



Eco-hydrological Guidelines for Wetlands in England and Wales - a “Heads-up” on the Story so Far

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scope of talk

What are eco-hydrological guidelines?

Why are the guidelines needed?

What do the guidelines tell me?

What can I use the guidelines for?

Have they been used in the real world?

Where can I find out more?



et Grassland



beds and Ditches



Woodland







What are Eco-hydrological Guidelines?

Link ecology and water sources

Regimes

Generic - wetland plant communities

One for each National Vegetation Classification (NVC) community of international importance

Written by leading academic specialists

User friendly format

Why are the guidelines needed?

Habitats Directive

Optimum water, nutrient and management regimes

Evaluate impacts of activities and consents

Seasonal variability

Habitats covered

Wet Grassland (Dr. David Gowing, Open University)

Wet Fen/Mire (Drs. Bryan Wheeler, Sue Shaw, Sheffield University)

Wet Swamp and Ditch (Owen Mountford, NERC Centre for Ecology and Hydrology - CEH)

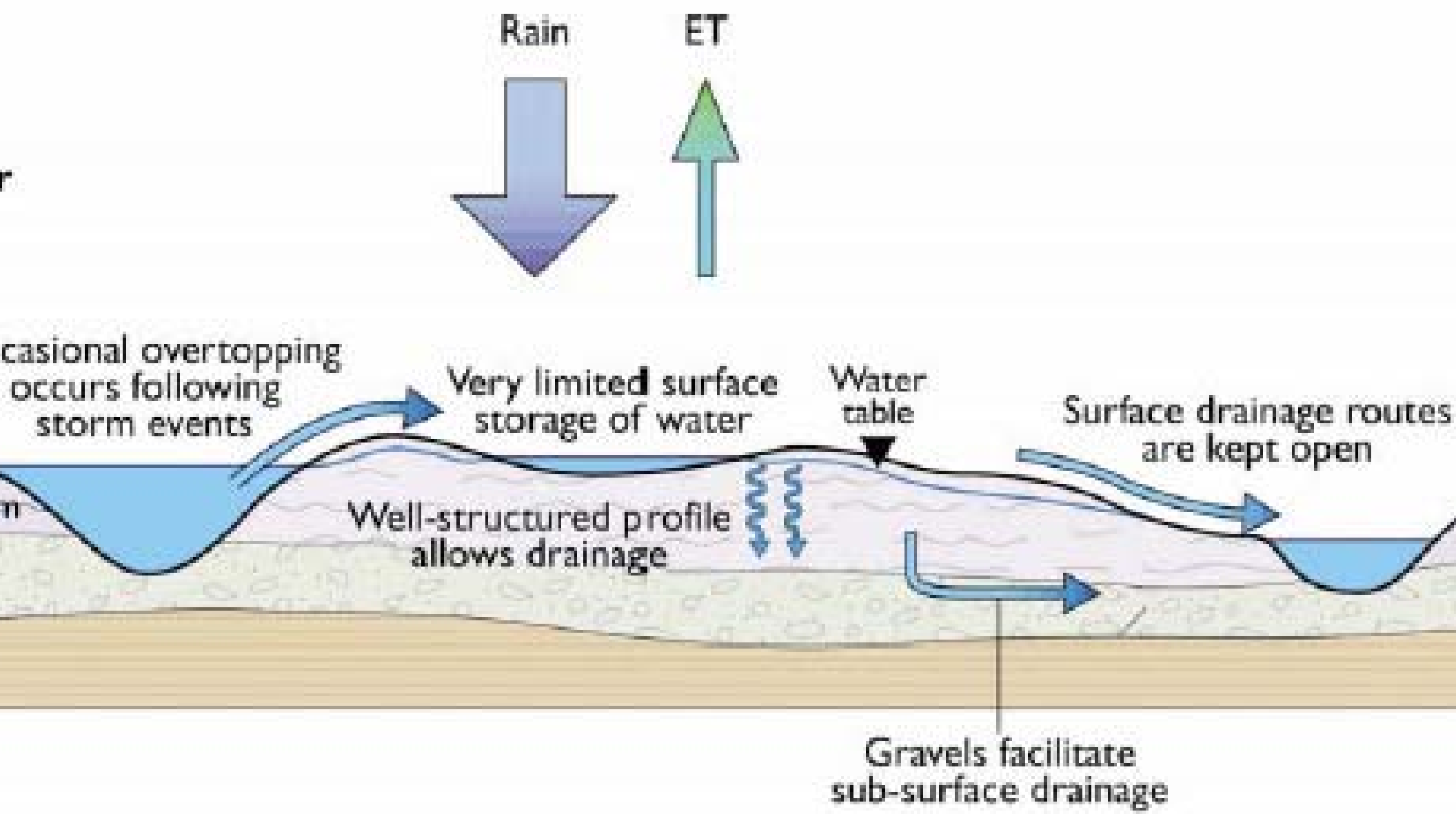
Wet Heath (CEH)

Wet Woodland (Forest Research)

Wet Dunes (University of East Anglia)

What do the guidelines tell me?

