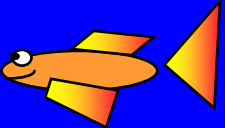



# River Basin Planning and

**economics**

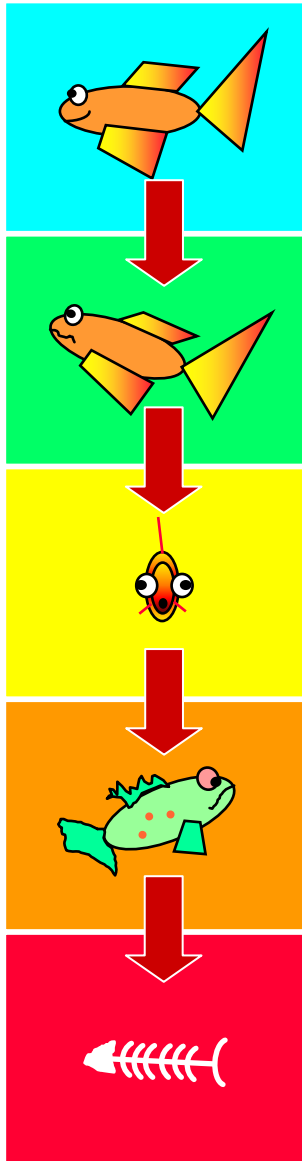
Experiences from Scotland

**Peter Pollard**

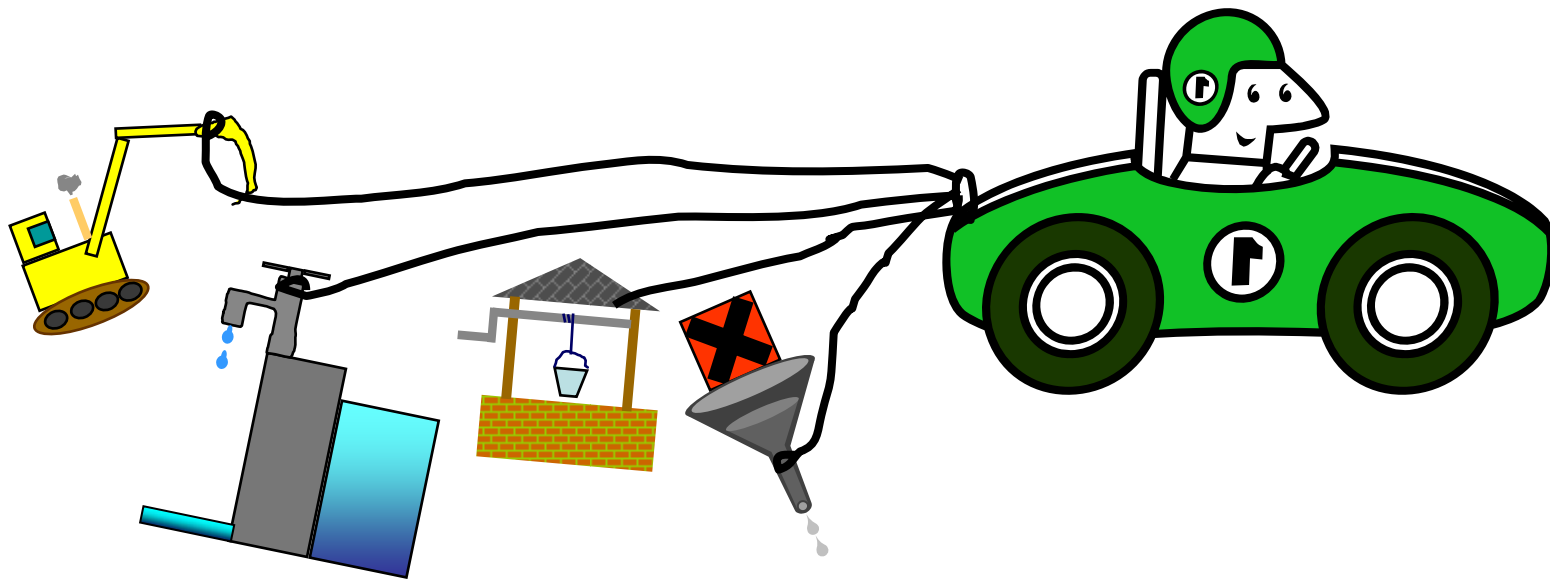
	Rivers	Lochs	Estuaries	Coastal
	184	45	21	188
	923	88	19	235

