

# Site Management: from theory to application – are we closing the loop?

Mike Camplin

Marine Conservation Officer (West Wales)

Countryside Council for Wales



# Outline

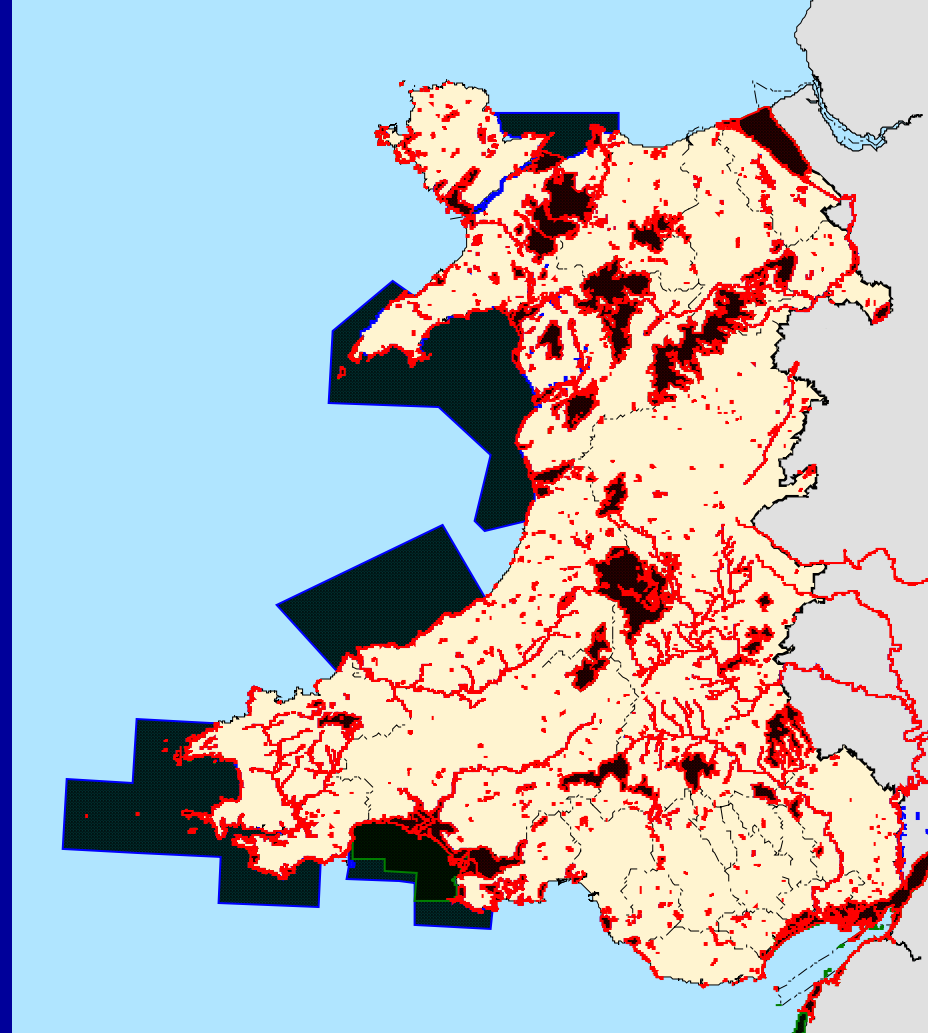
- Conceptual cycle of site management
- Historical approach (terrestrial sites)
- Application to marine sites
- Re-examine in light of experience:
  - Conservation objectives
  - Management objectives and actions
  - Indicators, monitoring, feedback

# Marine Sites

## Experience:

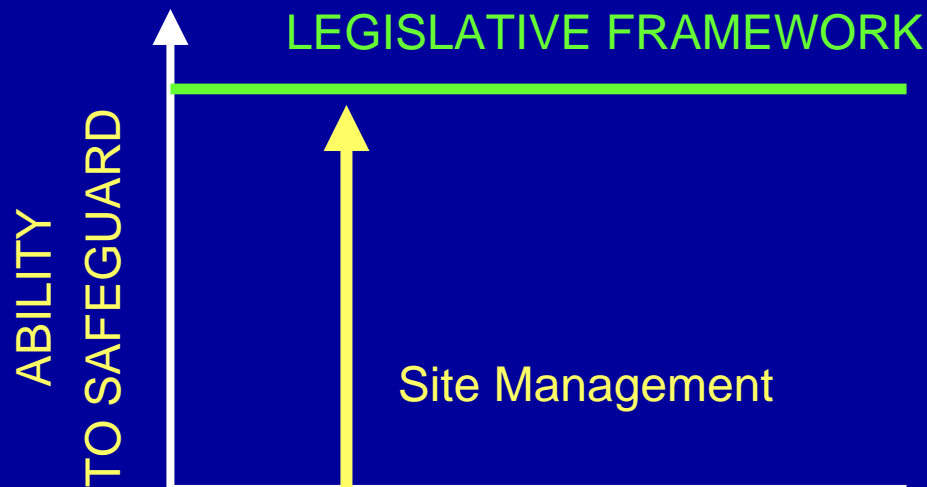
- Management plans
- Regulation 33 Advice
- Casework
- Site monitoring & surveillance

