Integrating conservation management and monitoring

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Natural Resources Wales

A basic model

Clive Hurford

A few words about the origins of the model

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Dr Terry Rowell was responsible for the original thinking behind the model and for developing the first version of it. Terry subsequently became the Head of the CCW Monitoring Team. In this position he led a Life-Nature/CCW Life Project:

'Habitat monitoring for conservation management and reporting: A demonstration of good practice on Natura 2000 sites in Wales'. Project No. LIFE95 NAT/UK/000821.

This project gave rise to the version of the model that I am presenting here, while acknowledging the significant contributions of both Terry Rowell and Alan Brown to this adaptation of the model.

The model

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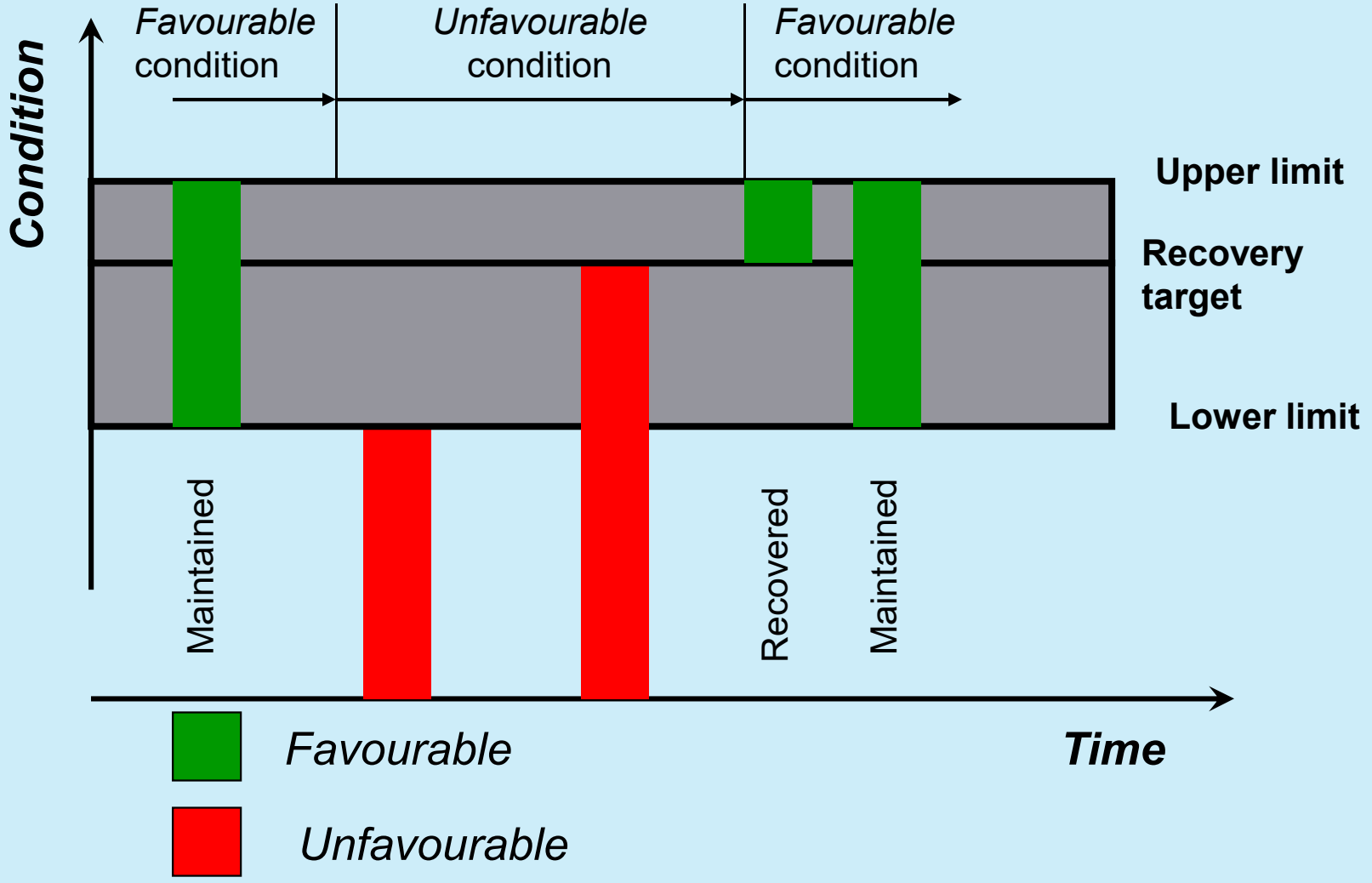