60 % good or better

# Objectives



# How? SEPA regulatory controls

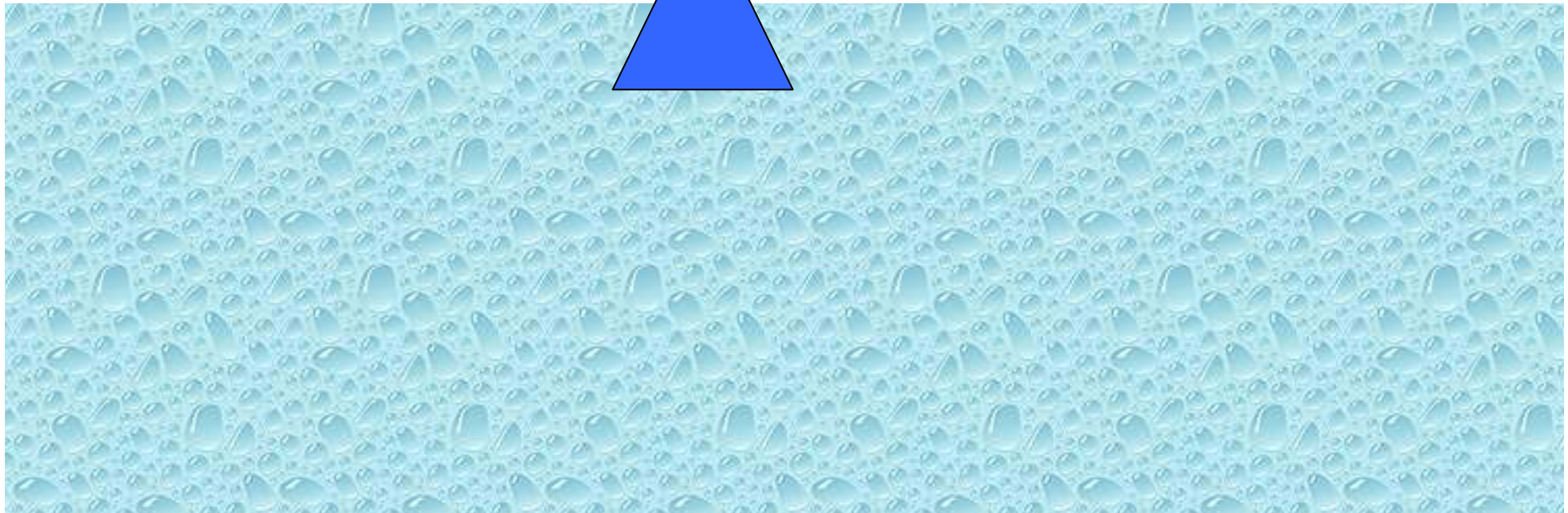
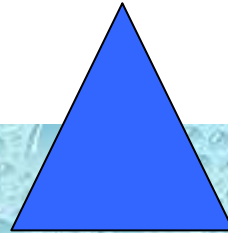