1. Context - Distribution, topography and substratum
2. Wetland Water supply mechanism(s) (WETMEC) and conceptual model
3. Water table, nutrient and flooding regimes
4. Implications - what will happen to your wetland?



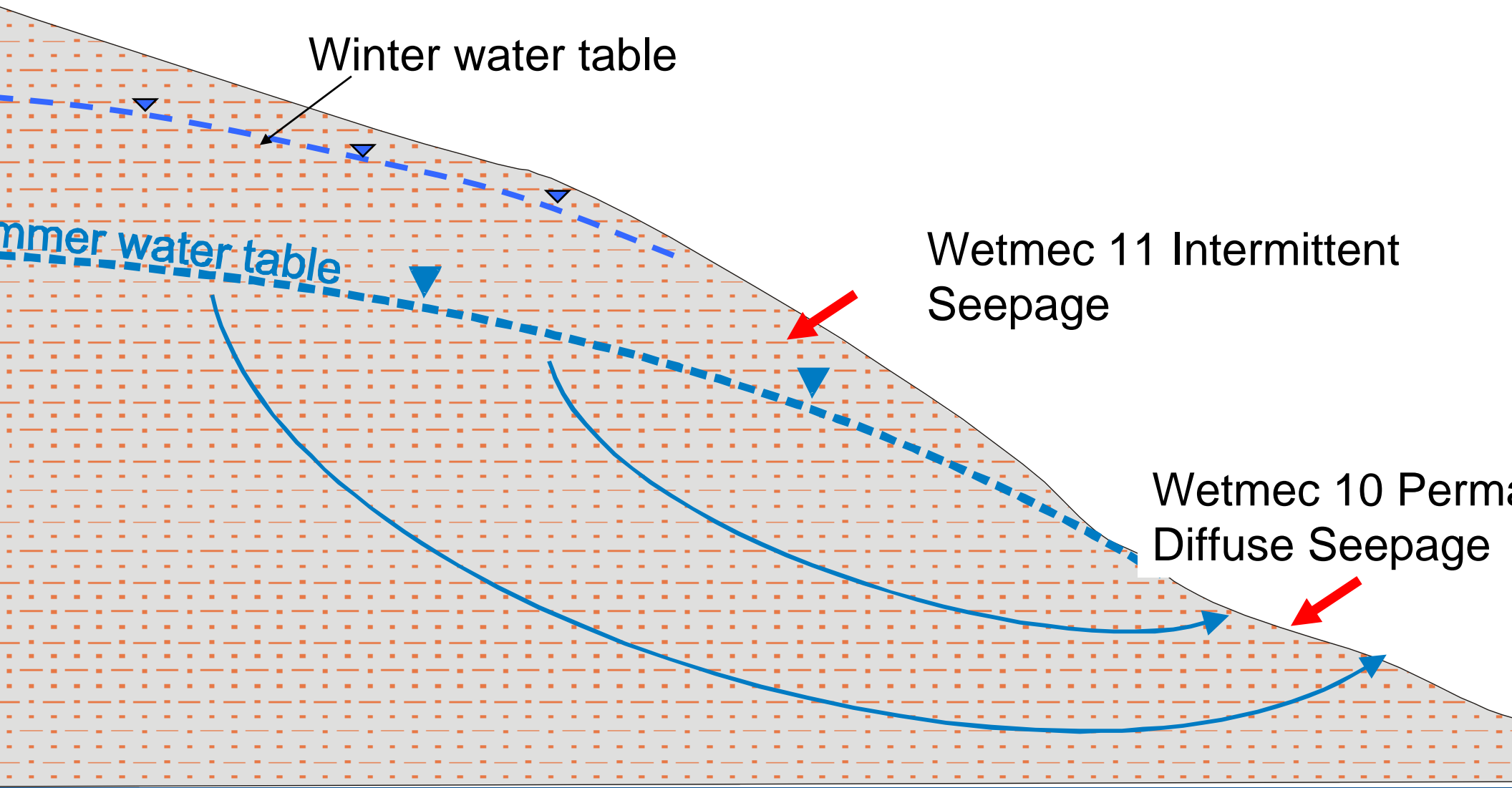
What are WETMECS?

