

This is the **first wetlands policy** for Yukon

Where do we want to get to?

What do we need to know to get there?

What can we implement in Yukon now?

Objective 2

Managing human impacts on wetlands

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What do we
need to consider
to chart our way
forward?

Objective 2

Managing human impacts on wetlands

What do we
need to consider
to chart our way
forward?

Of what?

From what?

To what end?

What is feasible in Yukon?

Of what?

Wetland **Functions**

AND / OR

Wetland **Values**

Of what?

Functions

What wetlands do

Values

What wetlands do

FOR US

Functions

- Controlling **water flows**
- Moderating **nutrient levels**
- Providing **wildlife habitat**
- Providing natural **fire breaks**

Values

- **Health and safety** benefits
(e.g., flood control, water filtration, fire control)
- **Harvest** opportunities
(e.g., wild berries, hunting)
- **Cultural** and Aesthetic value

Let's look at the Alberta Wetland policy

“To sustain the benefits [wetlands] provide to the environment, society, and economy”

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Functions

- Hydrologic (water flow)
- Water quality
- Ecological (habitat)

Plus...

- Human uses

Let's look at the Alberta Wetland policy

- **Hydrologic (water flow)**
 - Water storage and delay
 - Stream flow support
- **Water quality**
 - Water cooling
 - Sediment & toxin retention and stabilization
 - Phosphorus retention
 - Nitrate removal and retention
 - Organic nutrient export
- **Ecological (habitat)**
 - Fish habitat
 - Invertebrate habitat
 - Amphibian habitat
 - Waterbird feeding/nesting habitat
 - Mammal habitat
 - Native plant/pollinator habitat
- **Human uses**
 - Fire barrier
 - Human use and recognition

Of what?

Of what?
Can we proceed based on

Functions and Values

(what they do **AND** what they do for us)

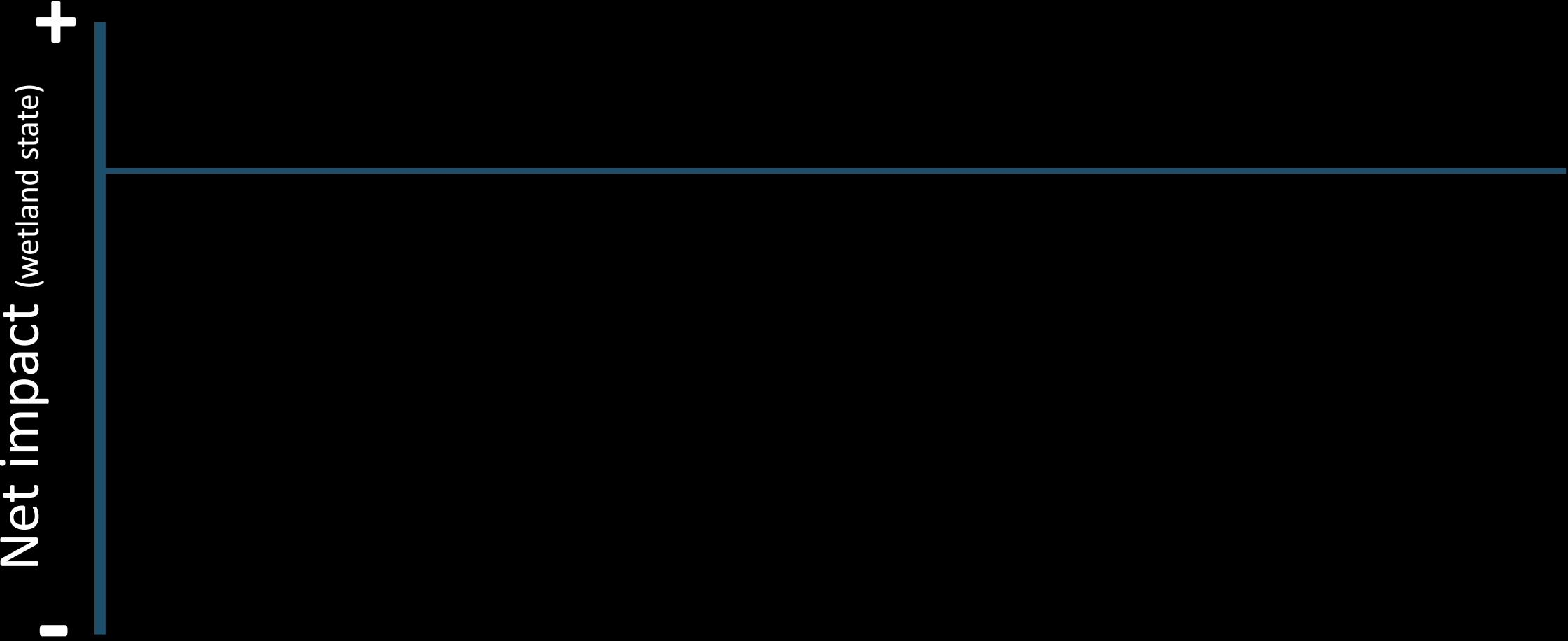
OR should we consider
something simpler (**area**)?