**Controlled Activities Regulations (CAR)**

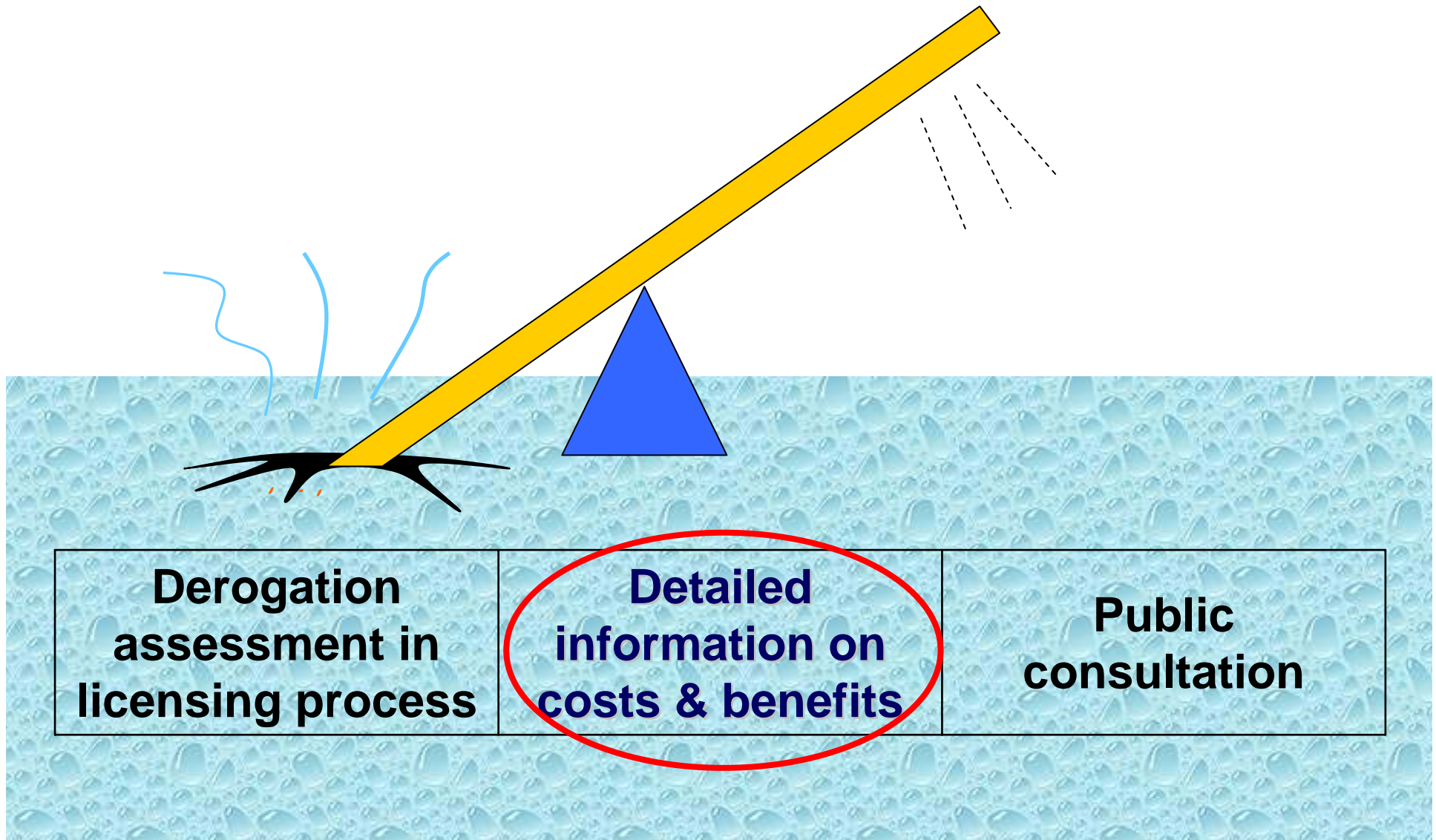
# Derogations: permitted deterioration

Benefit of new activity

Benefit provided by water body



# SEPA's job to strike the right balance



# Derogations: permitted deterioration




29 derogations for deterioration of status since 2006

Hydropower

Flood defence

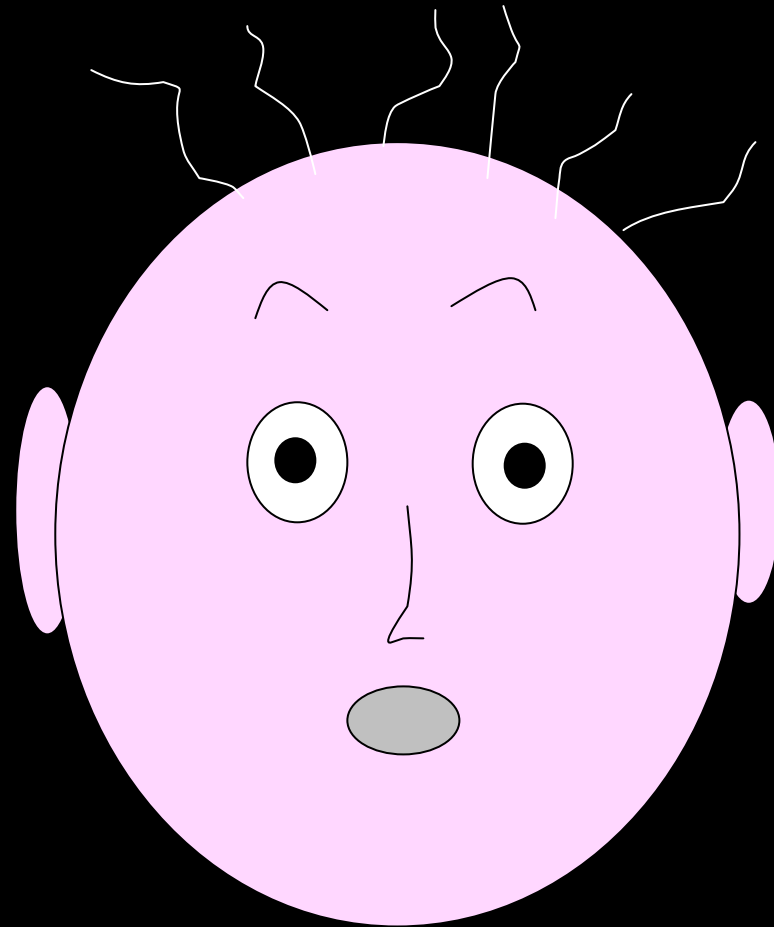


# 40 % worse than good

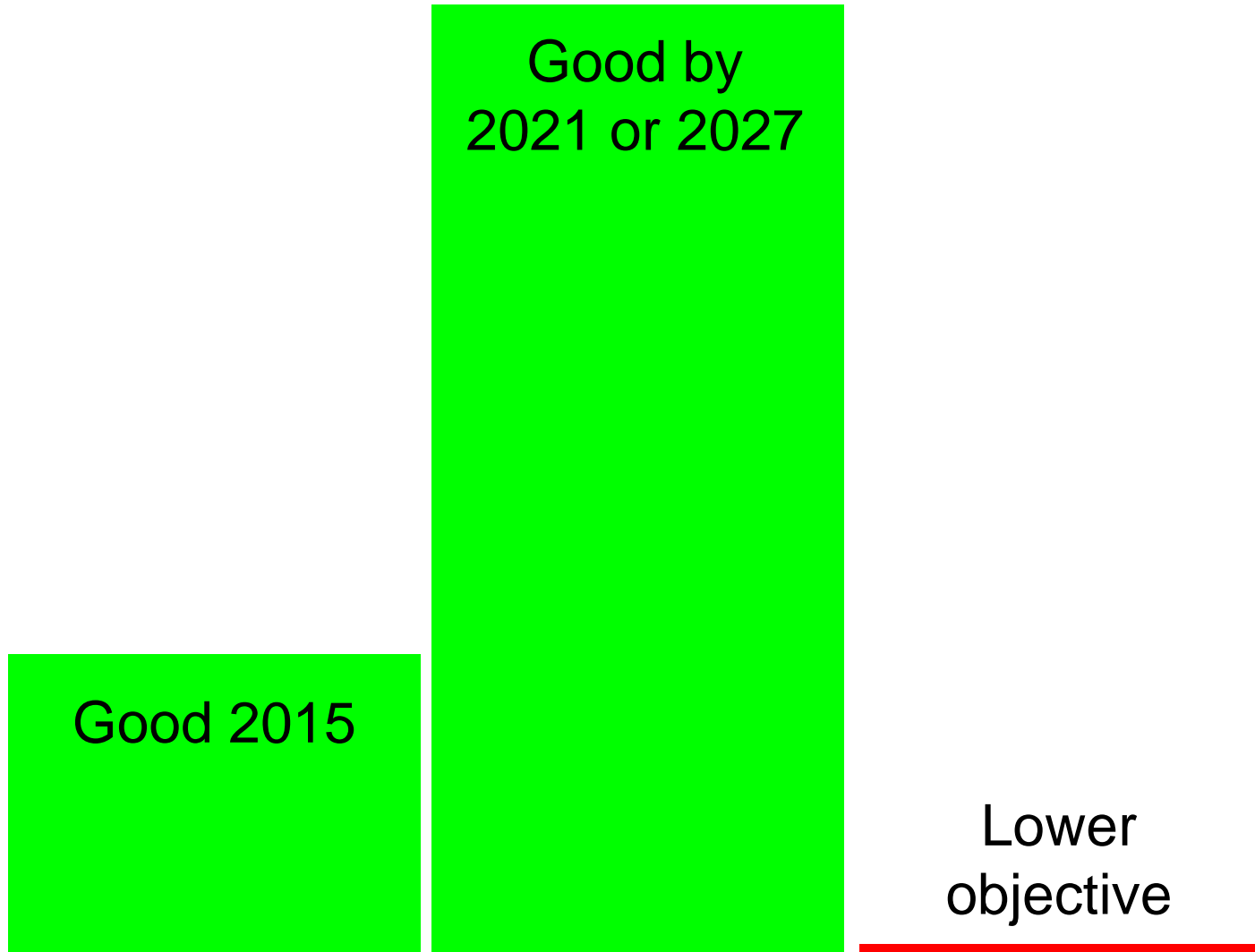
	398	73	5	32
	317	80	3	2
	191	48	2	0



**Need objectives for nearly 1,200  
water bodies!**



# Our objectives



# What are they?

Best estimate of what we expect to achieve

Prioritised route map

Only a few based on site-specific information on costs and benefits

How did we decide?

No complicated  
economic  
analysis

# Principal pressures

Water resource pressures:

*Hydropower, public water supply, aquaculture, irrigation*



# Principal pressures

Engineering works:

*Flood defence, legacy impacts, land drainage*

Diffuse pollution:

*Agricultural nutrients*



# Reasons for phasing improvements

Pressure-specific explanation

Describes practical challenges

Explains why this means that phasing is the best solution

Describes how we have prioritised

What we are doing in the meantime

# Prioritisation exercise

Potential length/area improved

Contribution to other objectives (e.g. Natura; salmon fishing; shellfisheries)

Synchronise with timetable for action on other pressures

Uncertainty about impact or its cause



To choose the right measures, we need to know gap to good status




Wet summers mask impact

Abstraction sites change

Crop demands change  
- rotations

Cumulative impacts

# Phasing to avoid disproportionate cost

Unnecessary or wasted expense	Time needed to re-structure farm business	
2015	2021	2027
Improve understanding		
 Basic water use efficiency measures	Small storage ponds Stagger use of sites Switch to other sources	Change crops Large storage ponds
Staggered abstraction Good status where gap small	Good status where gap medium	Good status where gap large