Blue = SAC  
Green = SPA  
Red = SSSI



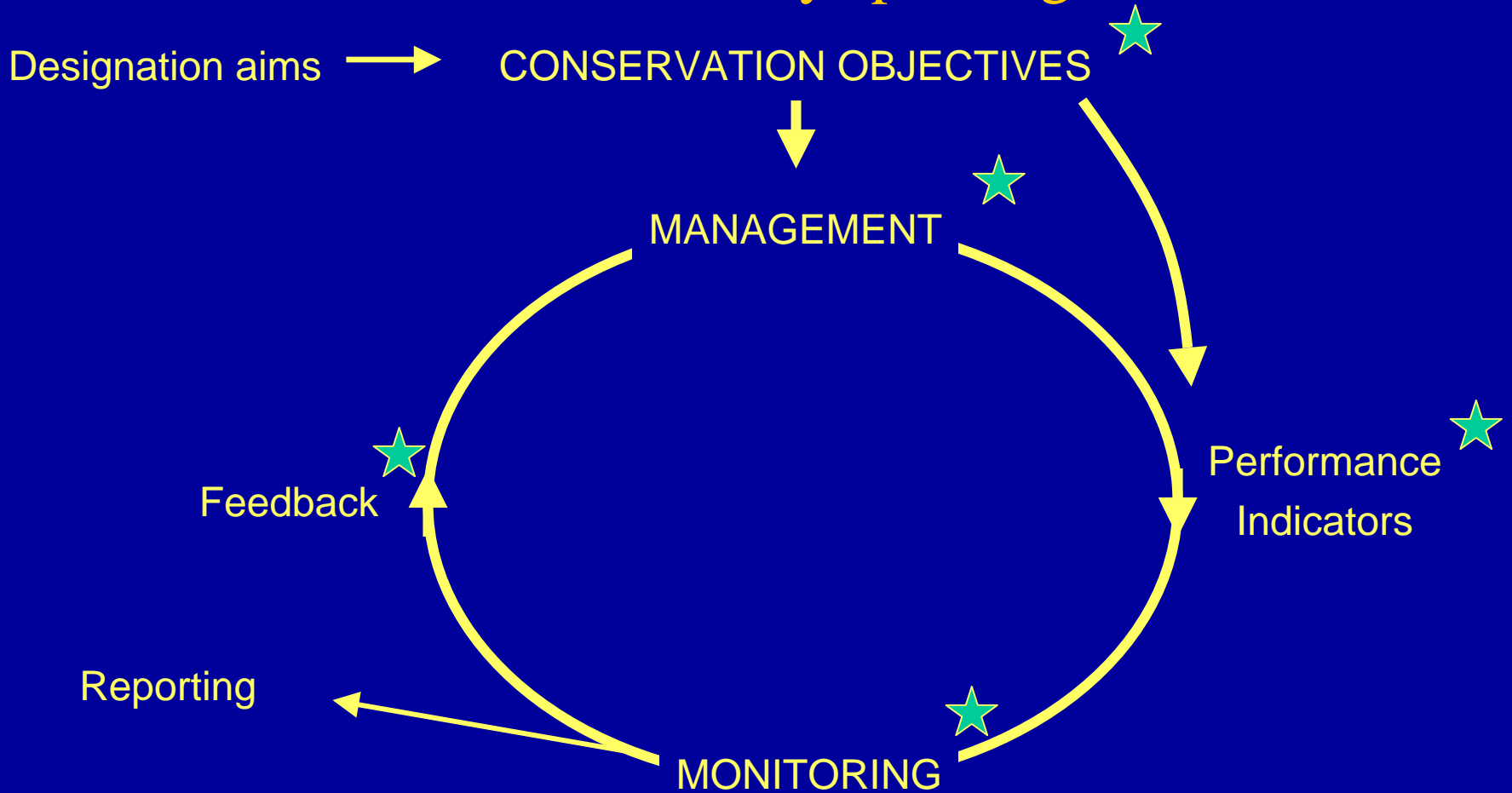
# Ability To Safeguard

- Defined by:
  - Underpinning legislation
  - Site management (our ability to fulfil the legislative requirements)



# Site Management:

Theoretically speaking



# Application to Marine Sites

## MNR, SAC, SSSI....

Significant differences from most terrestrial sites

- Features
- Scale
- Heterogeneous
- Highly dynamic
- Little, if any, manipulative management
- Management mostly of anthropogenic impacts
- Diverse spread of managers
- Many users and other stakeholders
- Ecosystem focus

# A Brief Story

- Of sponges, objectives, monitoring and dredge disposal – Skomer MNR

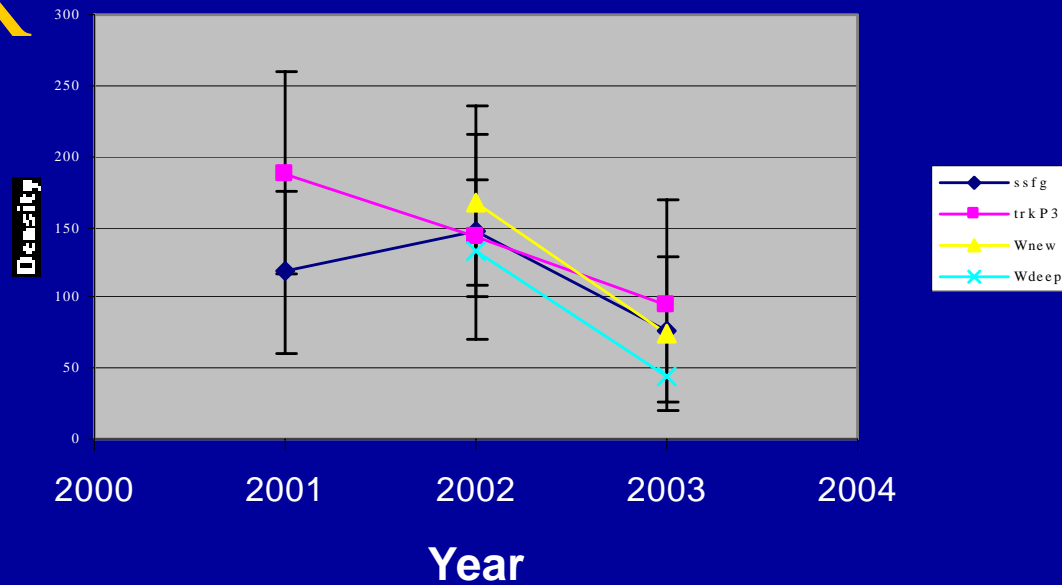


# SKOMER MNR

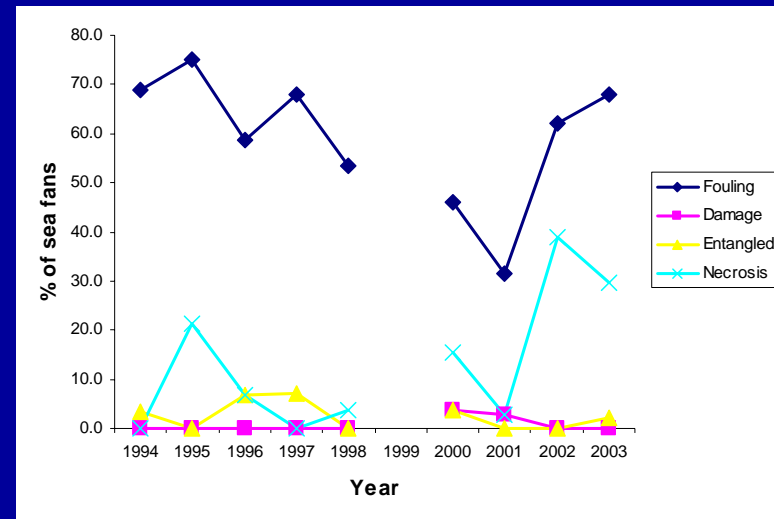
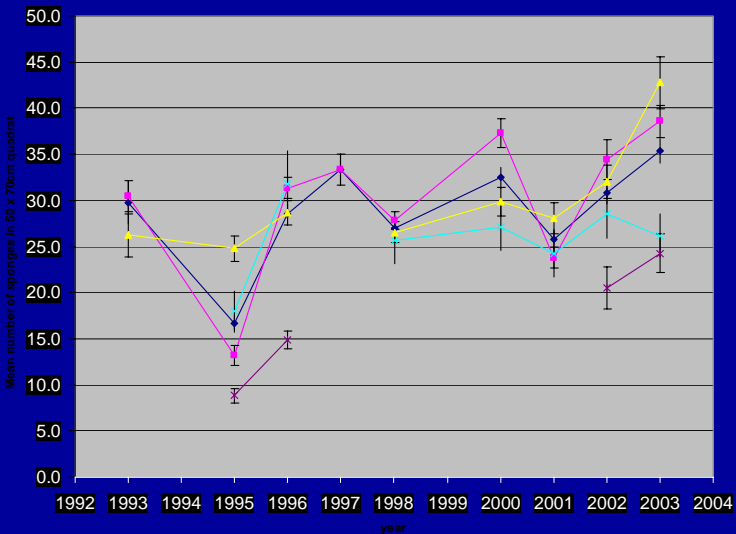
Monitoring and surveillance  
over many years