How?

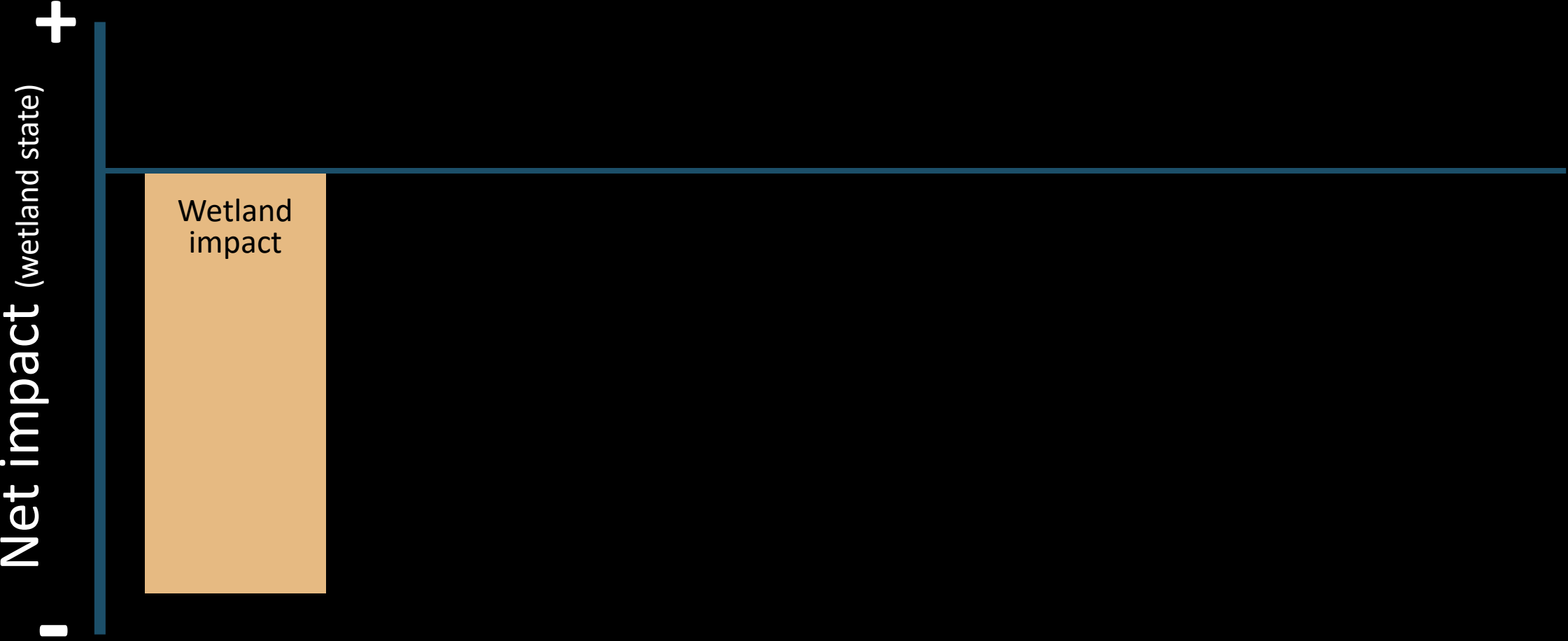
How?

A **mitigation hierarchy** is often used to balance environmental and economic interests.