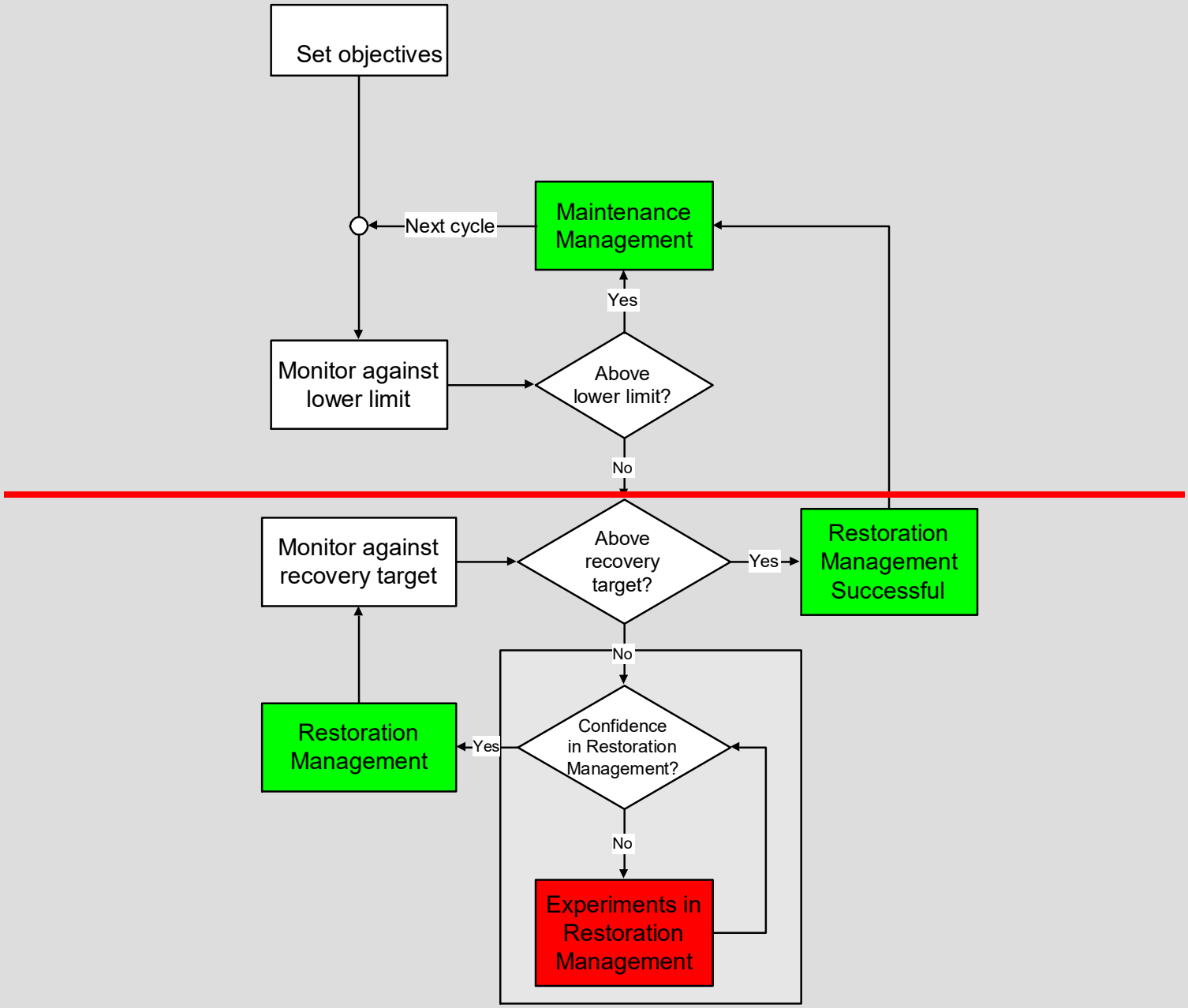
Set objectives
Next cycle
Maintenance Management
Yes
Monitor against lower limit
Above lower limit?
No
Monitor against recovery target
Above recovery target?
Yes
Restoration Management Successful
No
Restoration Management
Yes
Confidence in Restoration Management?
No
Experiments in Restoration Management