Change in management  
approach in mid 1990's

Density of polyps / framer



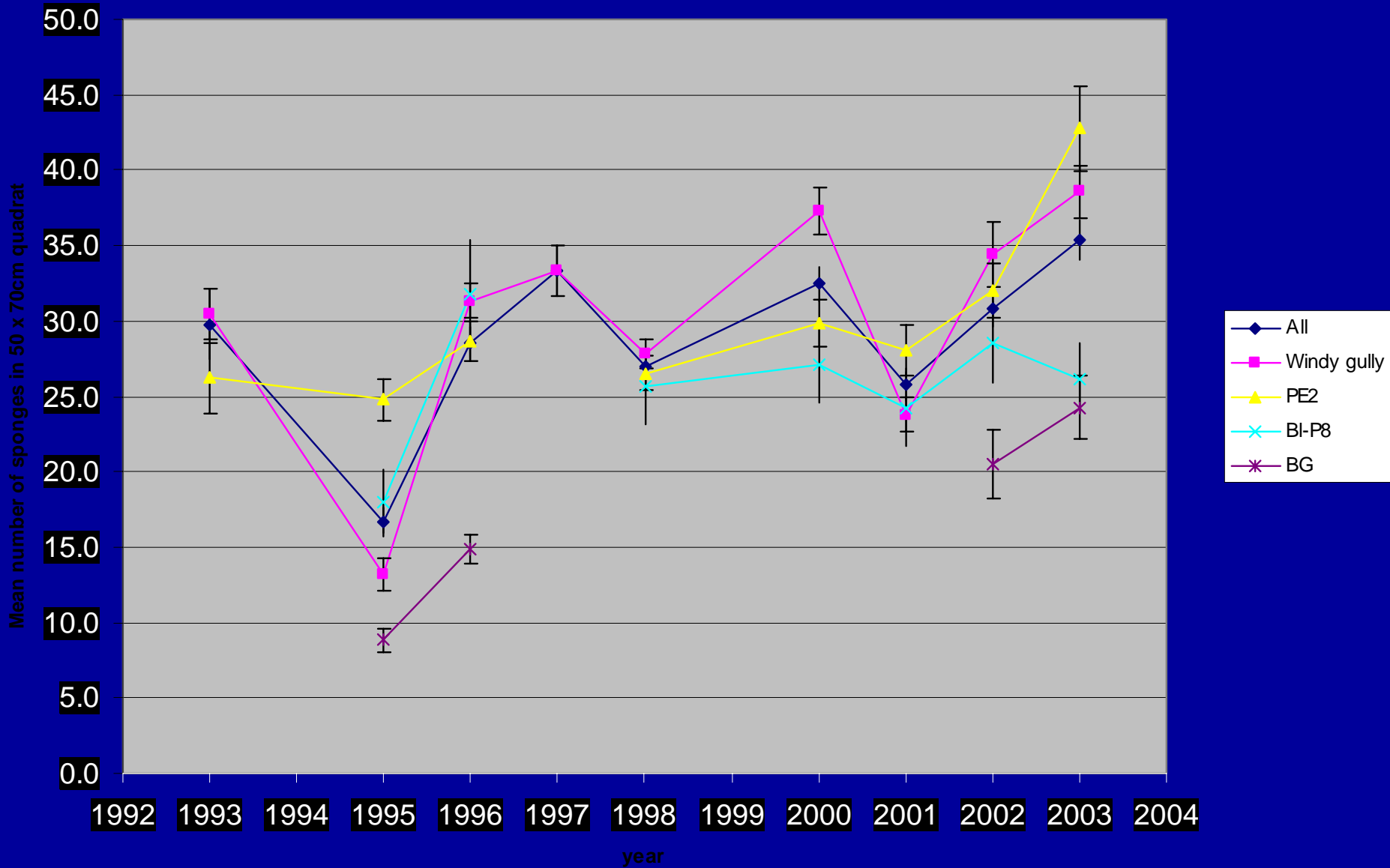
number of sponges / quadrat



# MNR Sponges

- Sponge communities defined as a feature
- Objectives changed from:
  - Is there an effect on the biota caused by increased sedimentation rates (due to anthropogenic activities)? to
  - maintain diversity and presence of rare and scarce species
- Examining data to determine sponge attributes, targets and limits

