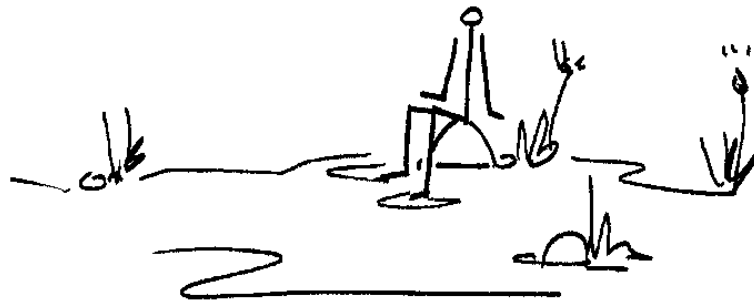


# What does water scarcity mean for you ? and How do you adapt?

Tally Palmer

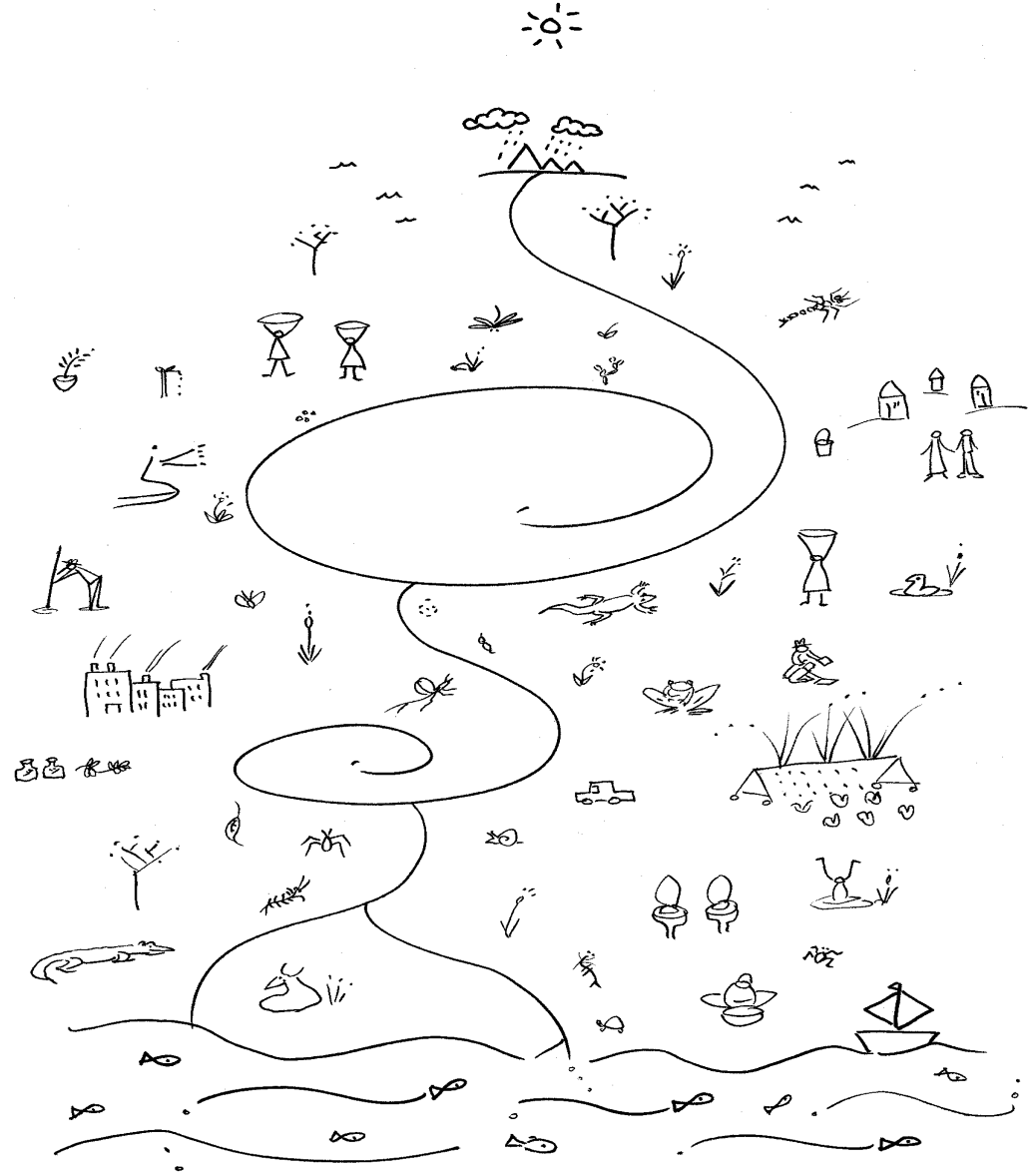


Jack Skead Memorial Lecture  
4<sup>th</sup> September 2021, Makhanda Wildlife Society



**RHODES UNIVERSITY**  
*Where leaders learn*

# We all live on this planet, in a catchment



# Water Security and Scarcity



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## First and Second order water scarcity

### First order scarcity :

biophysical scarcity  
demand exceeds supply

**Settlers & Howiesons Poort**

### Second order scarcity:

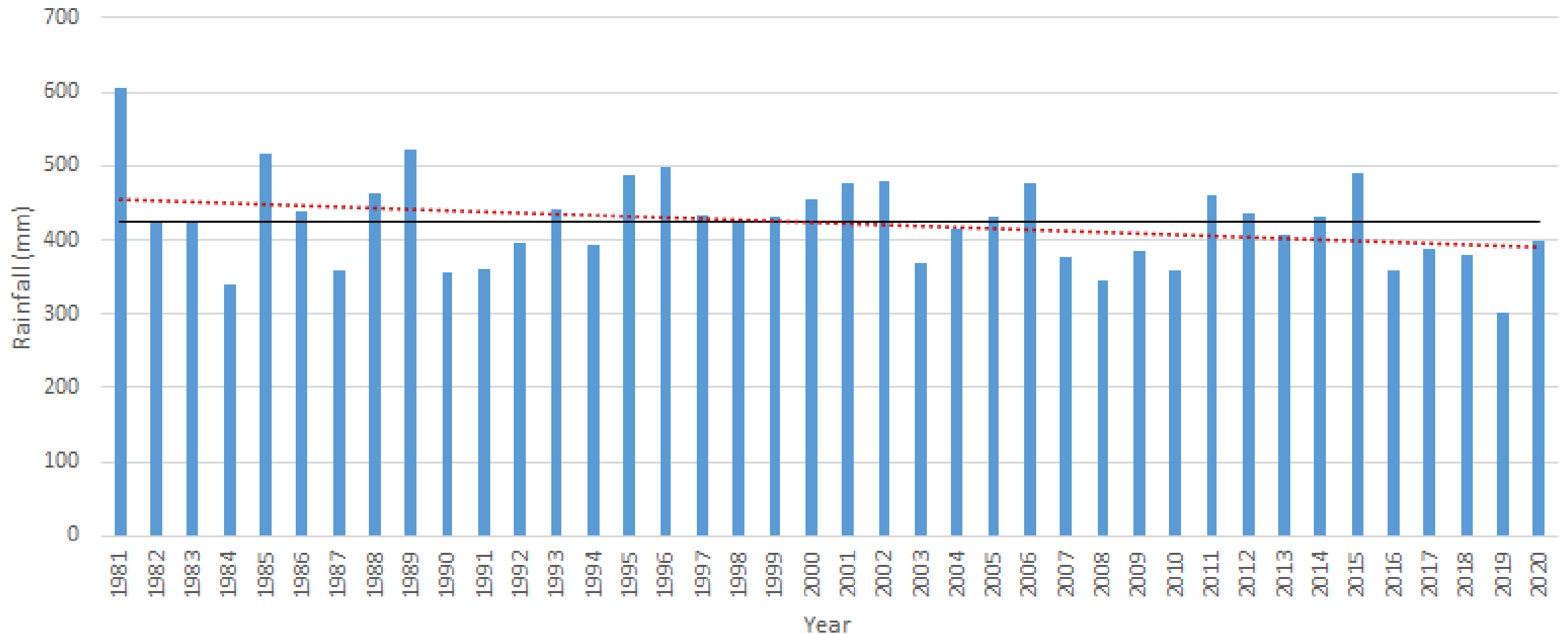
social water scarcity  
poor governance:  
insufficient investment,  
skills, political will ...