In effect, there are two discrete phases to the model

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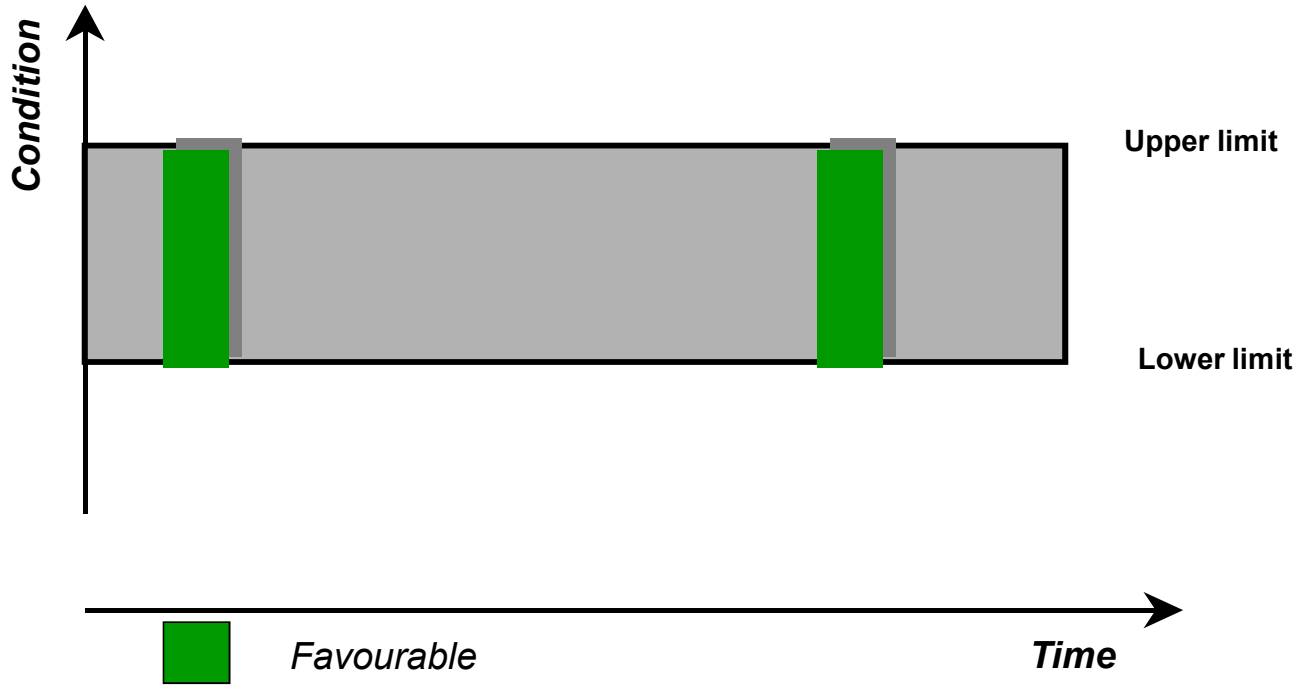
1) When the condition of the habitat or species is favourable