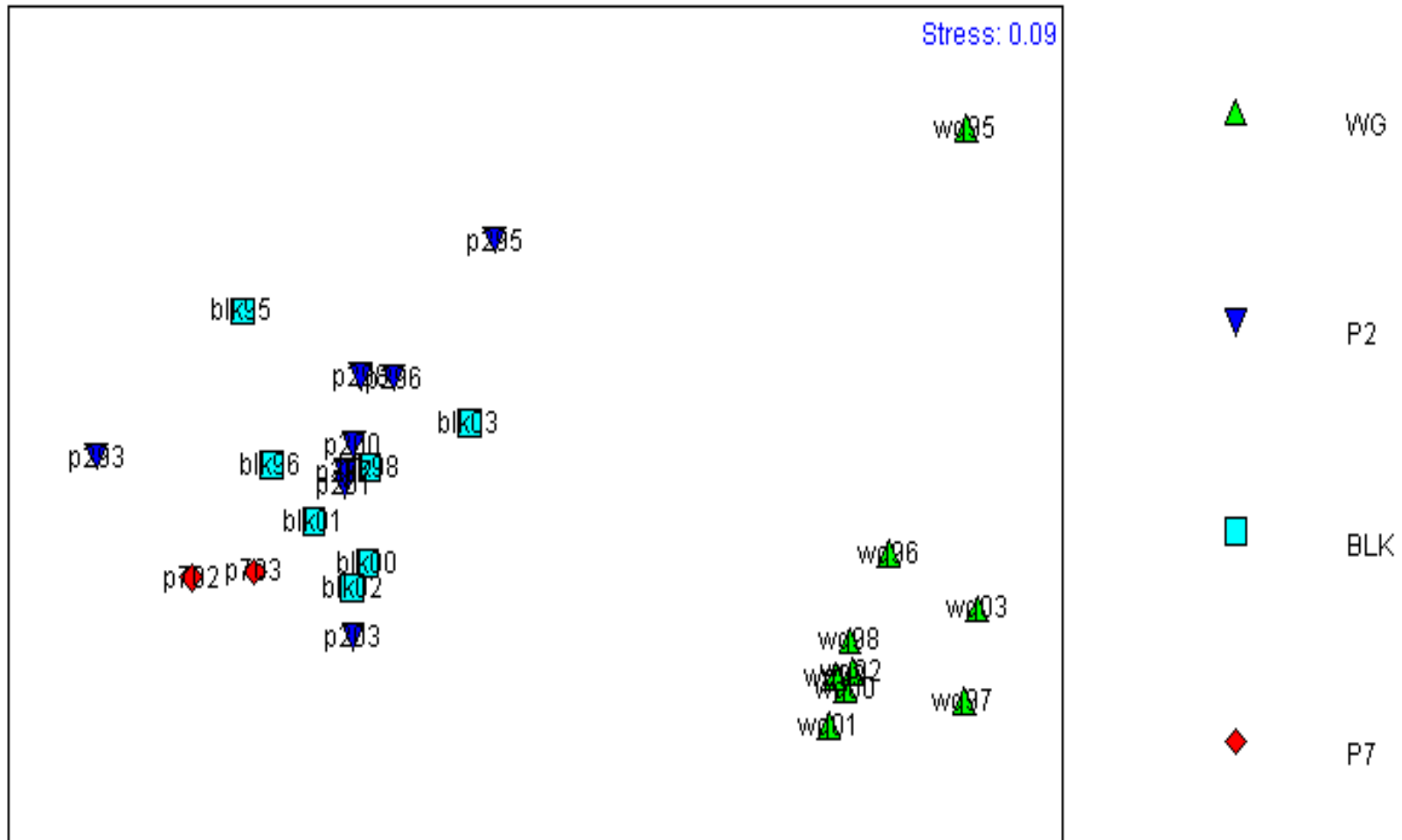
# Mean number of sponges / quadrat



# Multi variant analysis

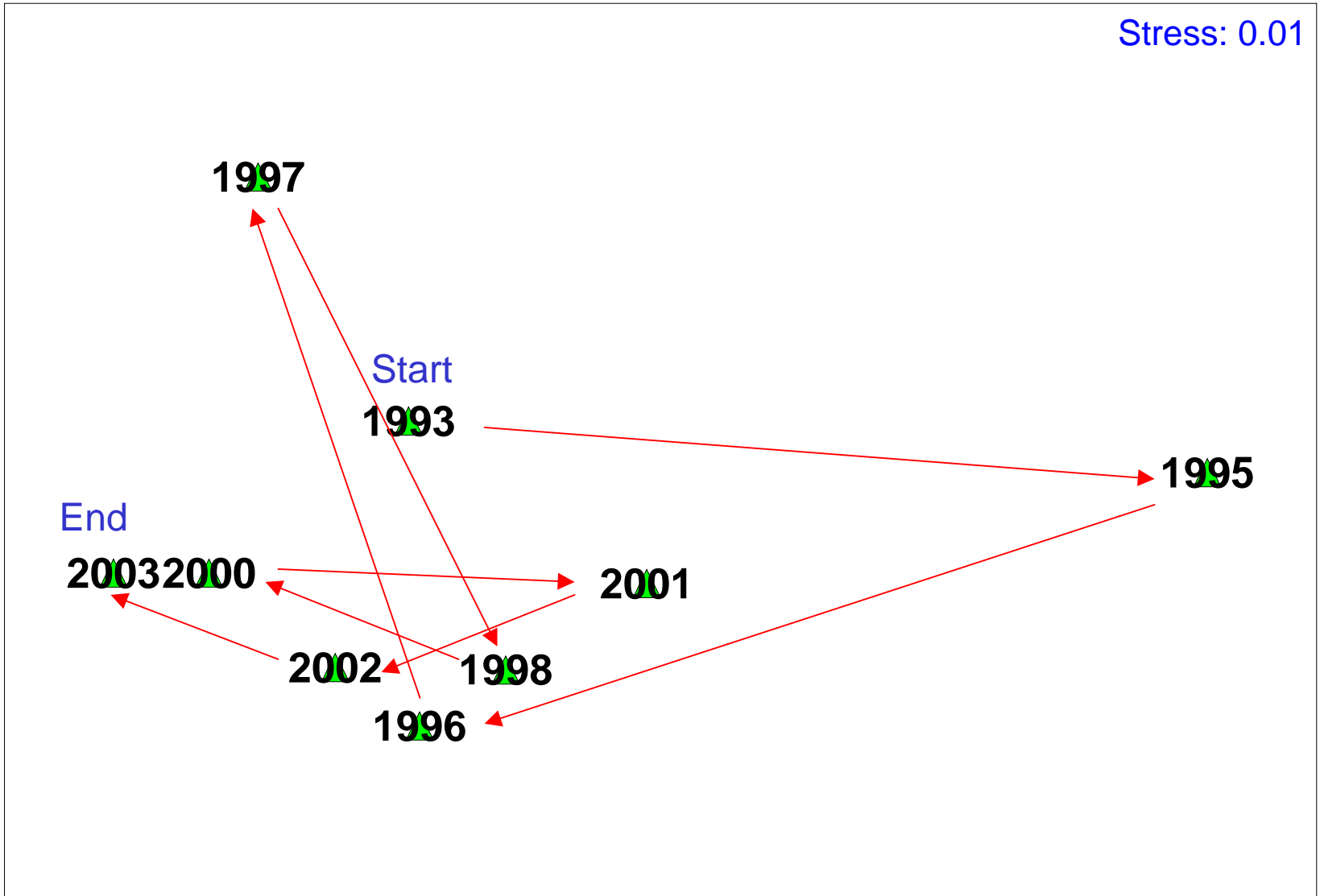
## Using Primer

*Sponge morphology 1995 - 2003 (4rt trans averaged to site & year)*



# Sponge data averaged to year

Stress: 0.01

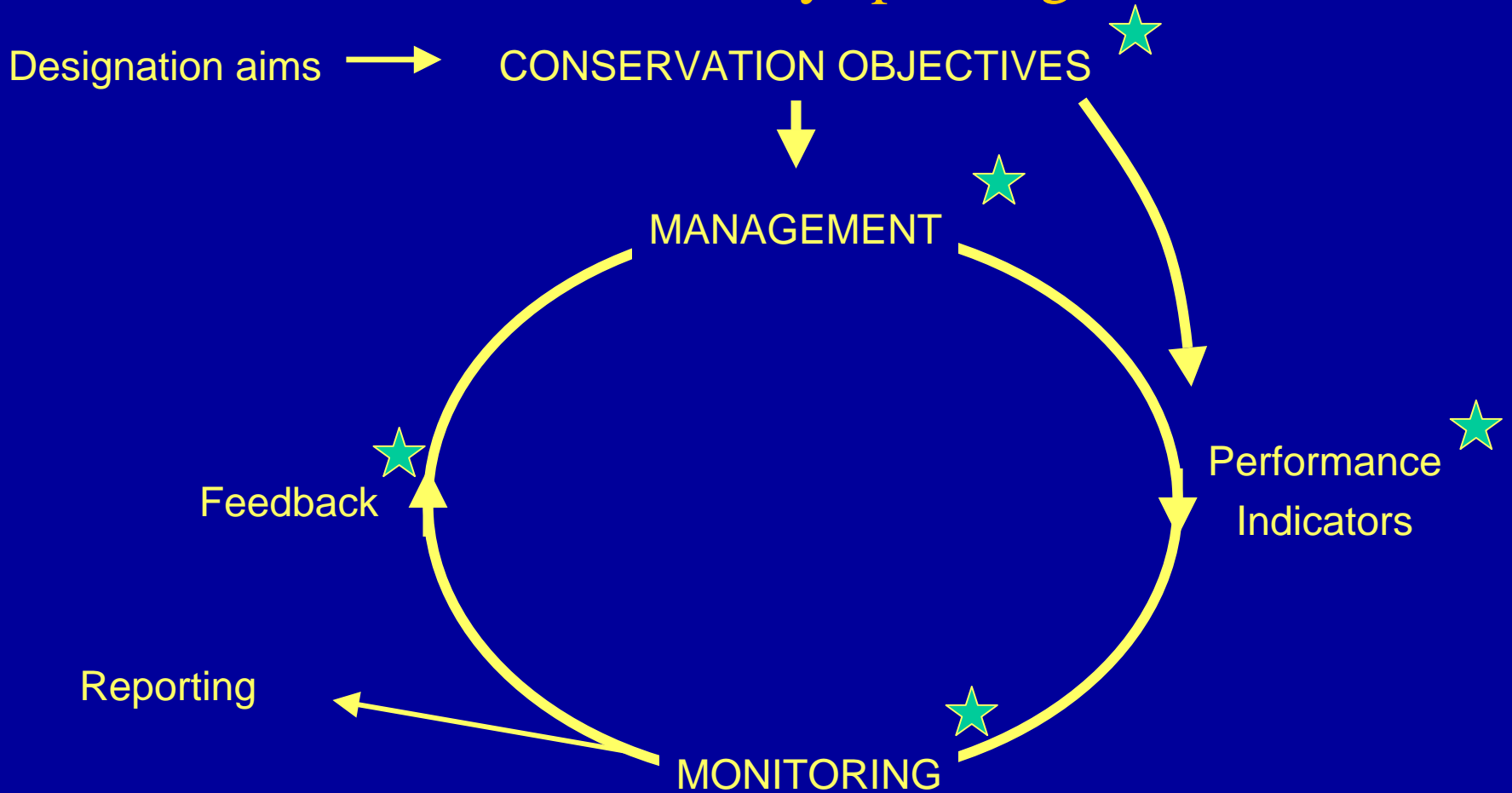


# Lessons?

- Need a clear objective, 1<sup>st</sup>.
- Establish appropriate indicators to tell us:
  - Has the objective been met?
  - If not, why not?
  - What changes are needed to management (if any).