# Setting objectives: water supply



Major capital works  
Complex to design  
Can involve major  
disruption

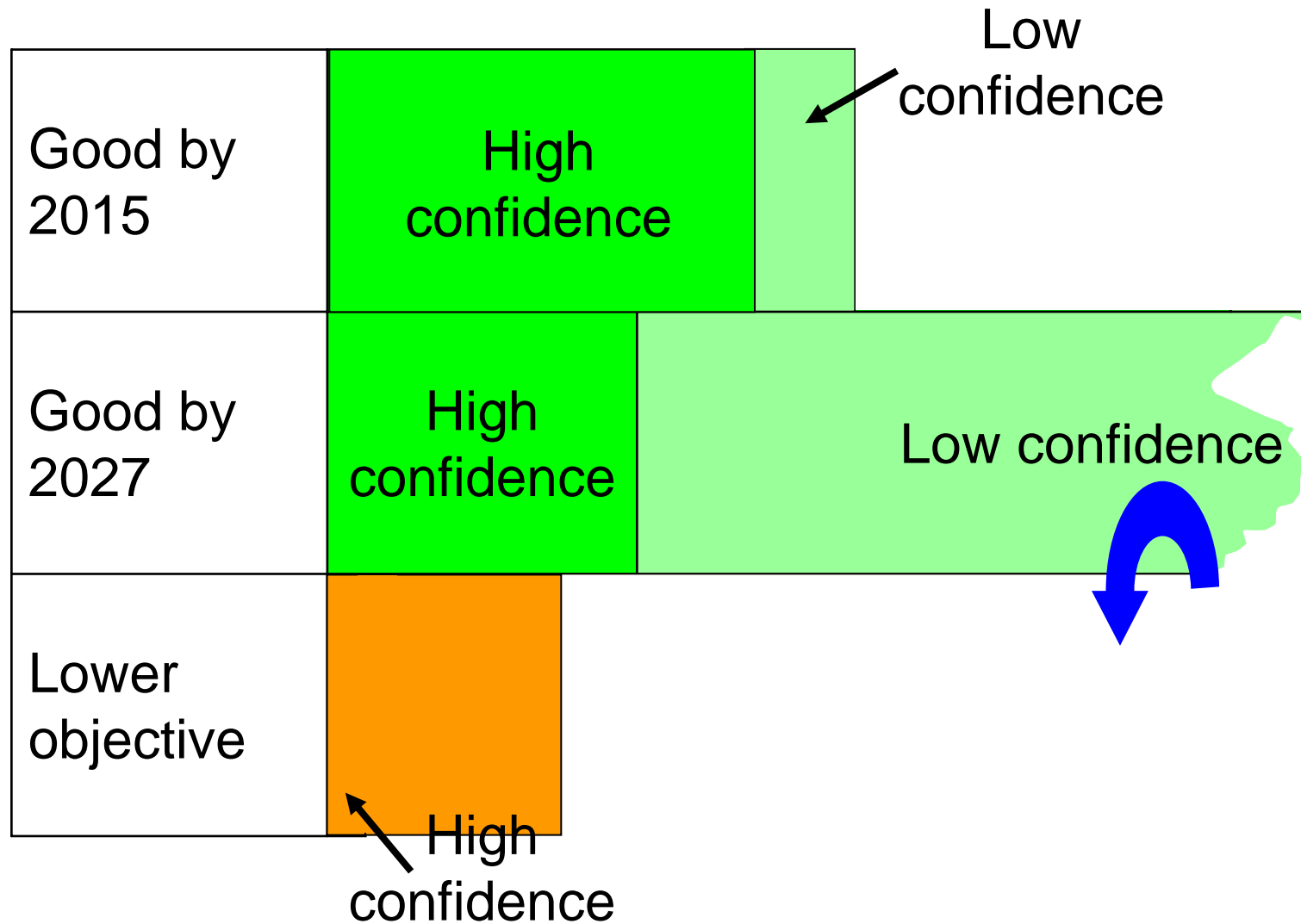
# Phasing to avoid disproportionate cost

If attempt too many schemes – risk of failure high  
Limit of what feasible to deliver

Investment programme of  
£450 – £500 million

<b>2015</b>	<b>2021</b>	<b>2027</b>
Implement 1st cycle priorities	Implement 2nd cycle priorities	Implement remaining schemes
Options assessment for 2nd cycle solutions	Options assessment for 3rd cycle solutions	

# How sure?



# How do we get sure?

## Licence reviews

Detailed site specific  
information and costs

Extensive public consultation

Confirm classification & objective	Re- classification	Extend timetable	Lower objective
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# What about money?

On-going activities		Result of past activities	
Economic beneficiary	Public purse	Person responsible or owner	Public purse

# Getting a share of the purse

Competition for  
funding

Market the  
benefits

Relate them to  
political priorities

Economy

Climate change

Biodiversity targets

Sustainable flood protection

Cross-border comparisons



# Final points

Best ever toolkit for protecting and improving the water environment

Aiming for good unless we have robust evidence this is infeasible or disproportionate

If necessary, we will review objective when developing detailed solutions

.....look for where get the biggest benefit for the money

600 km  
improvements  
already