**Makhanda**

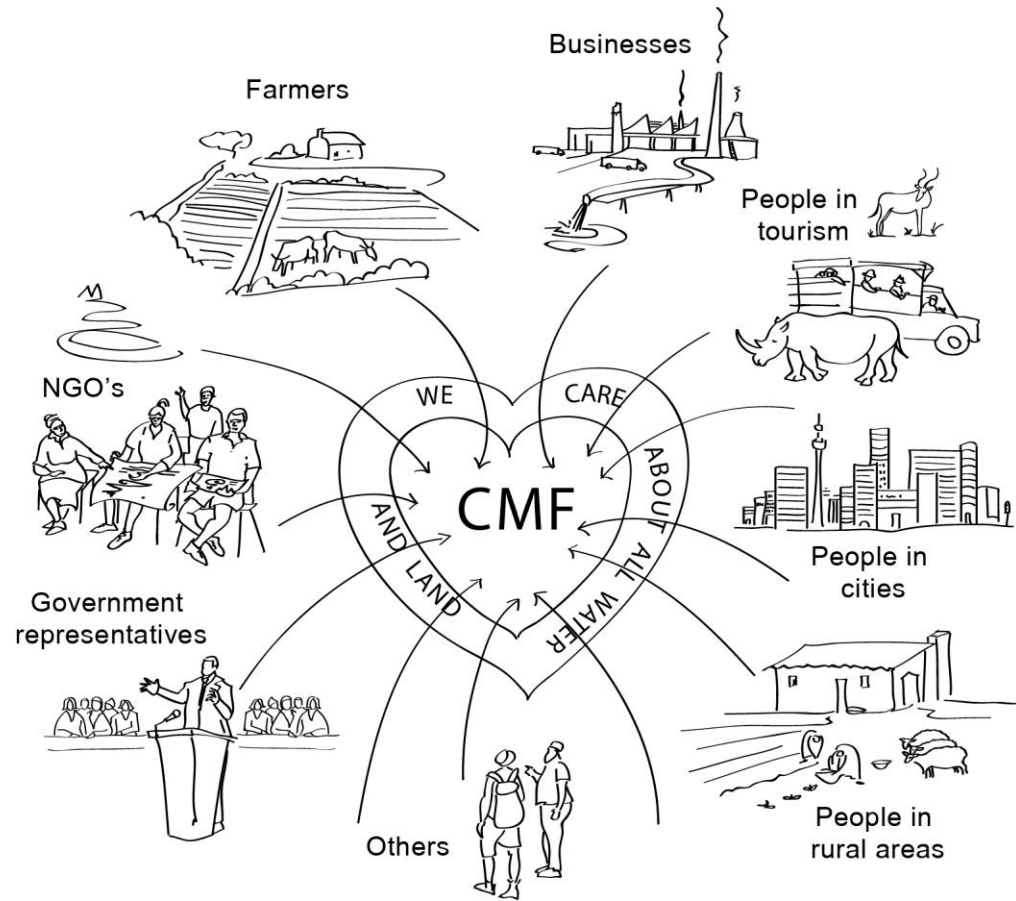


# Rainfall – below mean 10 in last 15 years, 5 out of last 5 years

Amakhala Game Reserve Annual rainfall (CHIRPS)



# What do you do ?



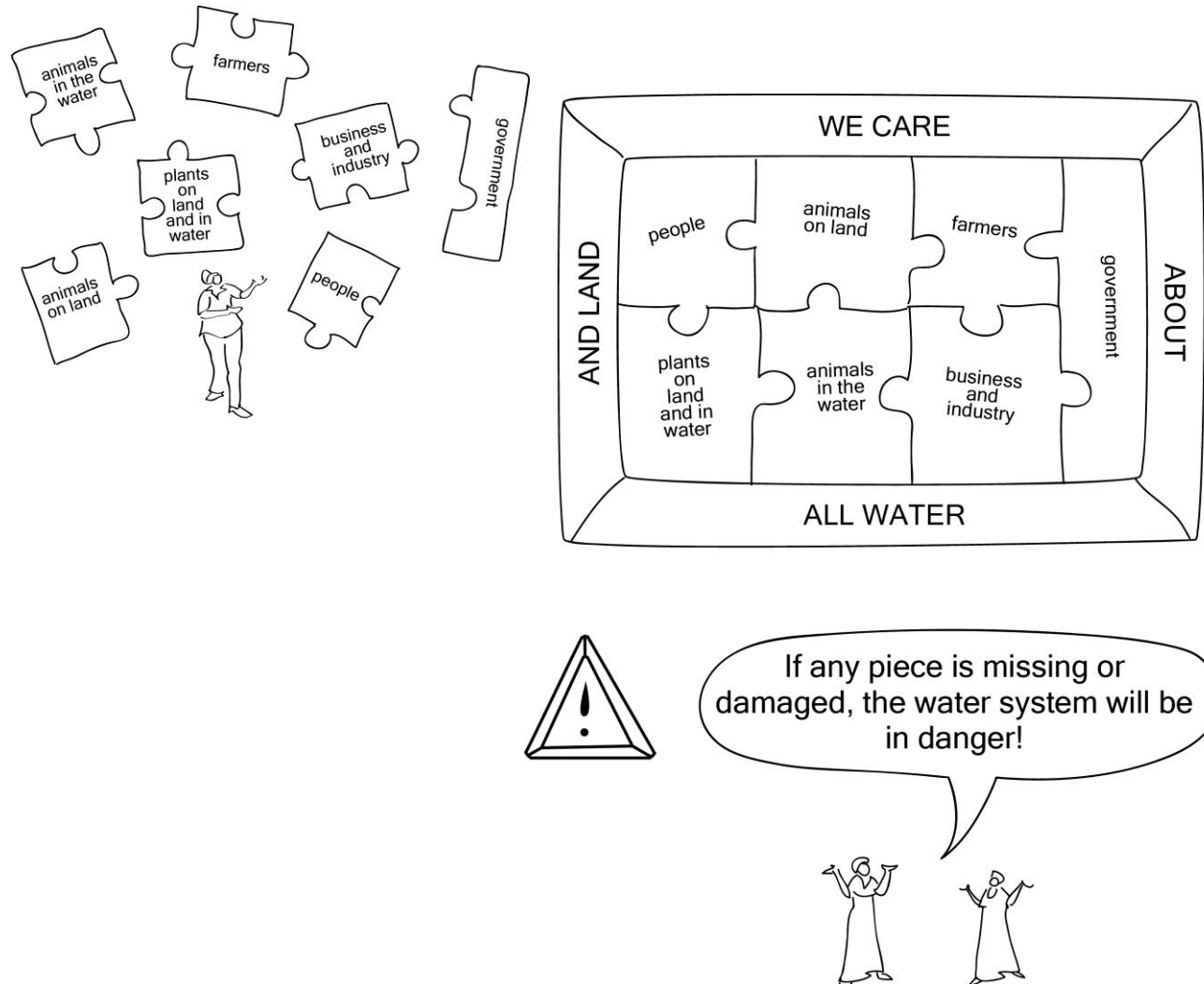
## 1. Live carefully:

- Rain water harvesting
- No leaks
- Use sparingly
- Borehole water is the same source

## 2. Live supportively of Local Government

- Formally and informally

# What have we done? and learned..



## 1. Water Law

- Science + political will

## 2. Sundays River Valley

- complexity of dysfunction

## 3. Makhana

- epistemic justice: fairness in what you know
- Makhanda Water forum

## 4. Tsitsa River catchemnt

- putting it together - partnerships
- participatory government

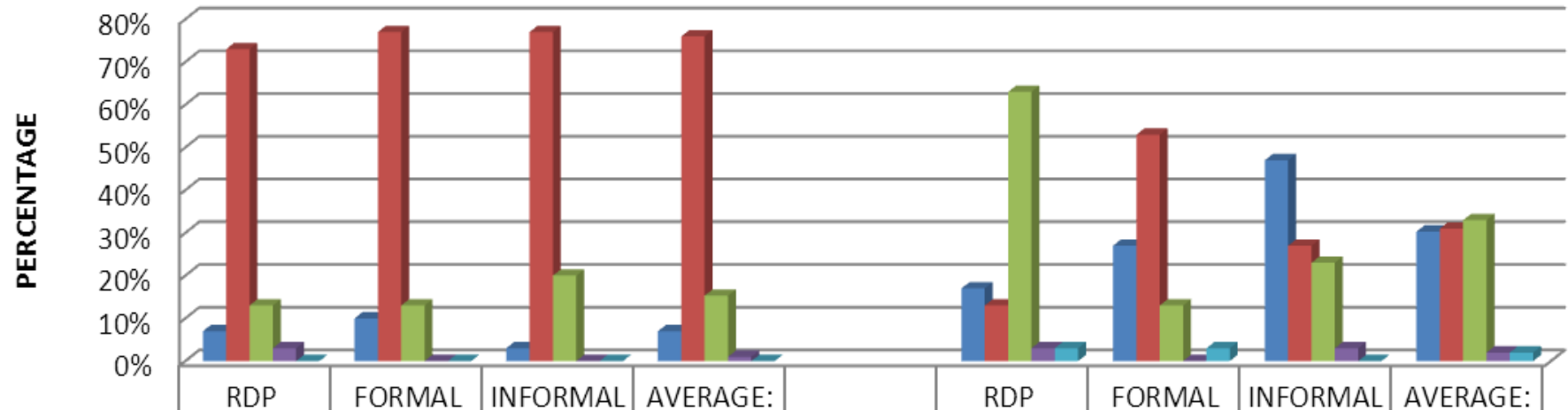
# Sundays R Valley: Kirkwood



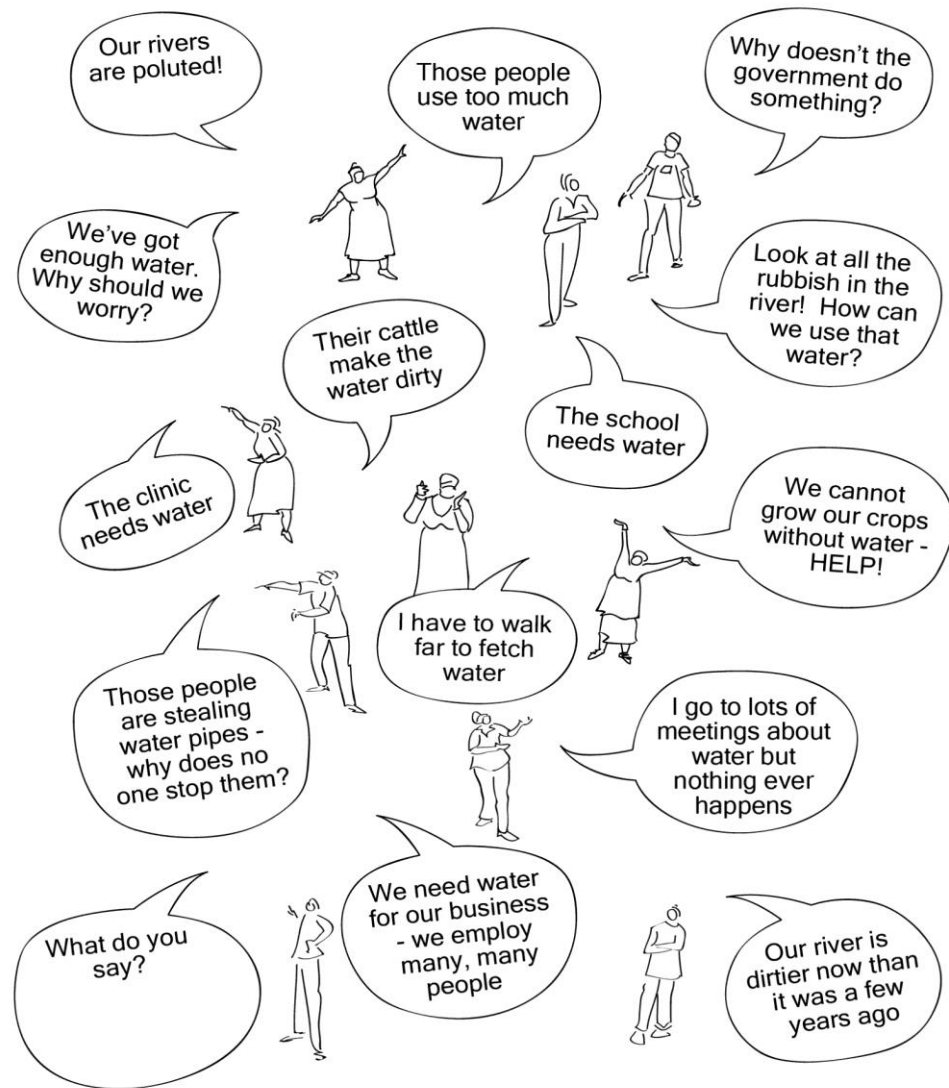
## FREQUENCY OF WATER CUTS

NOMATHAMSANQA

AQUAPARK



Daily	7%	10%	3%	7%		17%	27%	47%	30%
one- three times a week	73%	77%	77%	76%		13%	53%	27%	31%
four- six times a week	13%	13%	20%	15%		63%	13%	23%	33%
Monthly	3%	0%	0%	1%		3%	0%	3%	2%
Never	0%	0%	0%	0%		3%	3%	0%	2%





# When faced with shortages people:



- wait
- use saved water
- tank water
- ask neighbours to use their tank water
- use the canal - only Nomathamsanqua  
(unsafe water and dangerous to collect)
- buy water
- get water from work

- “The water it smells bad and is often brown and dirty with red worms in it.”