- Defining targets and limits can be difficult for a dynamic environment.
- To understand what's going on you need other information.

# Site Management:

Theoretically speaking

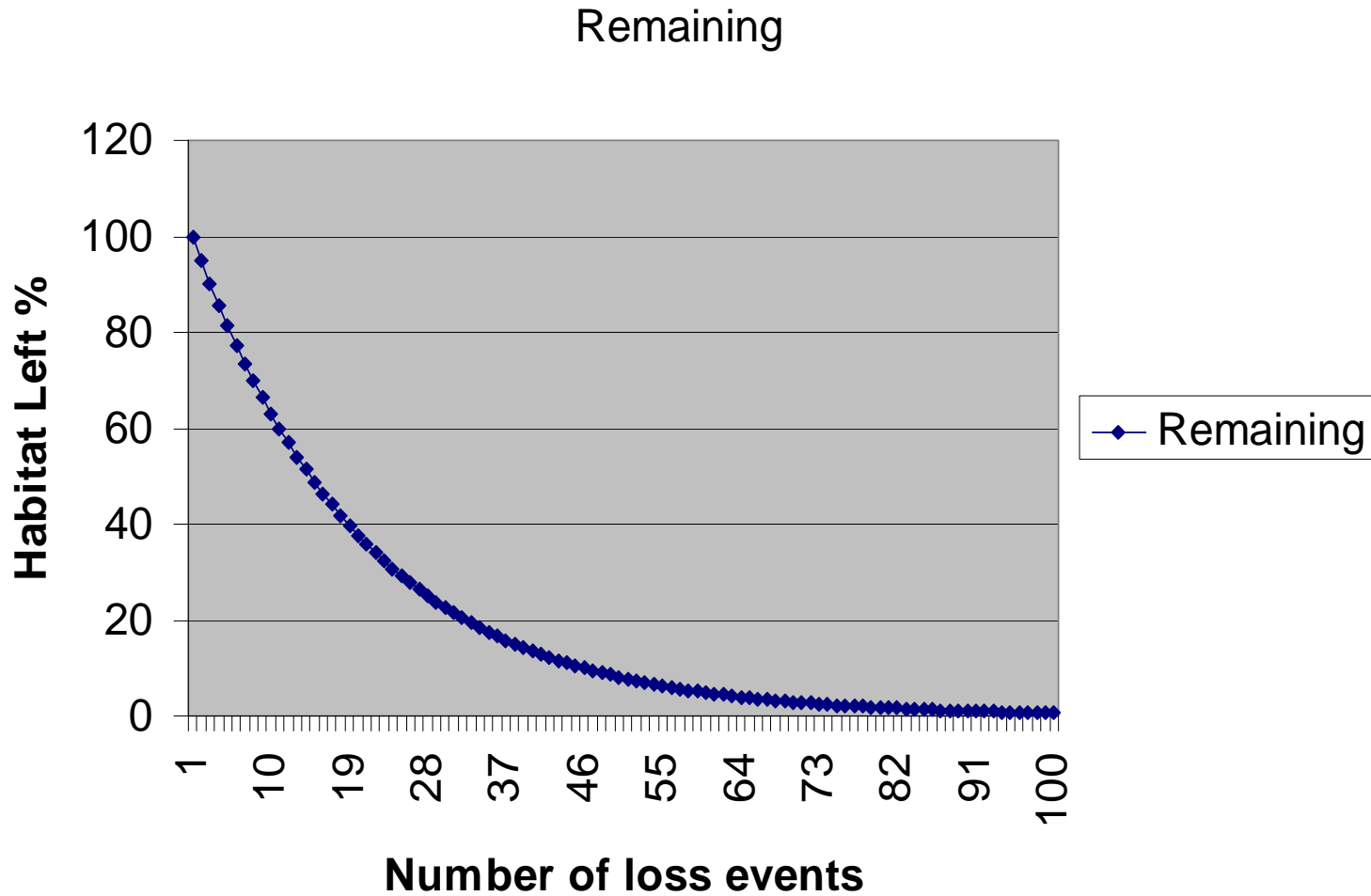


# Conservation objectives

- General issues:
- Need to clearly and honestly define our objectives. (I.e. what's OK and what isn't).
  - Are they?
  - E.g. “Distribution should not deviate significantly from the established baseline, subject to natural change”
- Difficult. No loss/change? Some? If so how much? Once off?, or ad infinitum? Allowable gradual decline?