This is the maintenance management phase of the cycle

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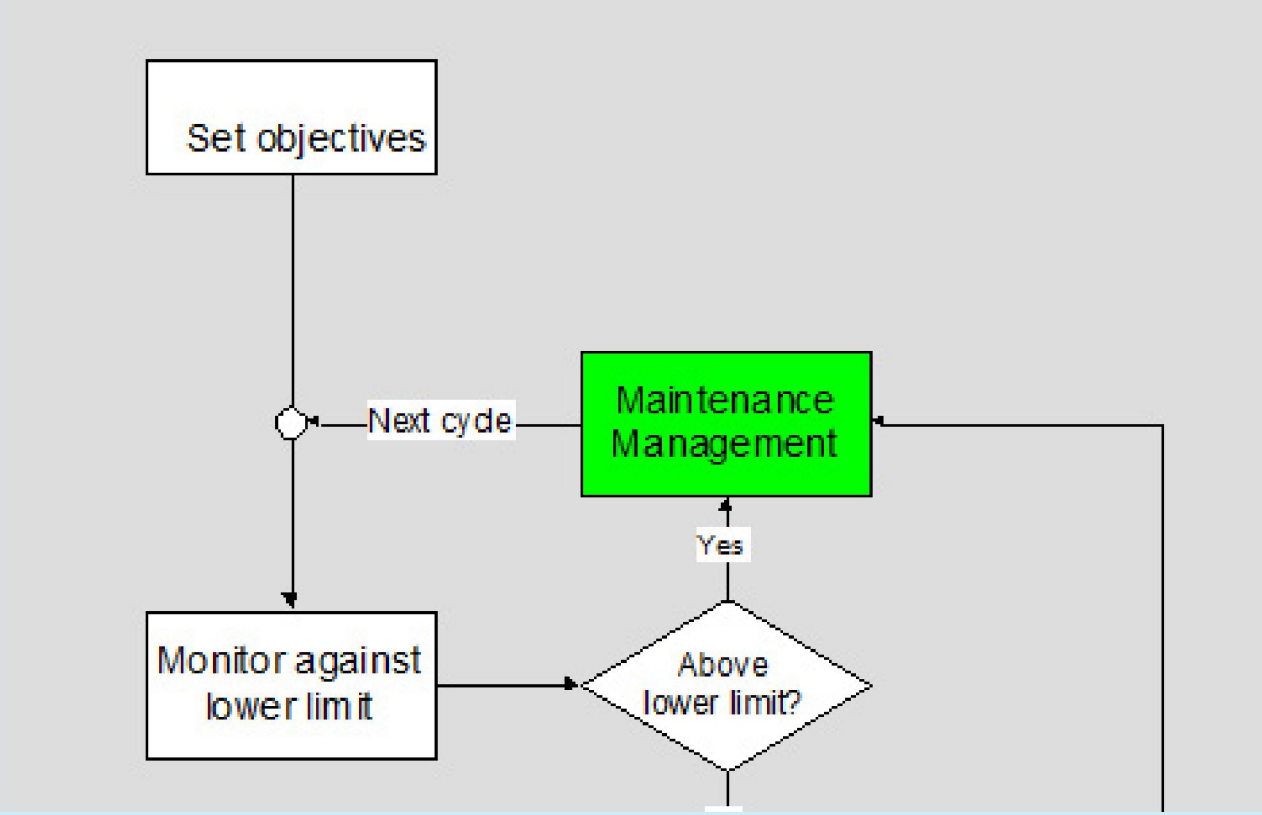

The other phase.....