- The children they get sick, they get rashes and my wife she got rashes from the water, when the water is dirty, and after the water cuts when the water comes back on the water is brown and dirty.”

### Water problems



- “We’ve had many days where we’d wake up to find that there isn’t any water. Then you would find out that there is a house with water, so you’d run to that house to see if you can get water from them. “

- “ The taps only have water before 10am, so you have to rush early to get water.”

### Water shortages and cuts



- “They just make promises but then nothing changes. We still don’t have water and when we do it’s brown and dirty and trickles out the tap.”

- “ we complain but they don’t do anything, we are always having problems and they don’t care. We can’t trust them to do their jobs”.

### Water service delivery problems



- “I pay for water but the water isn’t good and it makes me angry because I pay for this water but I can’t drink it, I can’t cook with it... the municipality should make sure the water is clean then maybe people will pay.”

- “Look at this bill- why does it say that I have used this much water and haven’t paid. They want me to pay so much money but this bill is wrong and I refuse to pay.”

### Payment for water



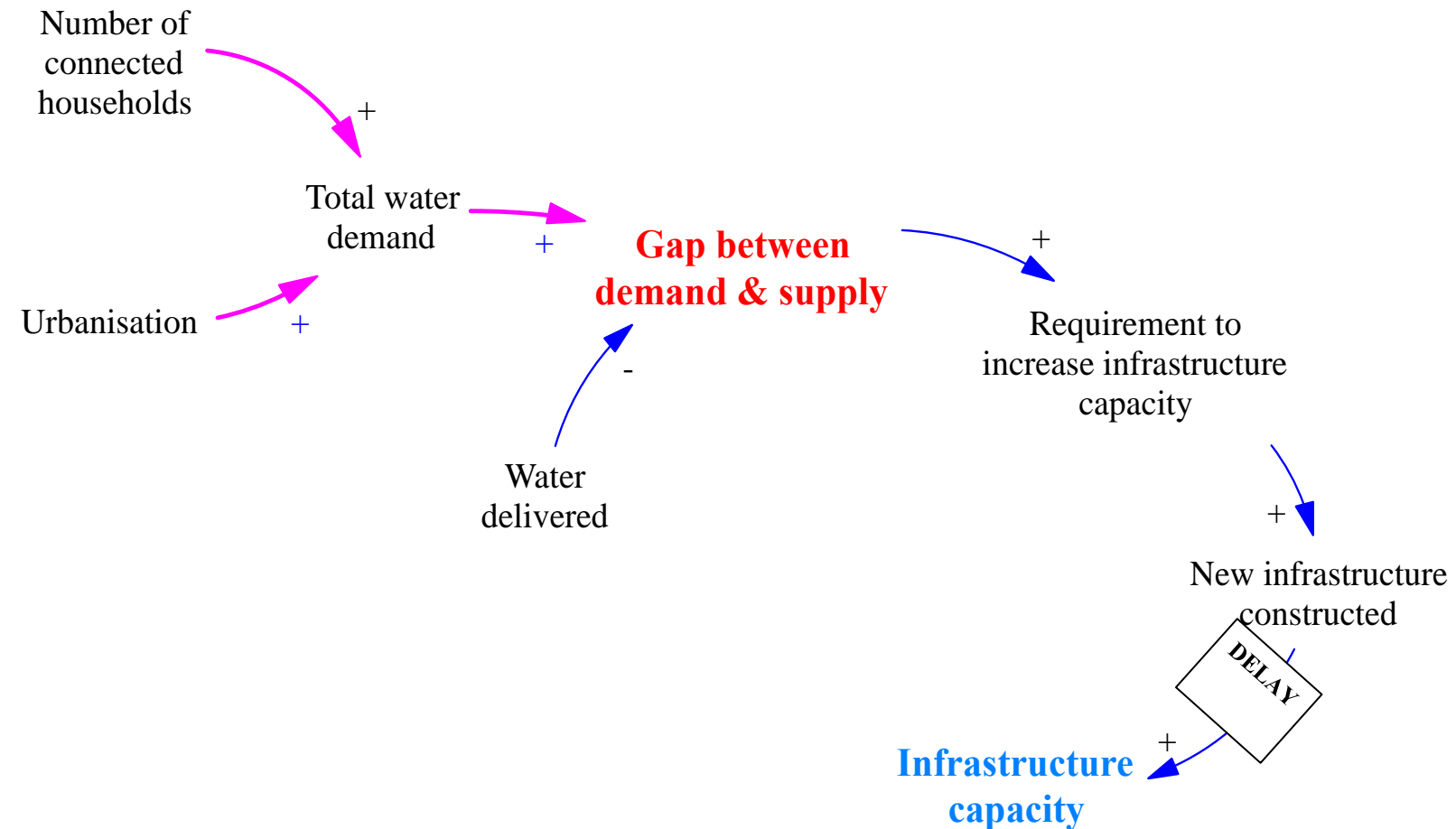
## What do people have to say regarding their experiences?