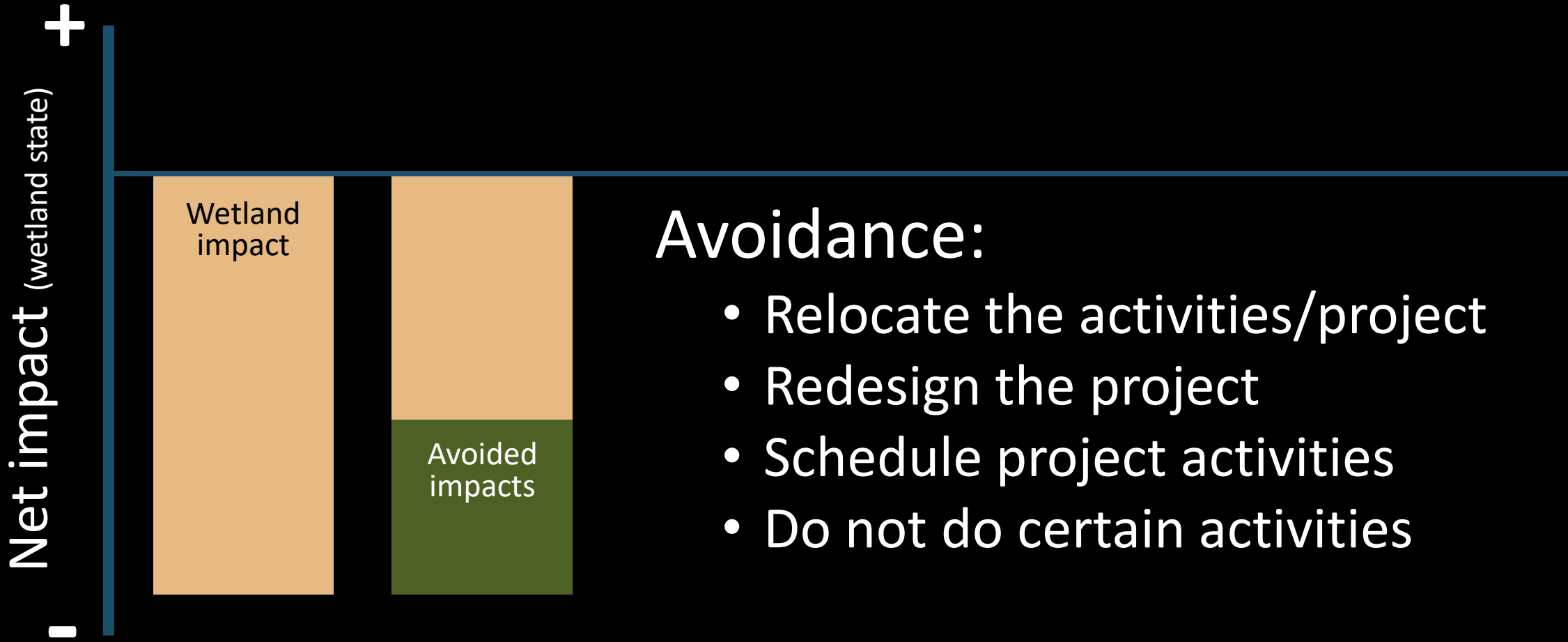
A mitigation hierarchy



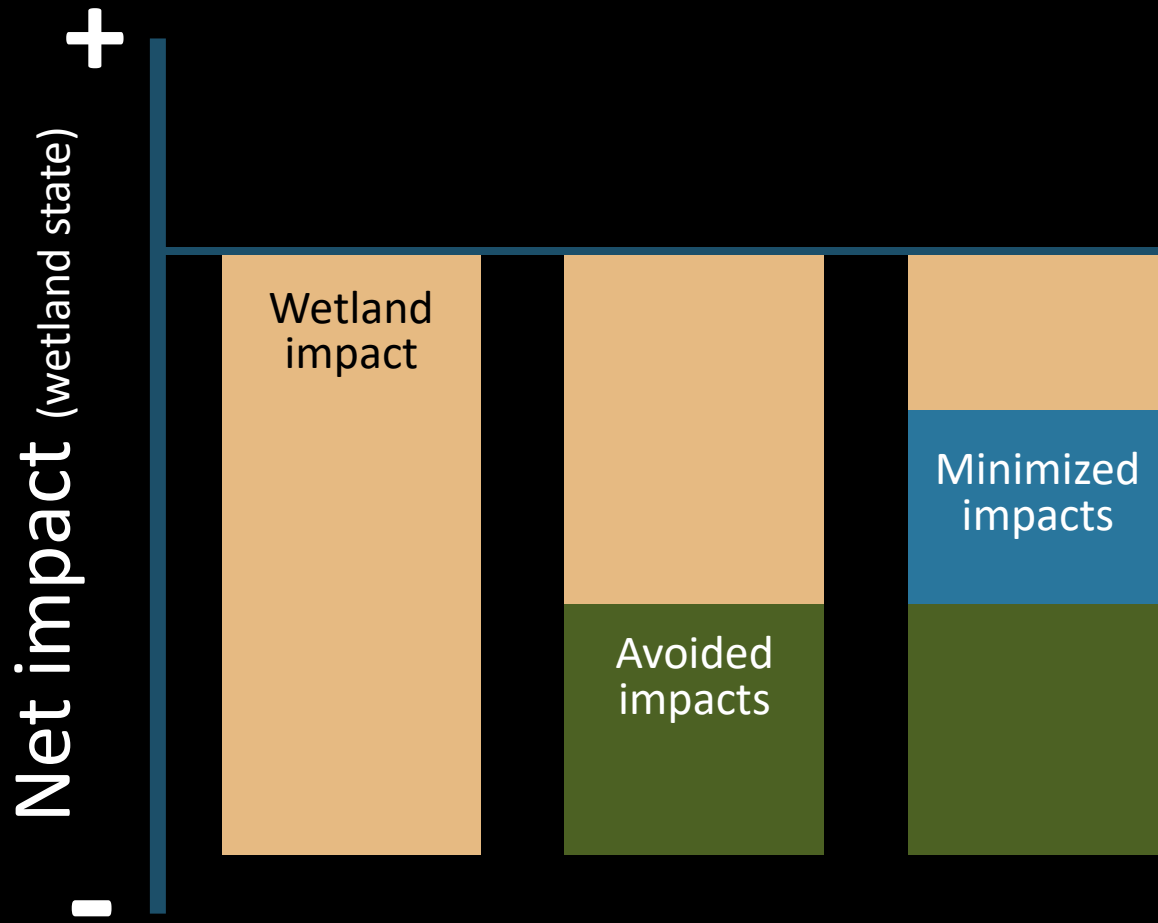
A mitigation hierarchy



A mitigation hierarchy



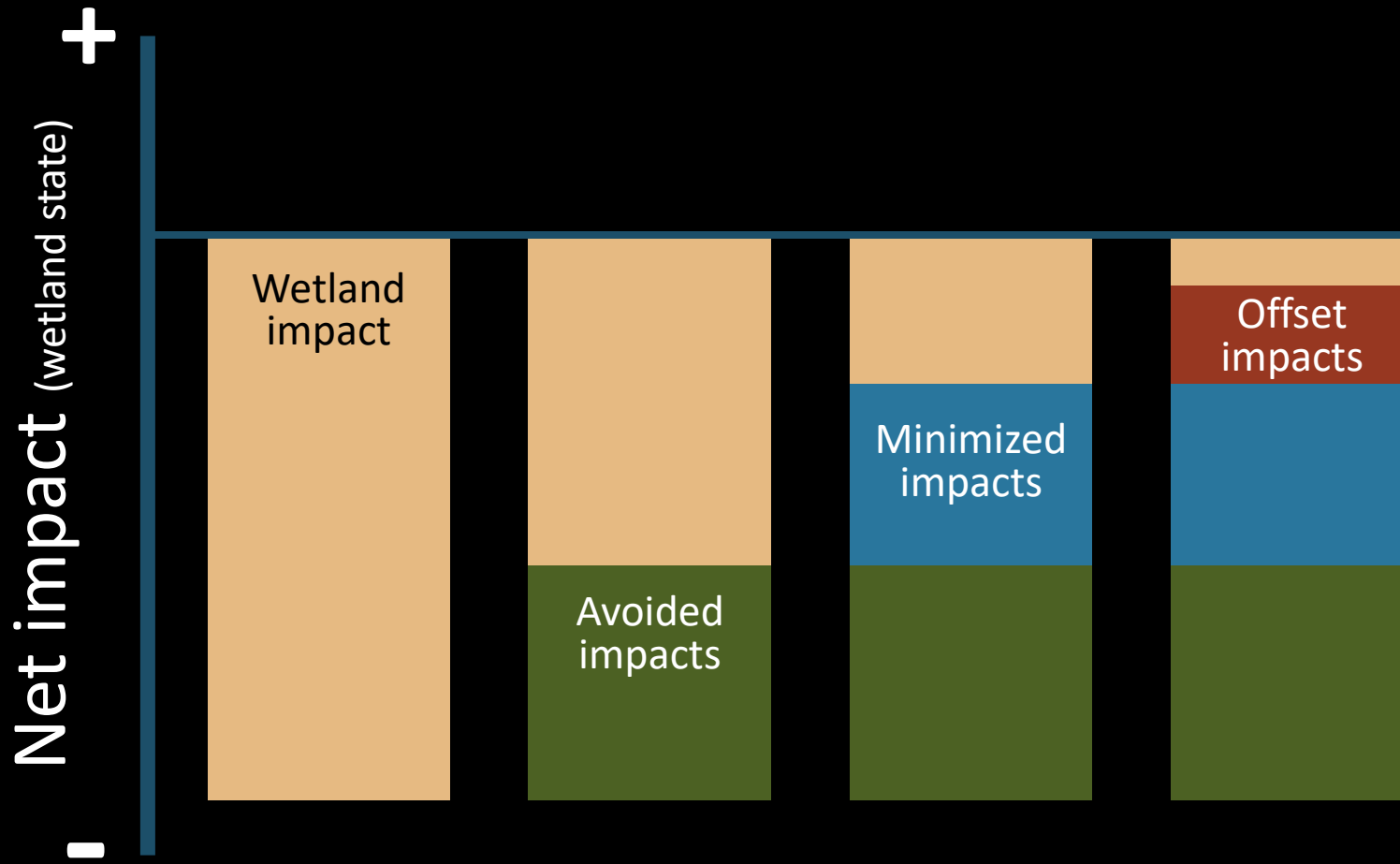
A mitigation hierarchy



Minimization:

- Physical controls
- Operational controls
- Abatement controls
- Reclamation (on-site)
measures taken to repair degradation or damage to wetland function following the activities

A mitigation hierarchy



Offsetting:

Measurable benefits resulting from actions in areas not impacted by the initial activity

- Restoration offsets
- Protection offsets
- Enhanced knowledge offsets

How?