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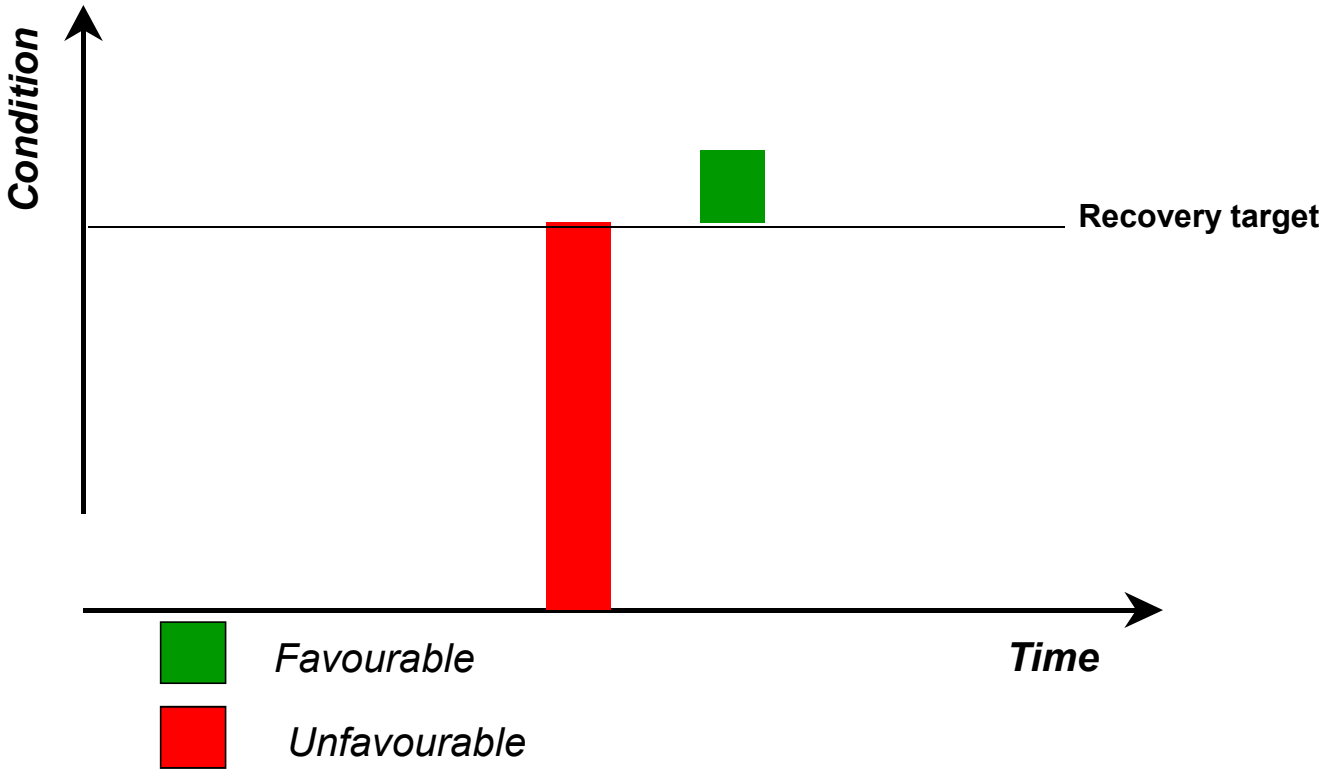
2) When the condition of the habitat or species is unfavourable



The restoration management phase of the cycle

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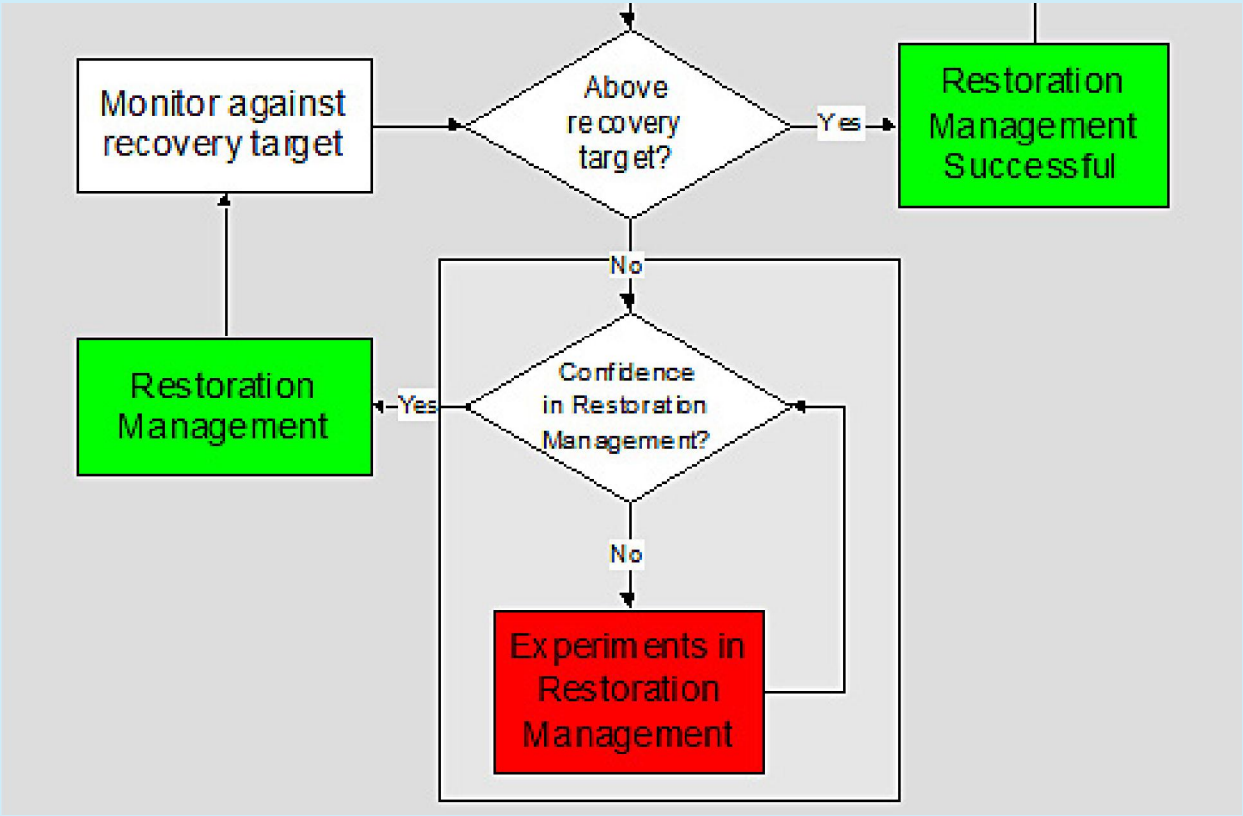