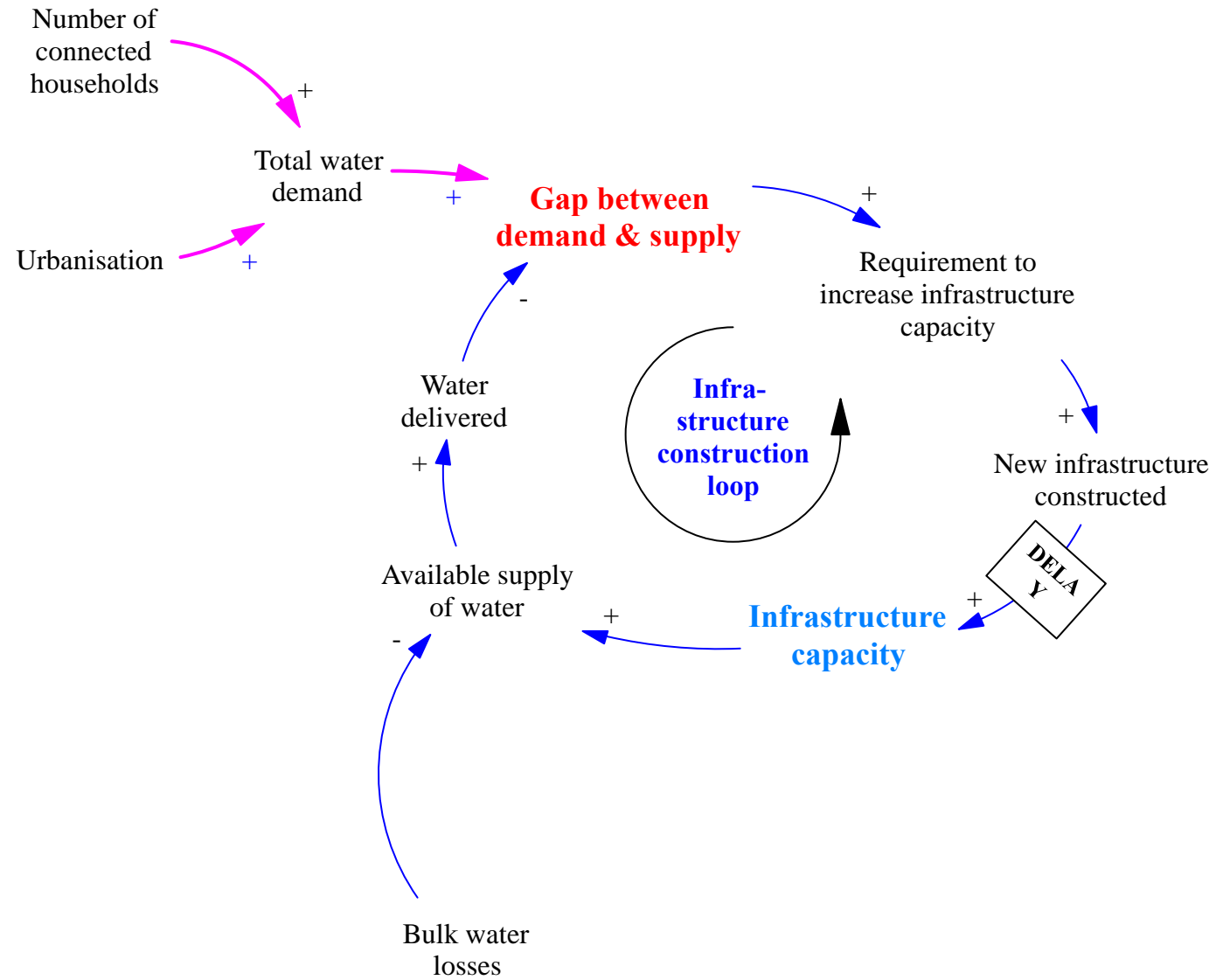
# Service delivery

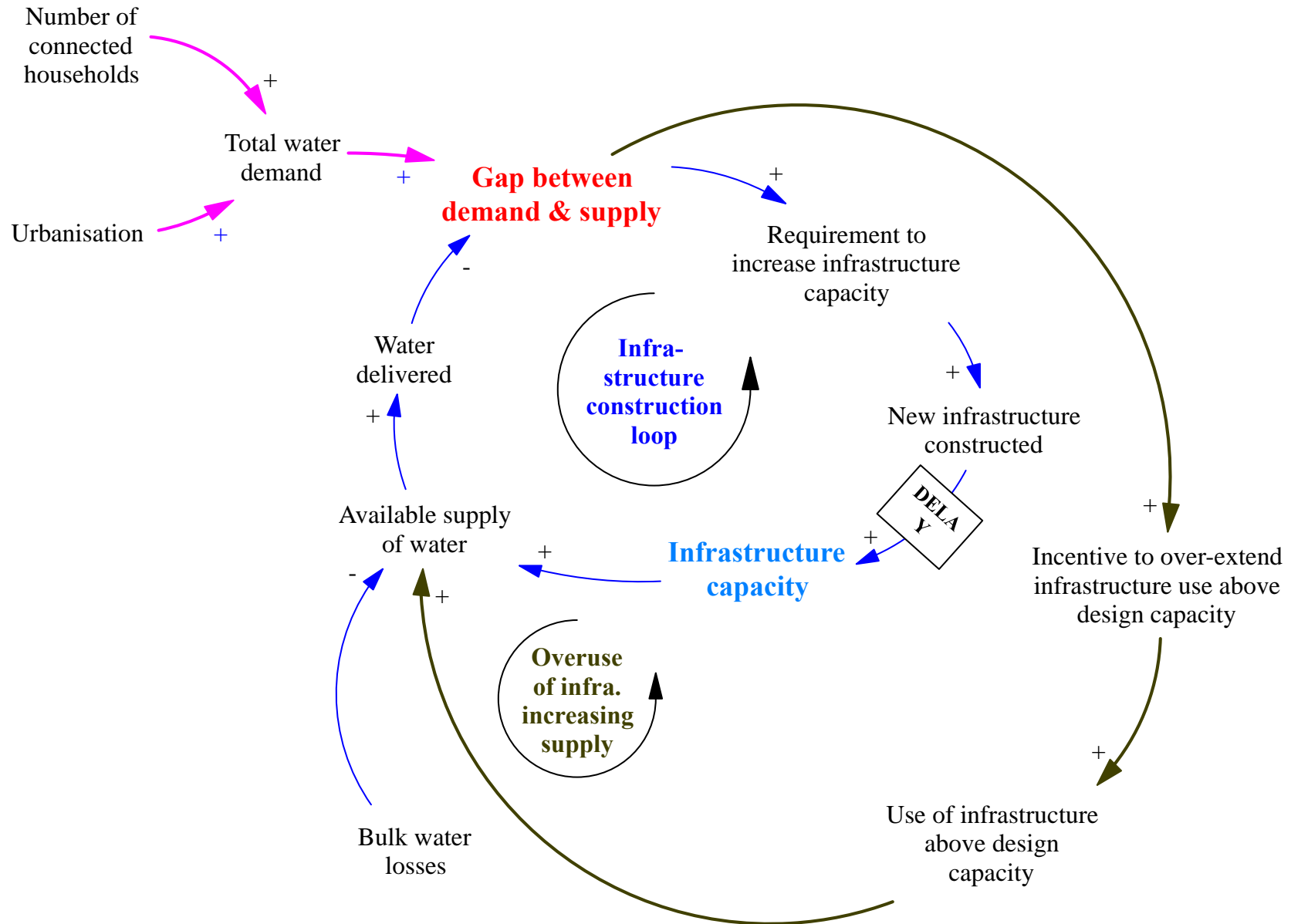


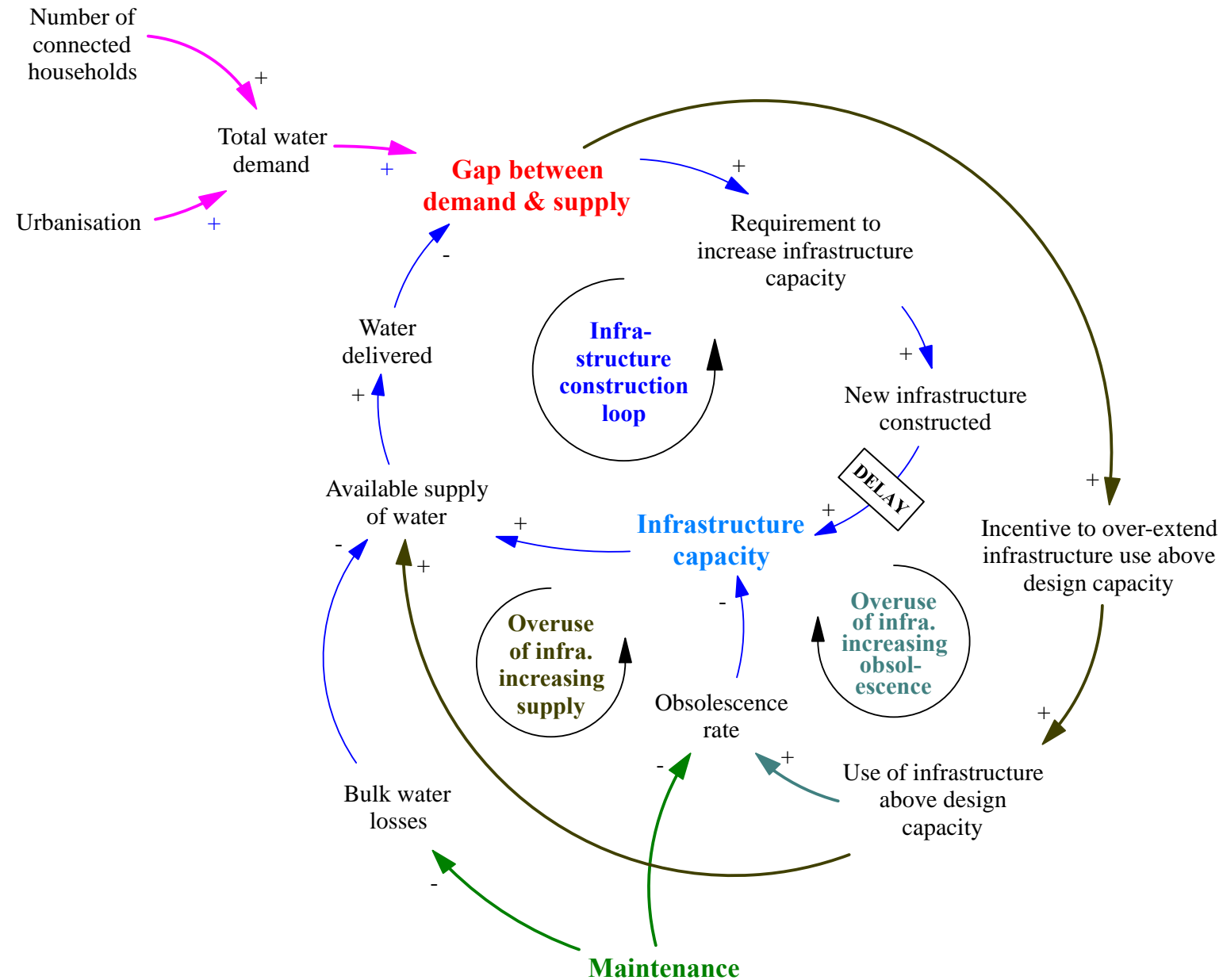
- **No communication between municipality and communities- often no response to complaints- complacency.**
- **Community standpipes are not monitored.**