# Habitat decline

5% loss allowed  
Per event



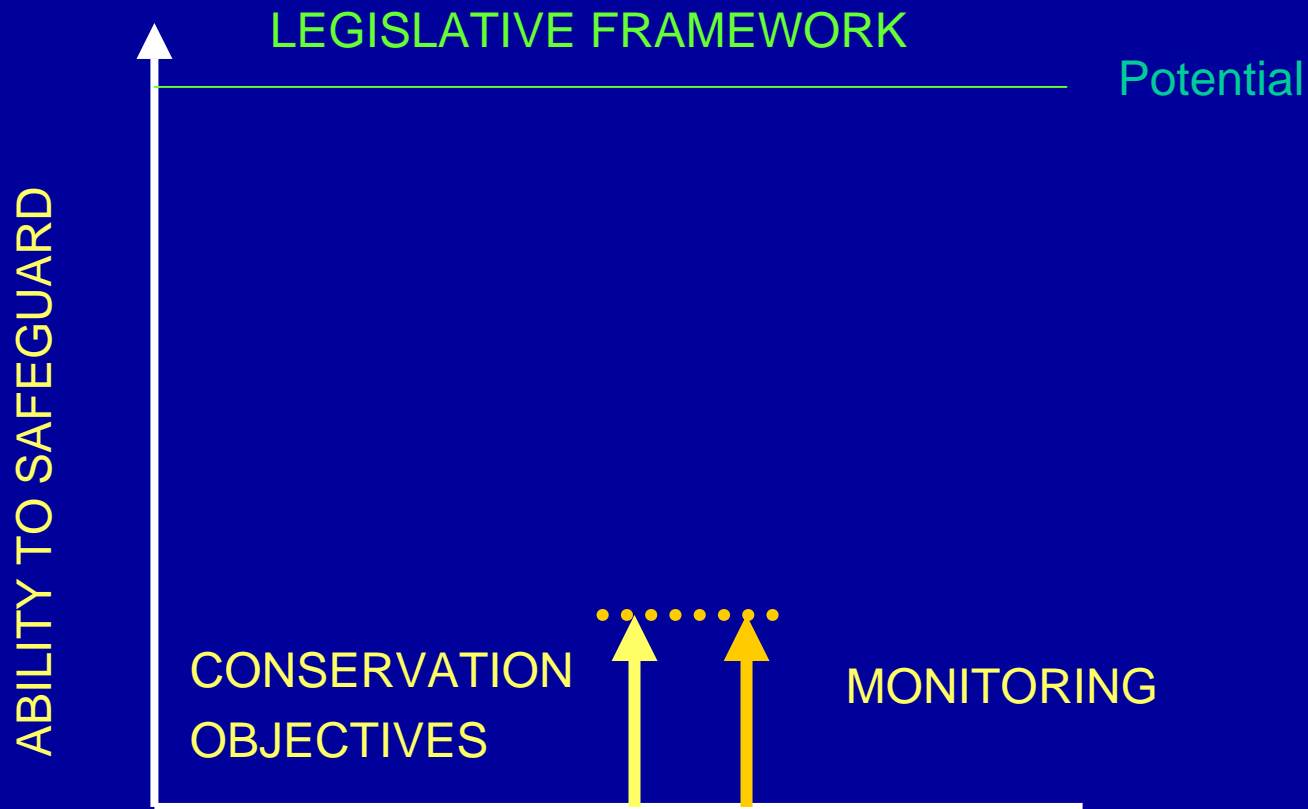
# Conservation objectives

- Decide required philosophy:
  - Maintenance through habitat manipulation,
  - Prevention of (further) deterioration and disturbance as a result of anthropogenic activity.
- May be a need for both, but each requires slightly different approaches to objective setting and management.

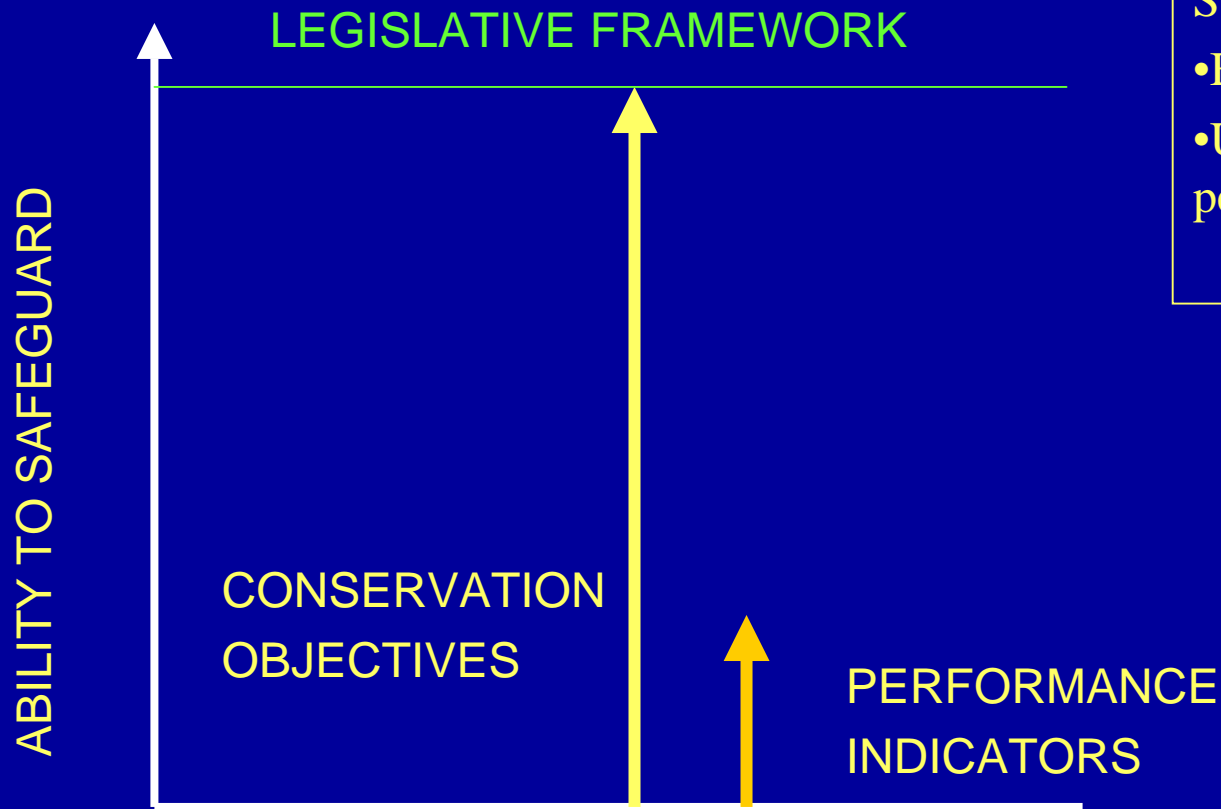
# Conservation Objectives

- Some objectives are defined by monitoring targets and limits
  - E.g. Maintain mean density of Pink Sea fan between  $x$  &  $y$
- Key issues
  - Conservation objectives limited by monitoring logistical and resourcing constraints.
    - Unmonitored = no objective = unprotected.\*