Although the model is basic, the implementation involves making several difficult decisions, i.e.:

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1. How to apply Favourable Reference (FCS) Values at the individual site level? Each site will have a different potential to support the key habitats and species, so how should each site contribute to a national Favourable Reference Value?
2. How to select the condition indicators for monitoring? We have neither the time nor expertise to monitor everything
3. How to carry out the most appropriate management to restore a habitat or species? Many of the habitats that we now value were not created or directly maintained by conservationists.
4. How to fund the management? And which sites, habitats and species are the priorities for funding?

And can a habitat achieve FCS if it no longer supports the animals that should be present?

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A few sources of information

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Some useful reference books

Ellenberg's indicator values

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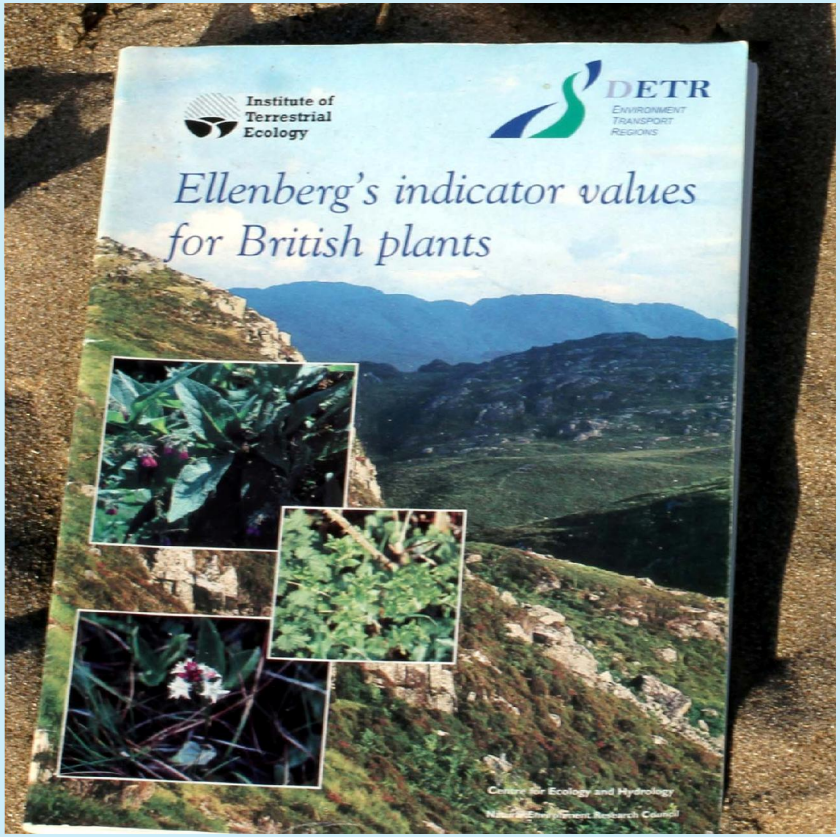
This is an important piece of work that can inform our selection of indicator species and assemblages. The book provides a list of values for the sensitivity of plant species to a series of known stresses, i.e. Light, Moisture, Soil or water pH, Nitrogen, and Salt