- **Informal dwellers and even RDP HH have to rely on others for their water – can create tensions.**
- **Water leakages and broken taps - unaccounted for water is a huge problem, water wastage.**
- **Indigent register- not updated.**
- **Water metres not read.**
- **Wrong billing or non- payment for water.**

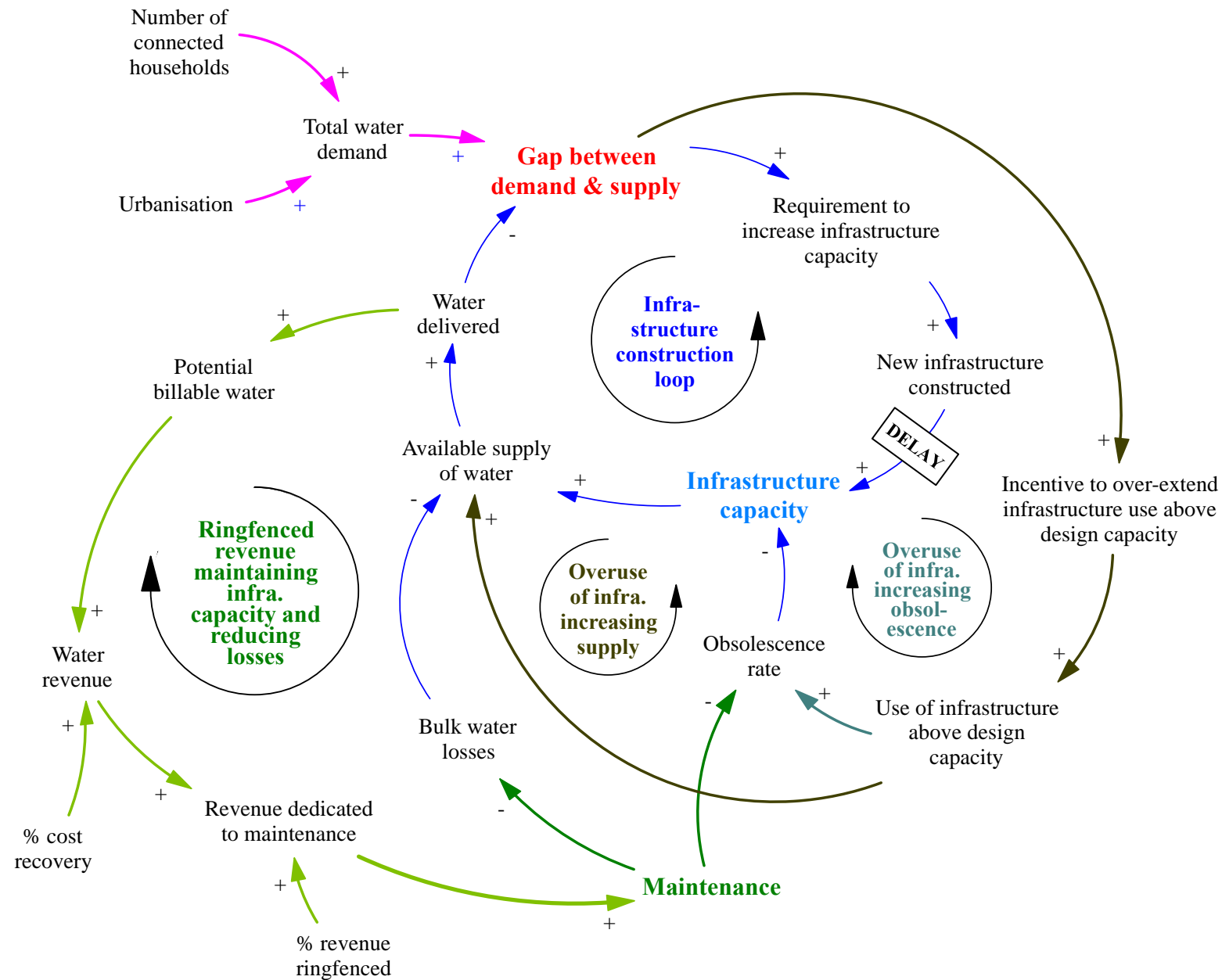
# Why? – interconnected modes of failure