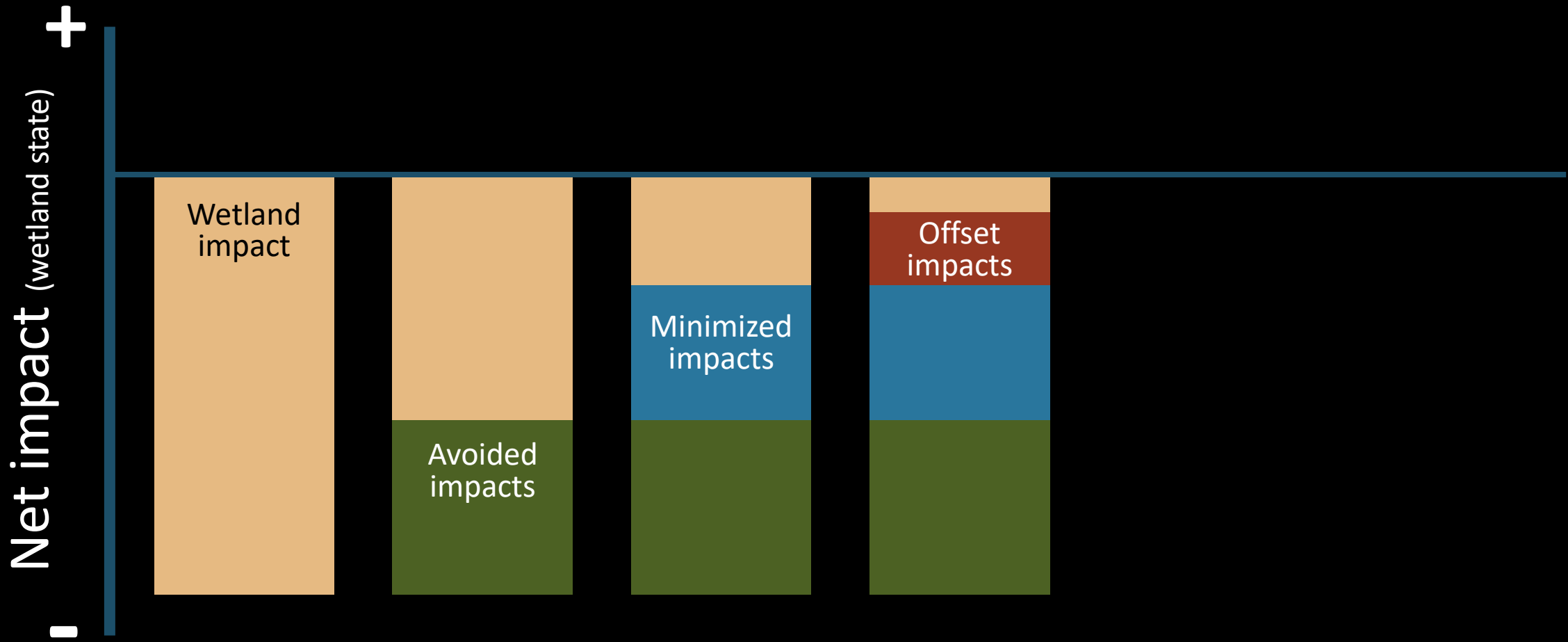
A **mitigation hierarchy** is often used to balance environmental and economic interests.

To be effective **we need to know:**

- When have we completed the process (**end point**)?
- When have we done enough to move to the next option (**next step**)?

A mitigation hierarchy

The end point?



The end point?

Options

Stay high level
(if we can)...