Comparative Plant Ecology

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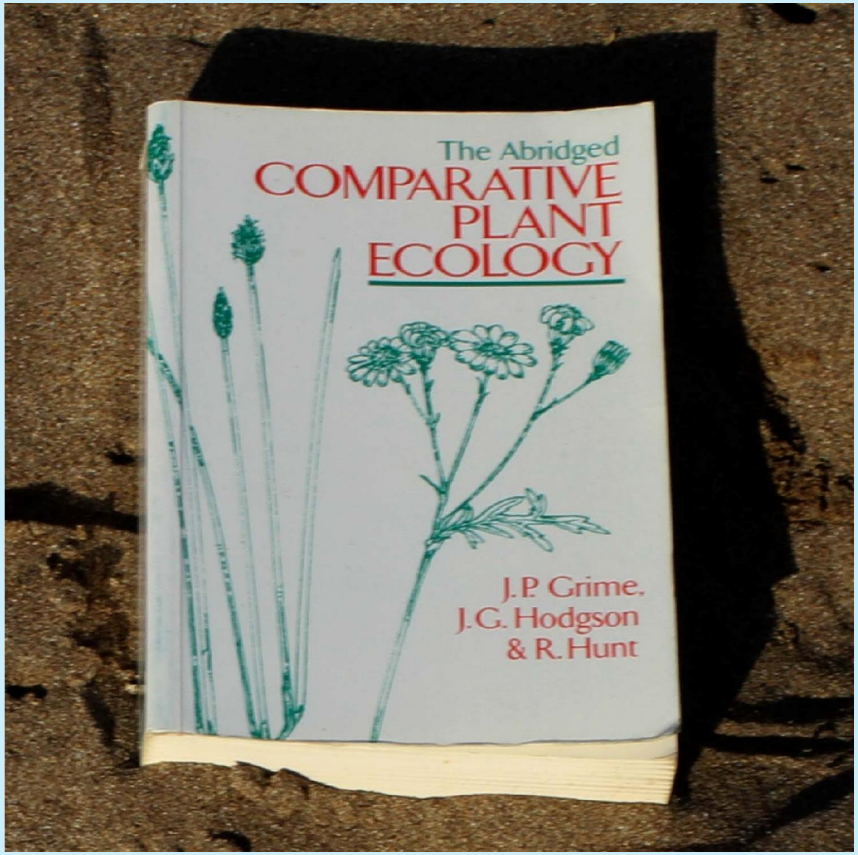
A useful book for helping to select appropriate indicator species. Initially by identifying whether plant species conform primarily to the Competitor (C) – Stress-tolerator (S) or Ruderal (R) life strategies (the C-S-R model): many of the best indicator species tend to be stress tolerators. The book also includes a vast amount of useful information on where species are found, regenerative strategies, life form, phenology etc