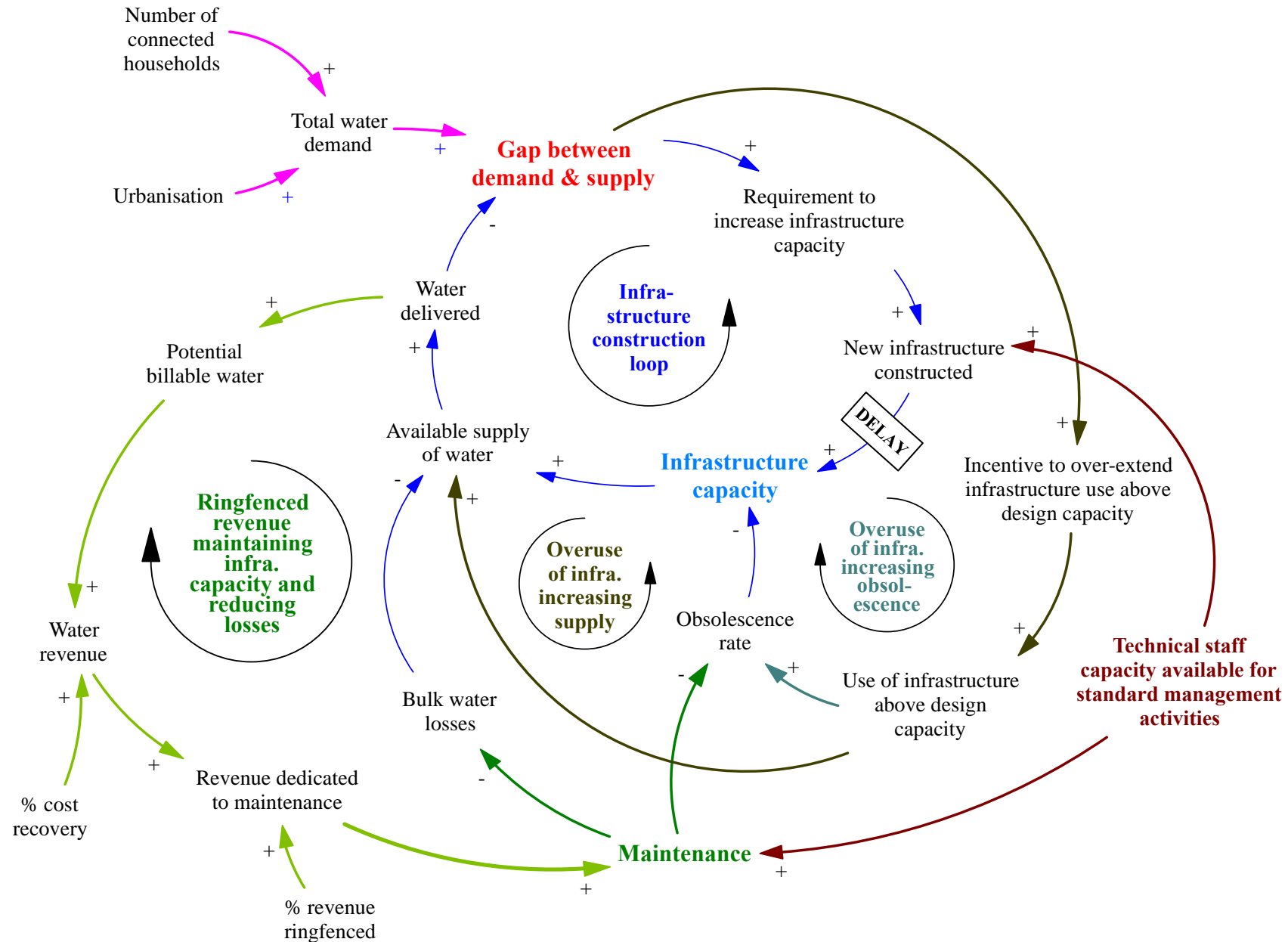


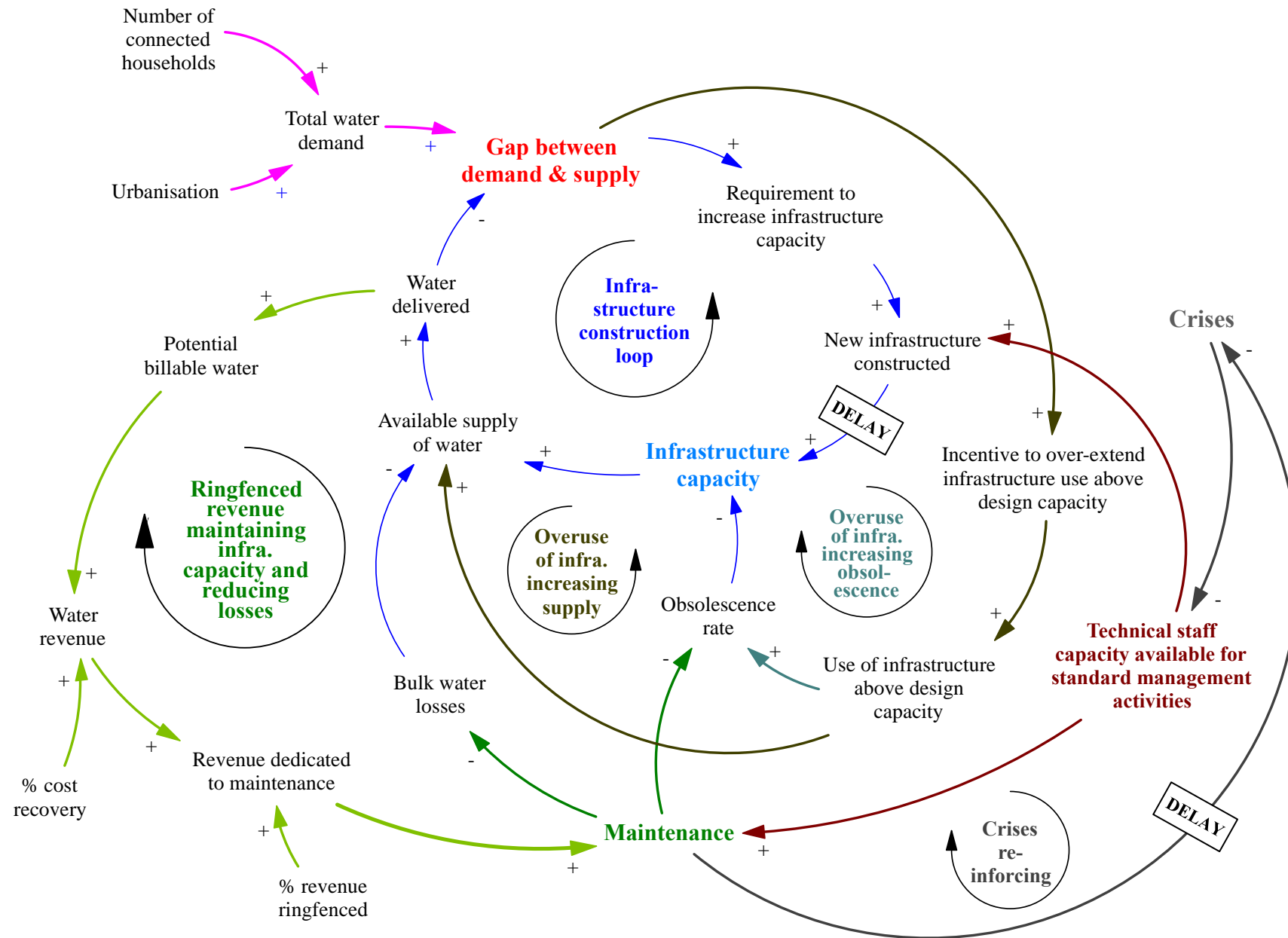