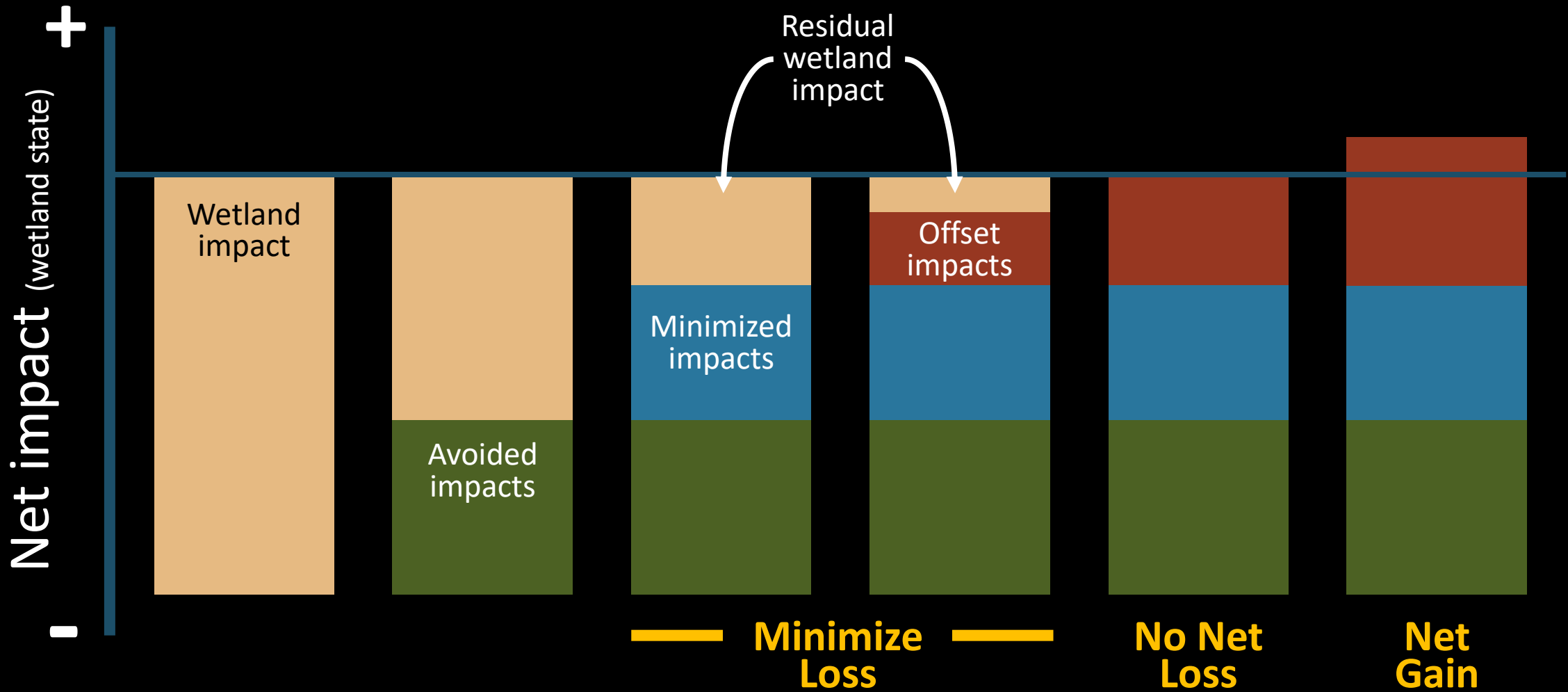
Minimize loss (of wetland benefits)

No net loss (of wetland benefits)

Net gain (of state of wetlands)

Hybrid threshold approach

The end point?