Monitoring Nature Conservation in Cultural Habitats

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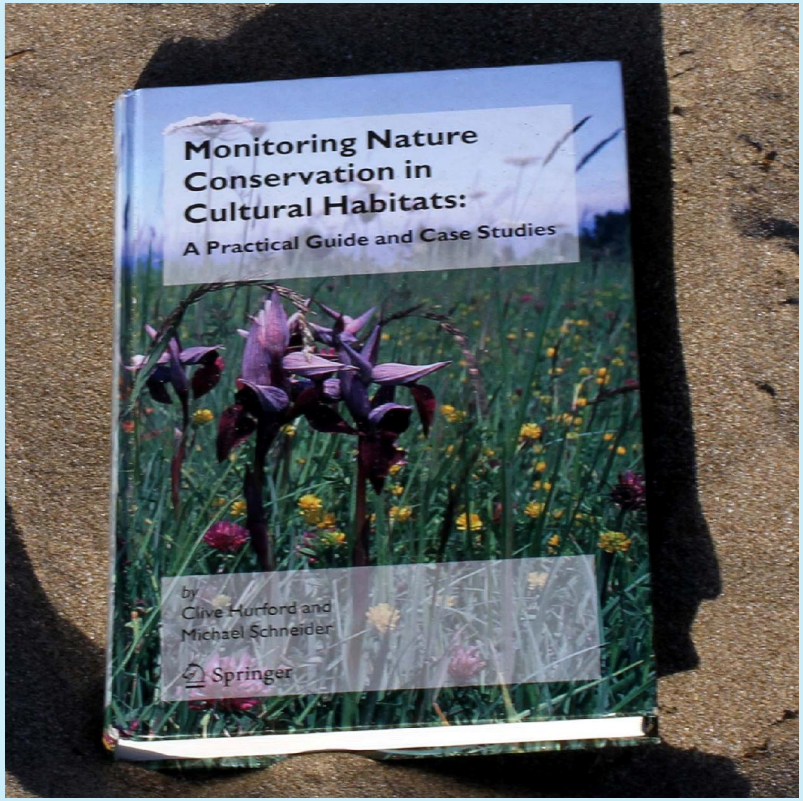
This book attempts to provide an efficient and effective monitoring framework for the information provided by the previous two volumes. It also provides a range of case studies from different countries of monitoring projects developed for a wide variety of different habitats and species.



Conservation monitoring in freshwater habitats

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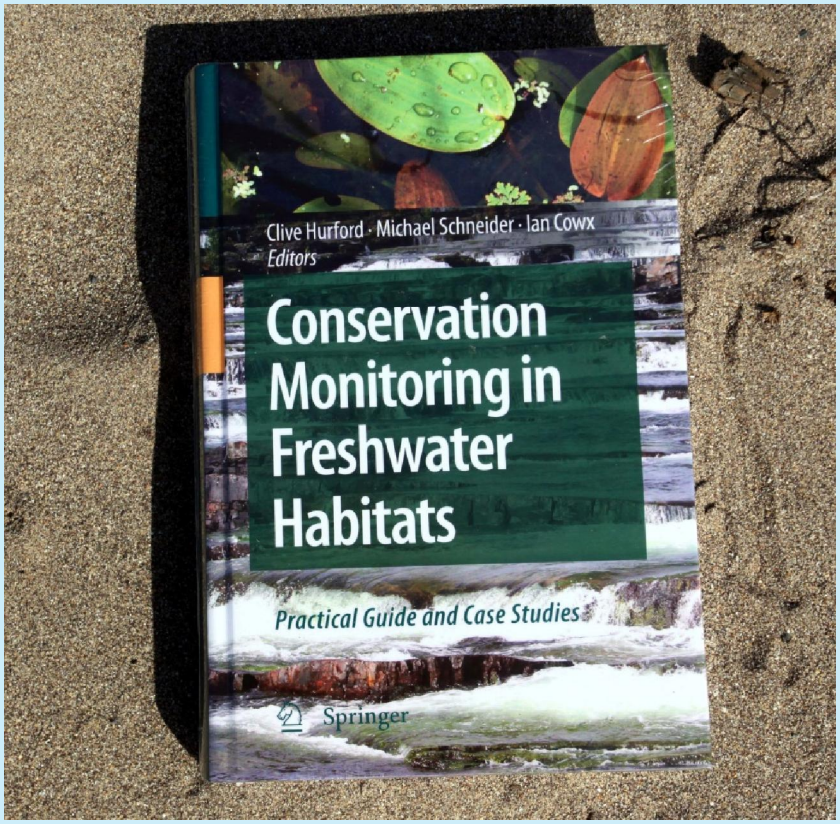
This book sets out to demonstrate how conservation monitoring can be integrated with conservation management in freshwater habitats. This includes a habitat monitoring case study that assesses the status of the habitat using the co-occurrence of the associated species (including animals) that we would expect to be present if the habitat was in a favourable state.



And finally.....

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Thank you for your attention