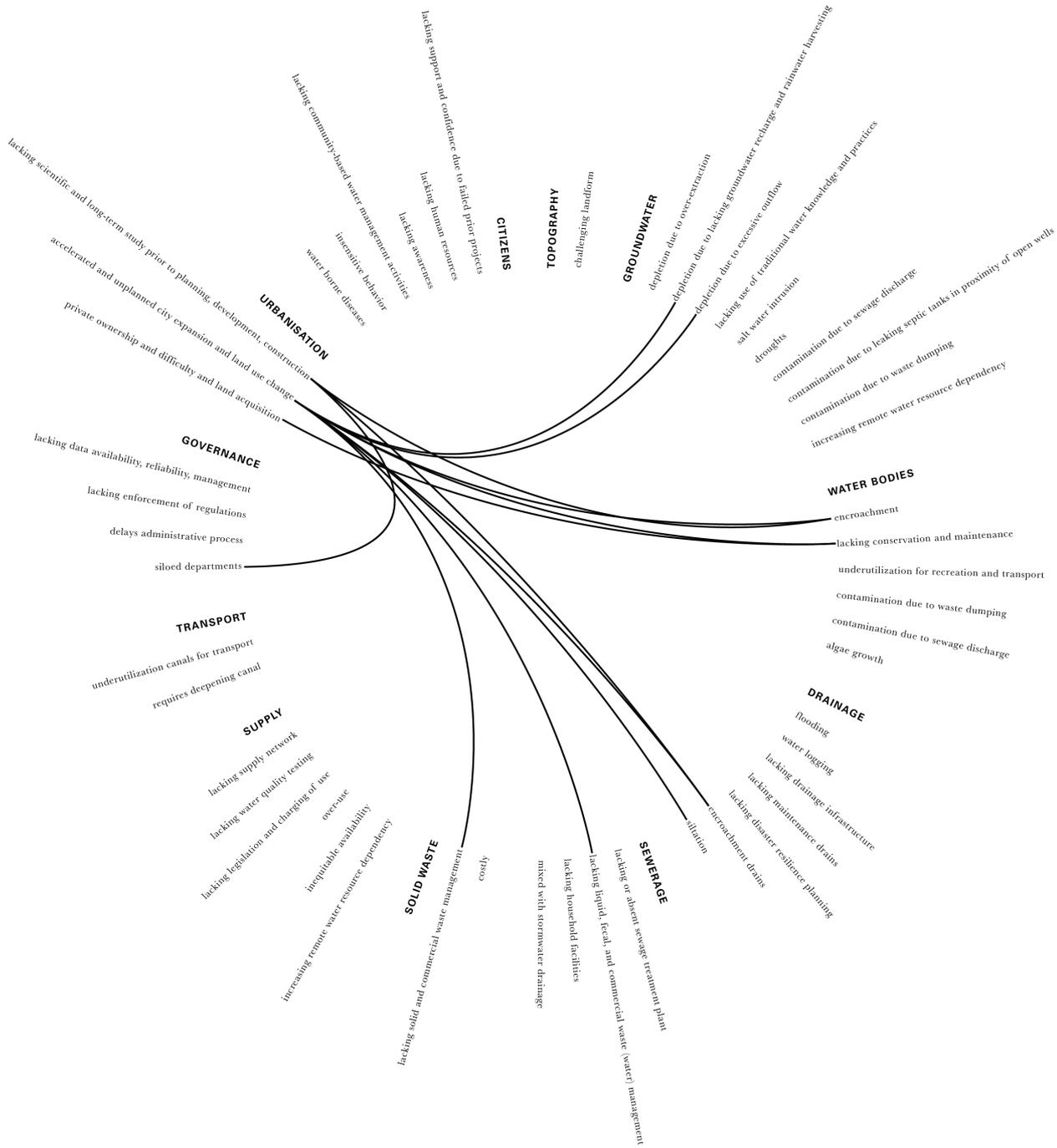
PROBLEMS RELATED TO TRANSPORT OVER WATER



PROBLEMS RELATED TO GOVERNANCE



PROBLEMS RELATED TO URBANISATION



PROBLEMS RELATED TO CITIZENS