# If CO's=MONITORING



# CO's=MONITORING



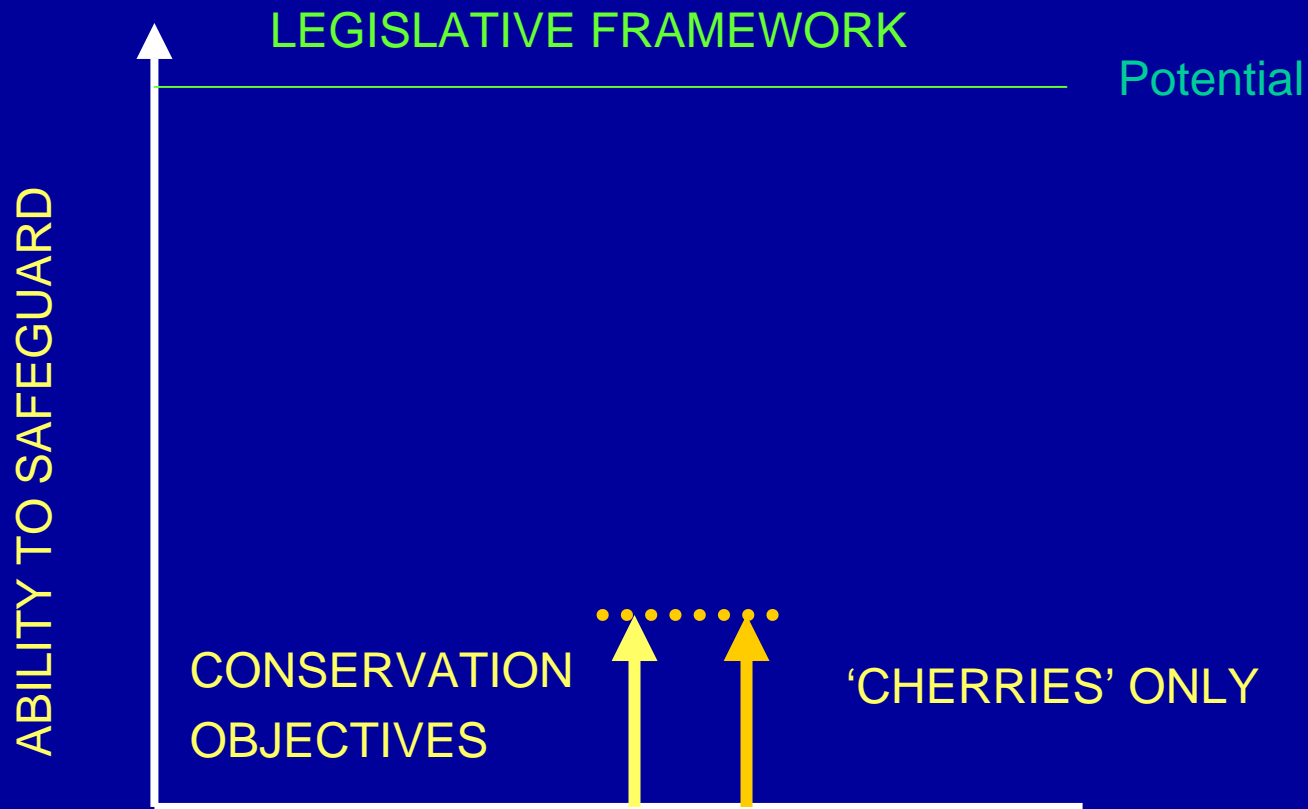
## SOLUTION?

- Break the link
- Use 'indicators' of performance.

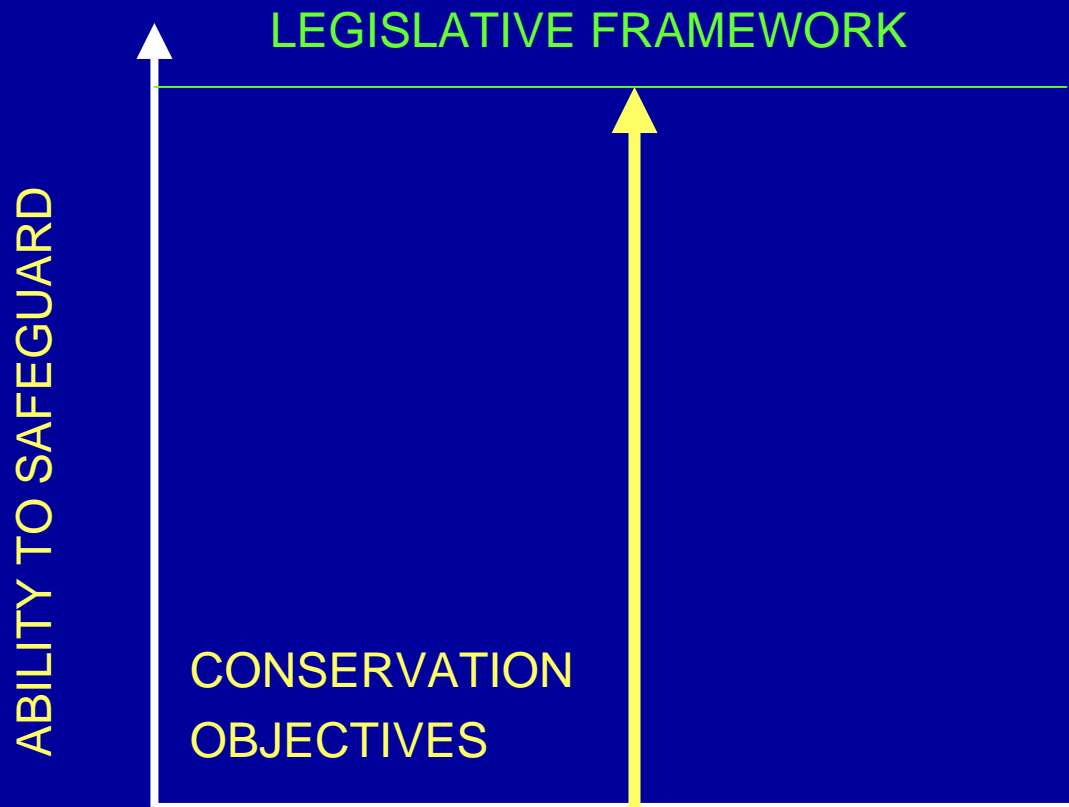
# Conservation Objectives

- Tendency to cherry pick.
  - CO's for 'best bits' of special features only
- Key issue
  - Conservation objectives limited to the 'best bits' only.
    - Rest of feature unprotected.
  - Best bits selected subjectively.

# CHERRY PICKING



# CHERRY PICKING



## SOLUTION?

- Don't cherry pick
- Develop CO's that encompass the features in their entirety.

