

# Regulation through water licences – when should stricter conditions be imposed?

## Asia Water Forum – notes for workshop

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# Importance of Economic Cost-Benefit Analysis

1. Regulators determine or influence water pricing, but quality of service is also important
2. Quality issues are regulated in NSW through an operating licence
3. Some licence conditions can be very costly to meet
4. It is important that customers value these requirements enough to justify the cost that they ultimately will have to pay
5. To ensure they do, all conditions should ideally be subjected to Economic Cost Benefit Analysis
6. I will present some examples of how this can be done

# Operating licence provisions

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1. Requirements to meet quality standards
2. Requirements to provide information
3. Requirements to give weight to the environment
4. Requirements to do certain things in a specified way

# Requirements to meet quality standards

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Examples:

- Yield, leakage prevention
- Service interruptions

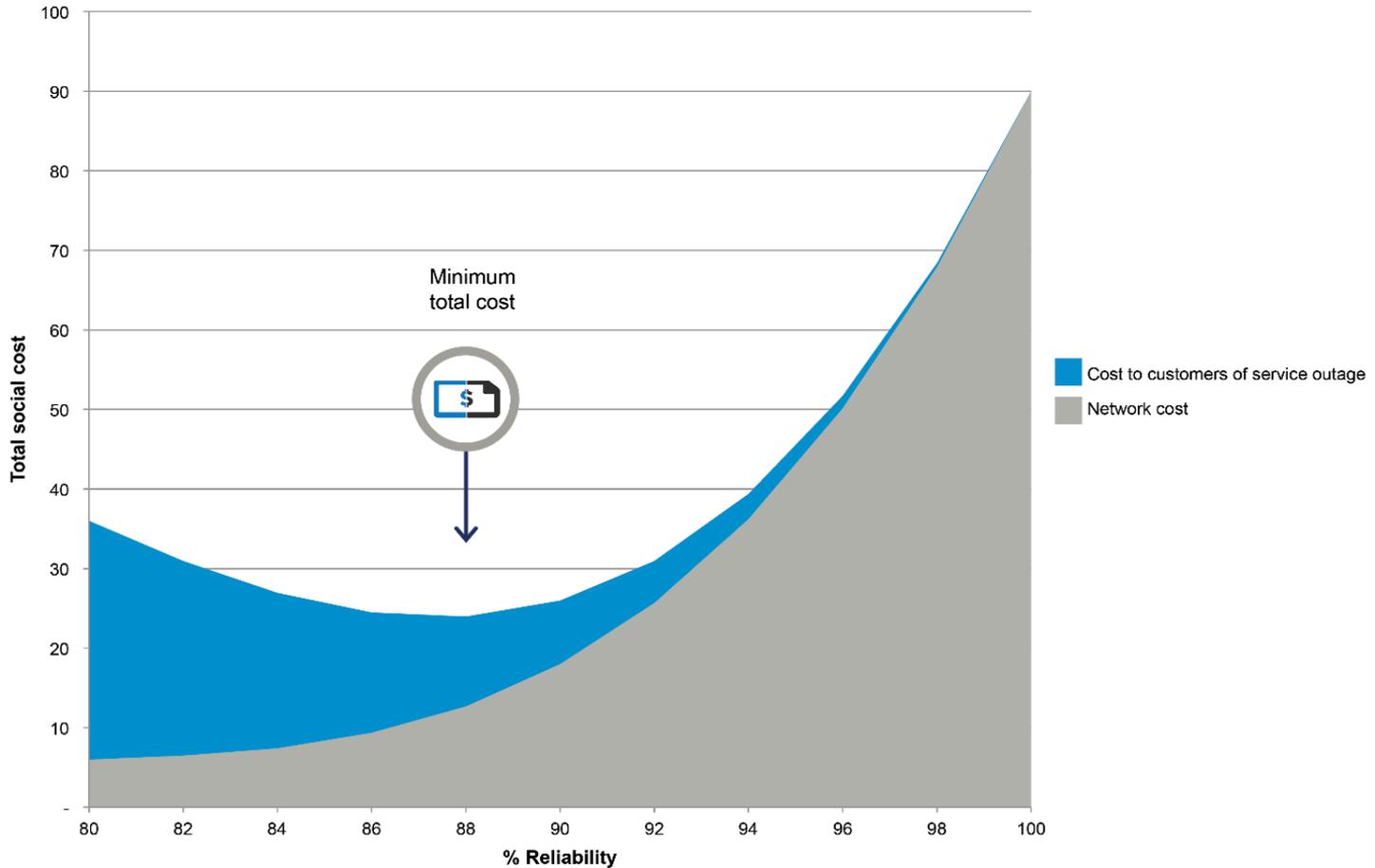
Need to show:

- The chosen standard represents the best tradeoff between customer inconvenience and service cost

Must quantify:

1. Customer valuation of each different quality standard
2. Cost to PWU of providing different quality standards

# Cost-effective quality standard



# Requirements to provide information

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Examples:

- Performance reports
- Education programs

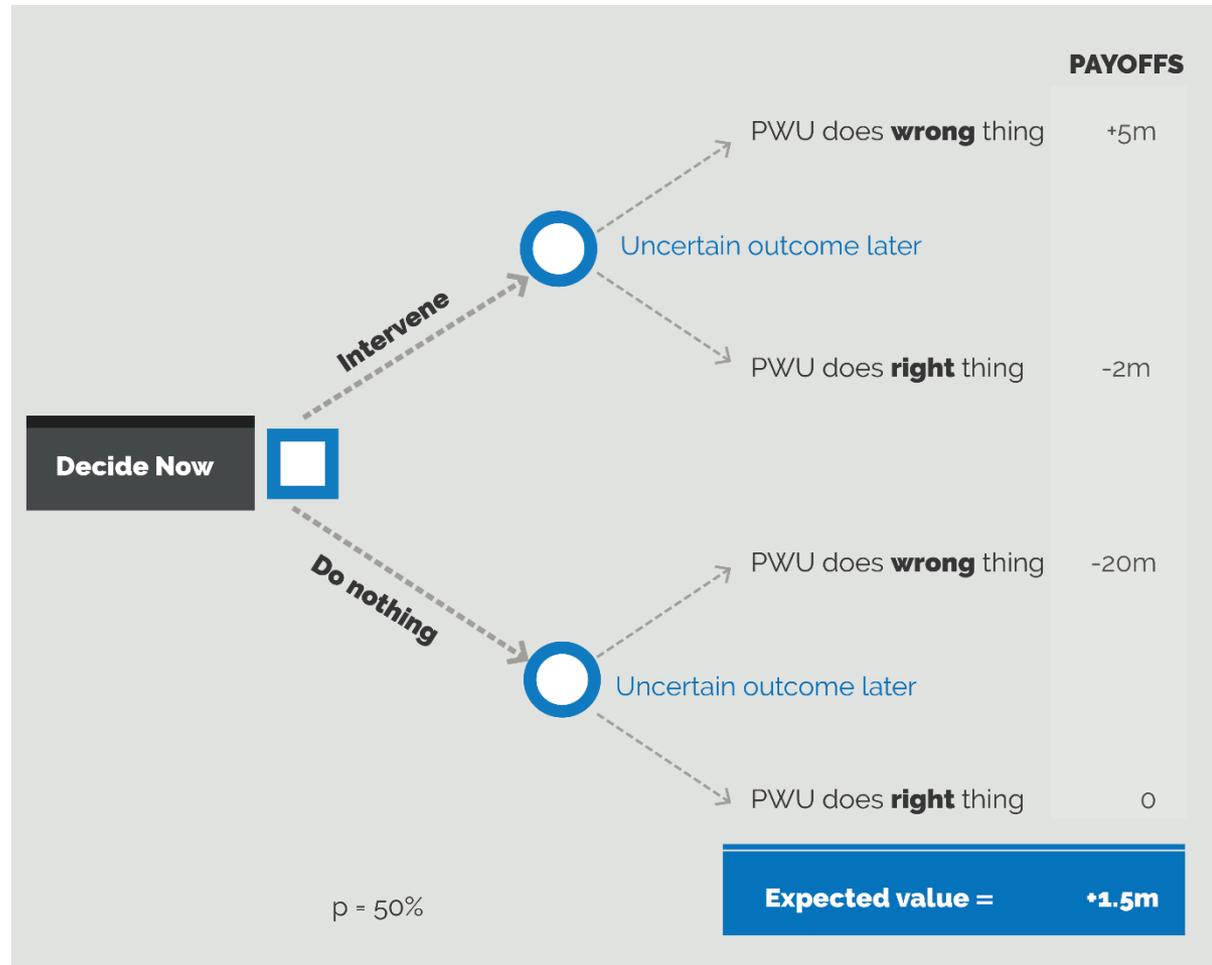
Need to show:

- Cost of providing information is less than value of that information

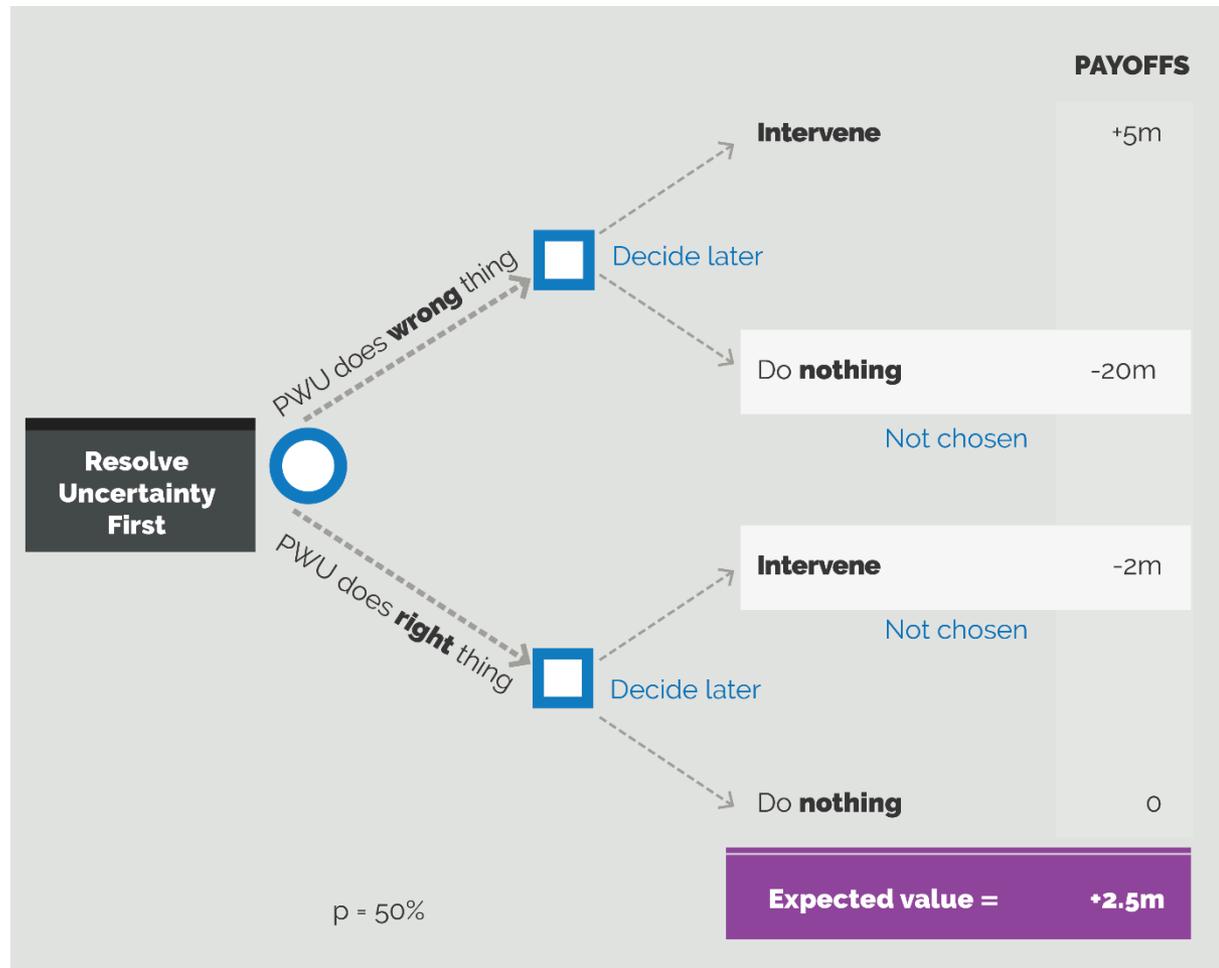
Must quantify:

1. cost of providing information (easy)
2. value of information (see next 2 slides)

# When information not provided



# When information is provided



# Requirements to consider externalities

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Examples:

- Catchment protection
- Protecting downstream from dam floods and spills

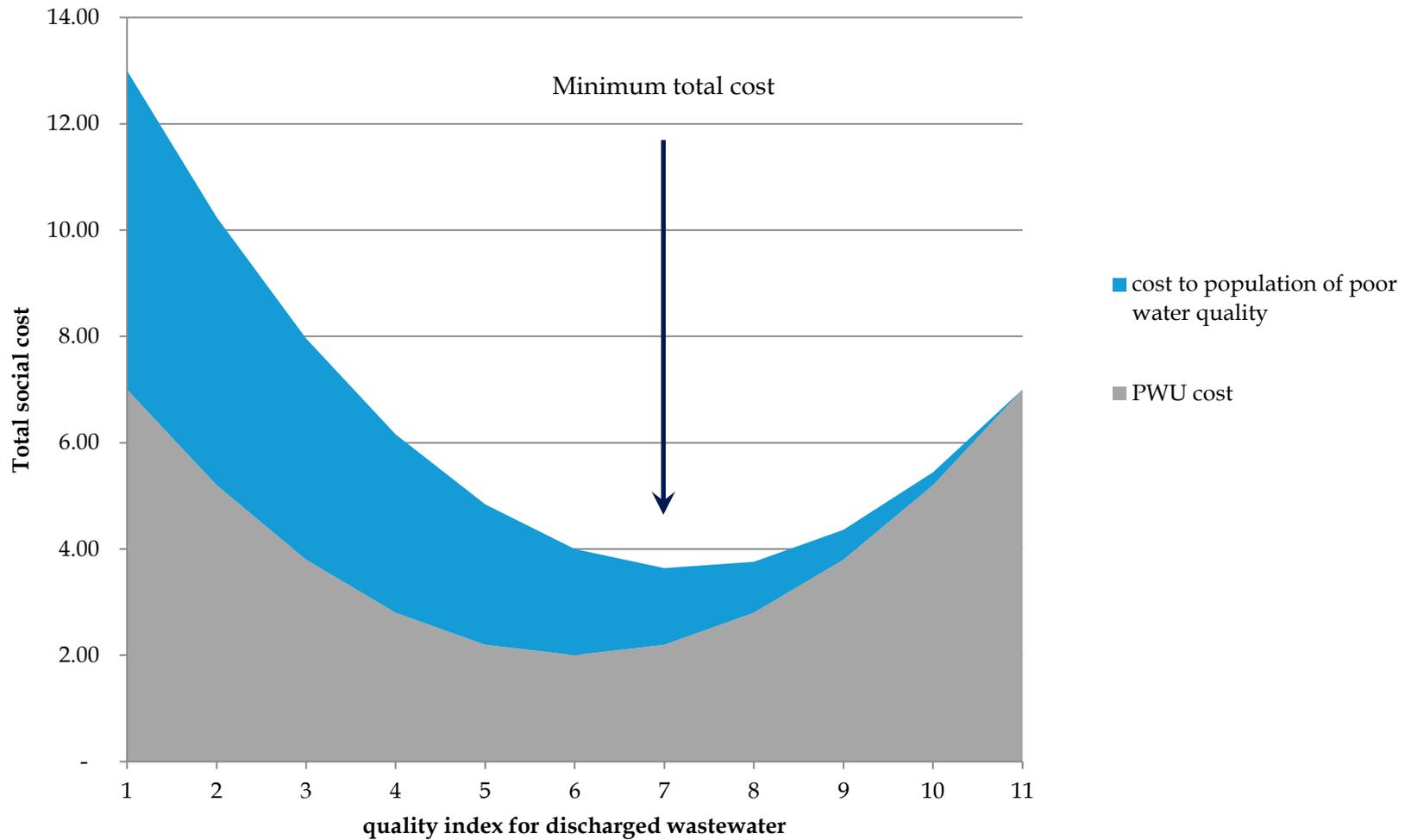
Need to show:

- Cost of providing external benefit does not exceed the benefit

Must quantify:

1. Value to society of each different level of protection
2. Cost to PWU of providing each level of protection

# Cost effective environmental outcomes



# Requirements to do things in a given way

Examples:

- Asset management systems
- Environmental management systems

Need to show:

- Without this licence requirement, PWU would act differently, contrary to the public interest

Skeptic says:

- If PWU needs to maintain these management systems to meet its outcomes, then they will do it with or without the licence requirement. Why impose it?

# Licence is needed when net social benefits $N_s$ and net private benefits $N_v$ are different

|                                     | <b><math>N_s</math> is positive</b>  | <b><math>N_s</math> is negative</b>   |
|-------------------------------------|--|---|
| <i><math>N_v</math> is positive</i> | No need for licence obligation as PWU would do this anyway                           | Licence <u>prohibition</u> needed to prevent profitable, but harmful action |
| <i><math>N_v</math> is negative</i> | Licence <u>requirement</u> needed to induce unprofitable, but socially useful action | No need for licence prohibition as PWU would not do this anyway             |