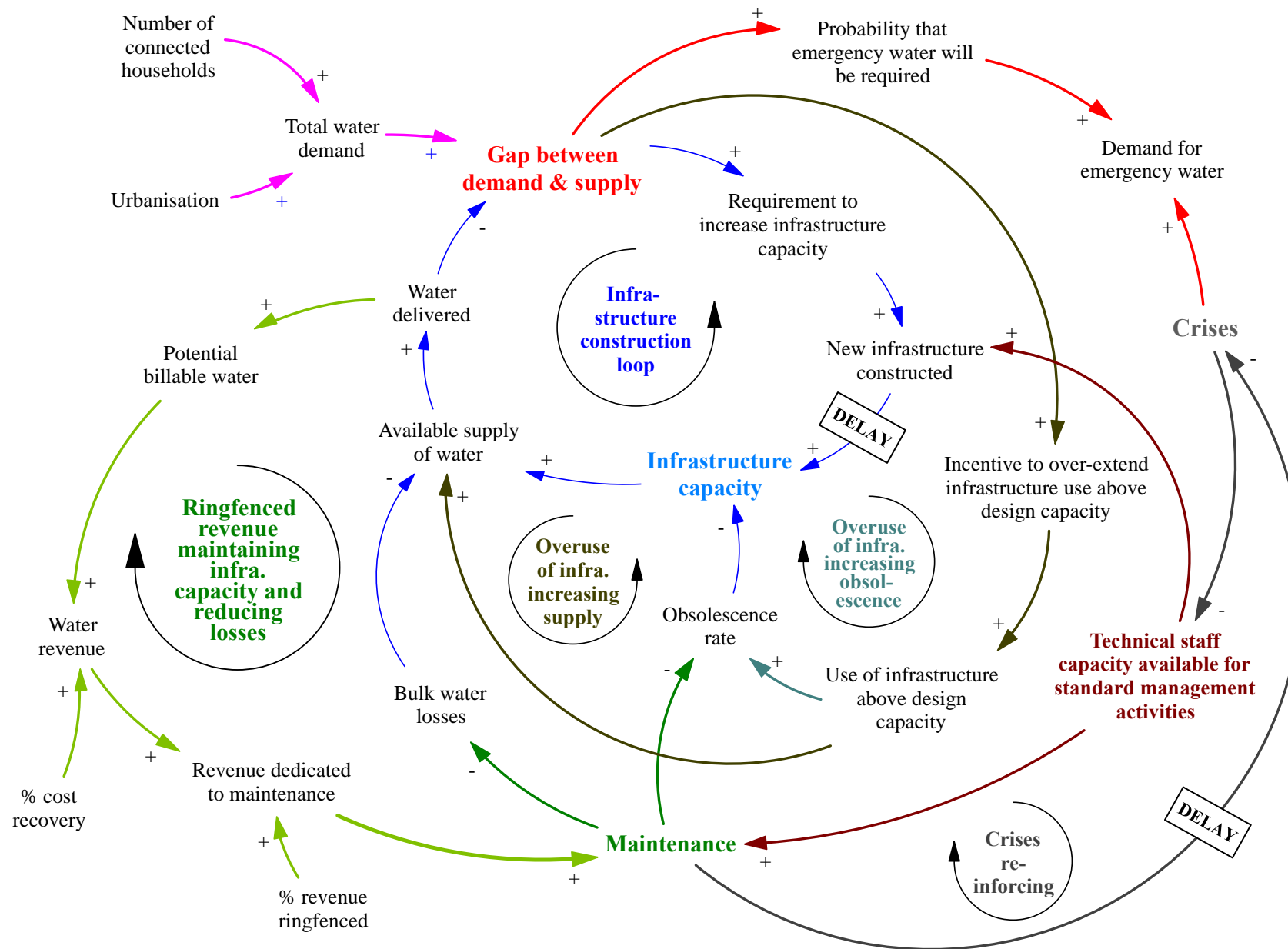














# River Rescue – Helen Holleman







**Thank you**