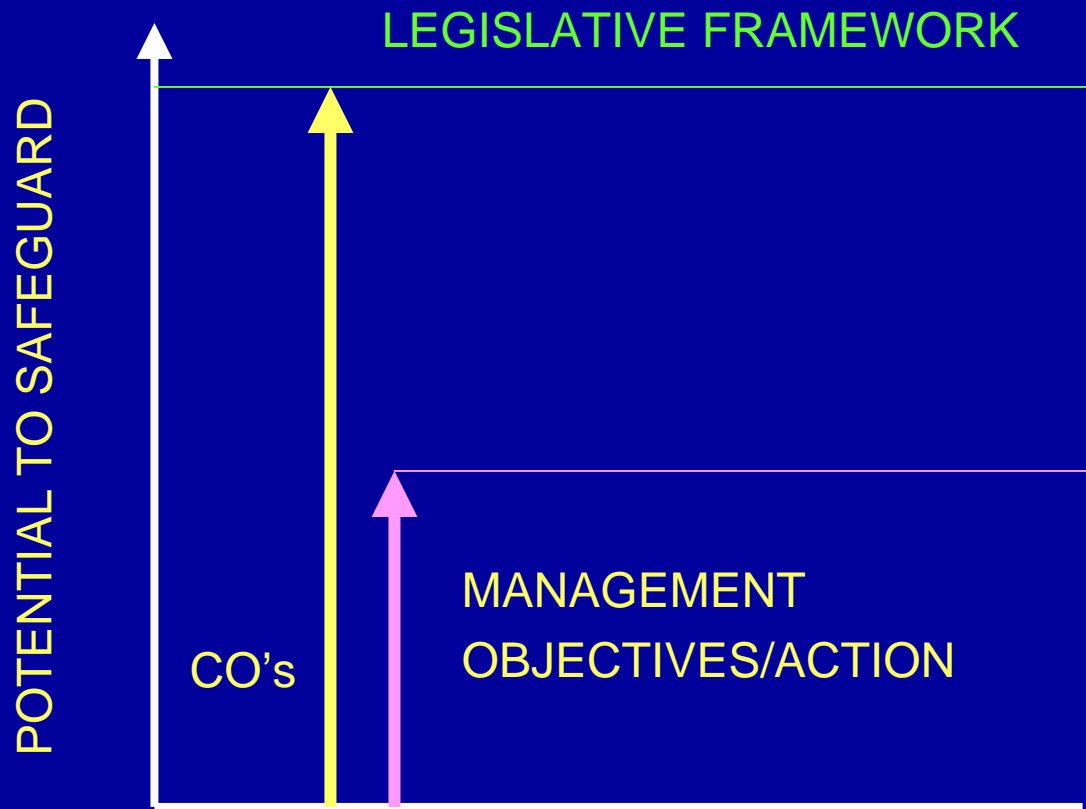
# However....

- Note:
  - Not all ‘special interest’ is of equal importance  
- just none of it is of no importance.
  - Variable degree of protection.

# Management

- Management often tends to reflect a level of managerial commitment rather than the needs of the site
- Key issue
  - Failure to fully establish preventative measures.  
Ignoring foreseeable future.

# Management

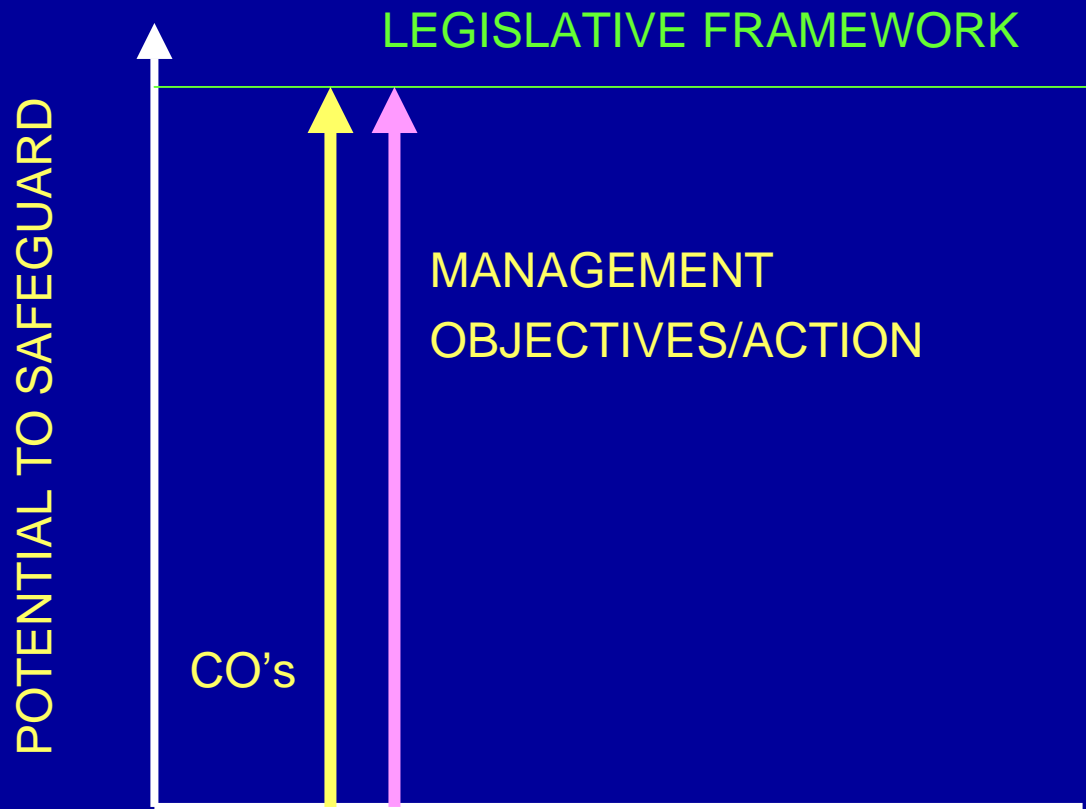


# Management

## Solution

- Attempt to get agreement on the management needs.
- Then seek agreement on action

# LIMITED MANAGEMENT



# Performance Indicators

(Attributes, targets and limits)

- Need to reflect the objectives (both CO's and MO's)
- Need to inform management
- Allow us to report

# Performance indicators

- Reflecting objectives?
  - Limited by resource and logistical constraints as expected.
  - Variable.
    - Great difficulties in:
      - selecting appropriate attributes
      - Setting meaningful targets and limits
      - Dodgy objectives = dodgy performance indicators

# Performance indicators

- Informs management?
  - Very little.
- Allow us to report?
  - But, what about other knowledge?

# Performance Indicators

- Is inherent dynamism accounted for?
- Are they targeted at identifying the presence of anthropogenic impacts?
- Are traditional measures of ‘status’ or ‘condition’ good at identifying impacts?

# Performance Indicators

Could we better utilise

- The wealth of experience in anthropogenic impact prediction and detection.
- Ability to predict (model) likely field values rather than only use static measures based on previous experience.

# Site Management:

Theoretically speaking