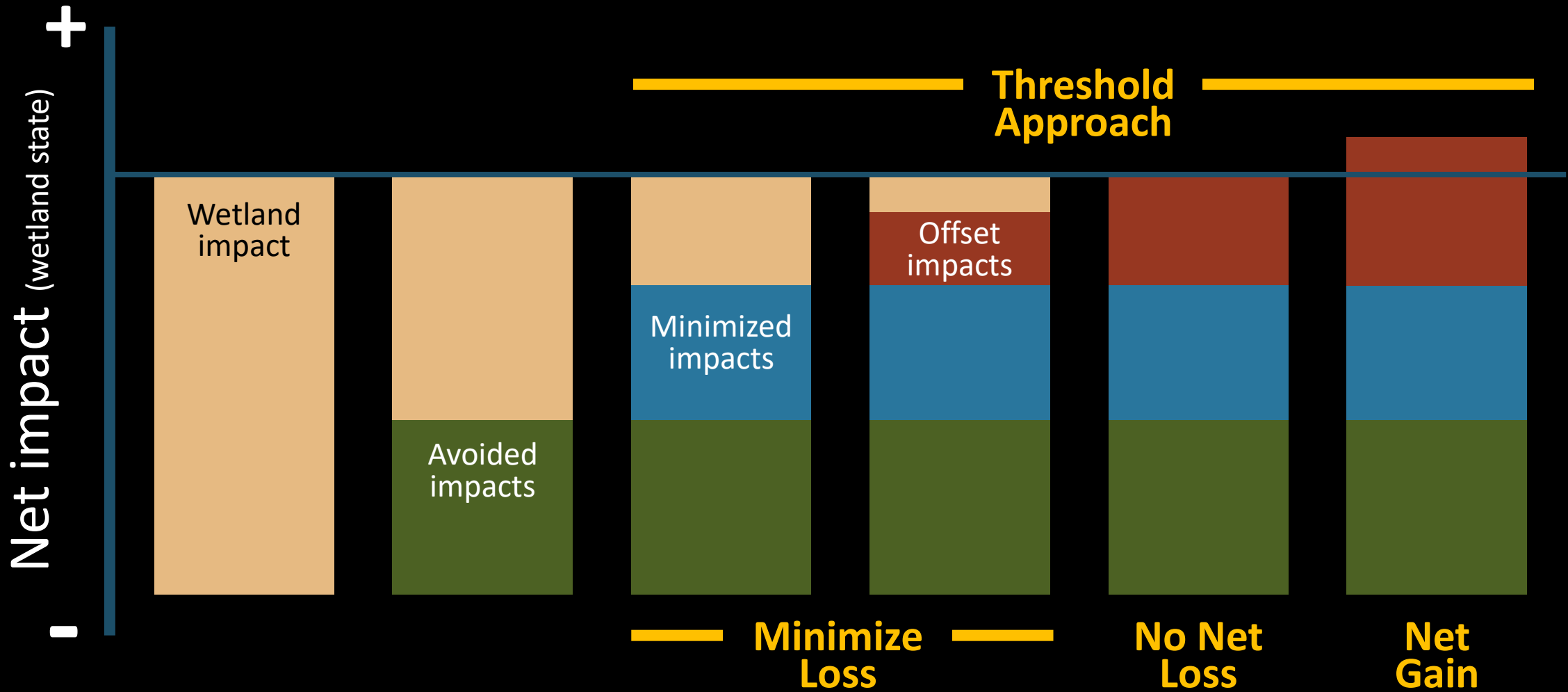


Challenges of No Net Loss (offsetting)

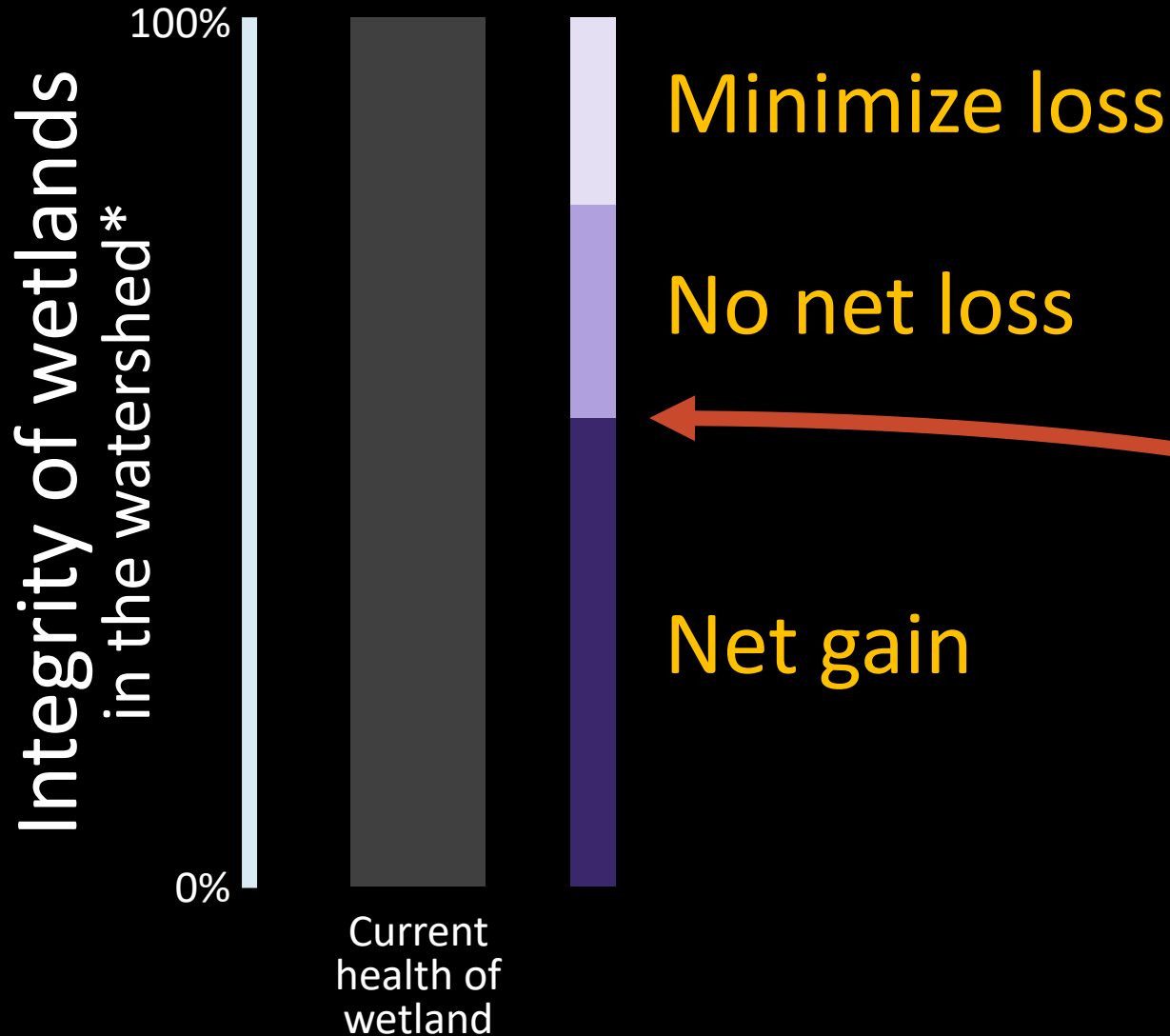
Maron et al 2016 *Bioscience* – Taming a wicked problem:
Resolving controversies in biodiversity offsetting

“there are many risks associated with the unscrutinized expansion of offset policy. Nevertheless, governments are increasingly adopting offset policies, so **working rapidly to clarify and—where possible—to resolve these issues is essential.”**

The end point?



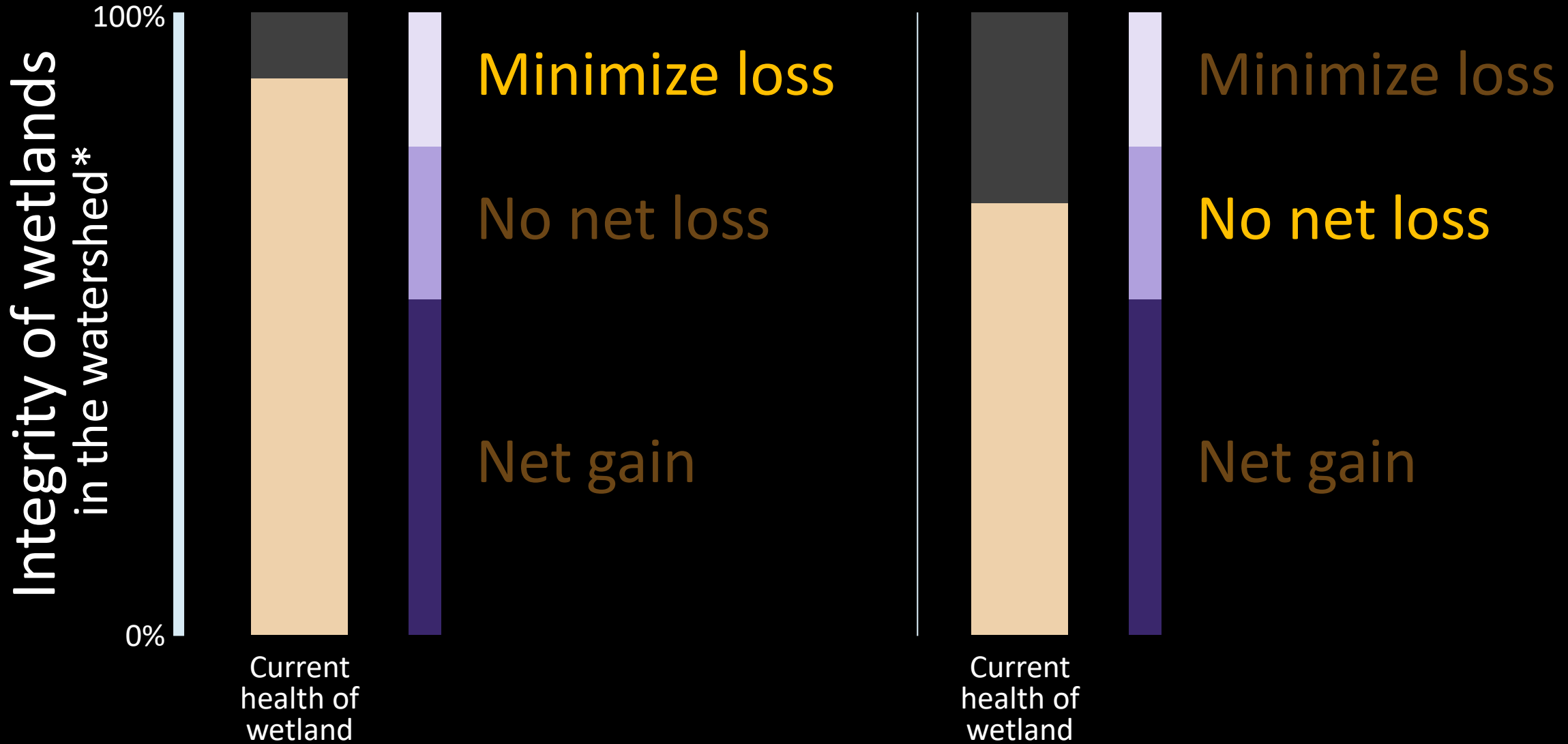
The Threshold Approach



As the overall health of the wetlands decreases and crosses pre-established thresholds, the requirement for mitigating impacts increases.

Set as an ecological threshold below which loss can not be tolerated

The Threshold Approach



The end point?