Wetland water supply mechanisms

Conceptualisations of the wetland habitats that result from the interaction between water supply and topography

WETMECs represent a series of conceptual hydrological models with an ecological overlay

Seepage Face in Unconfined Aquifer



Winter water table

Summer water table

Wetmec 11 Intermittent Seepage

Wetmec 10 Permanent Diffuse Seepage

What can WETMECs do for Us ?

A way of thinking about wetlands, and how they work

Named categories of water supply mechanisms

A basis for identifying and referring to wetland habitats

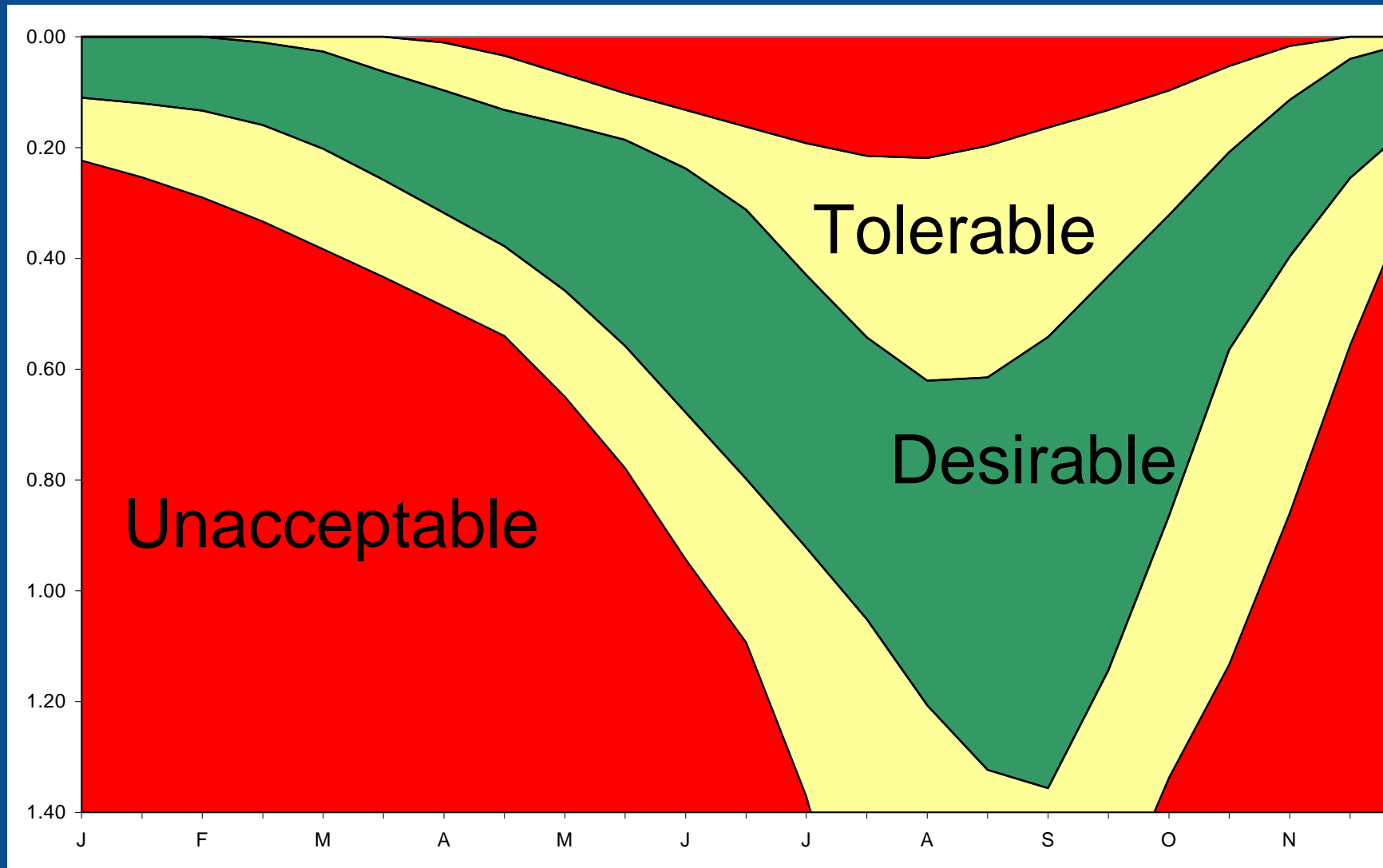
Development of conservation management strategies which work *with* the 'ecohydrological grain' of sites rather than *against* it

WETMECs can plug in to the Wetland Impact Assessment Process

Wetland Water Regimes

MG13 Grassland (Midelney soil)

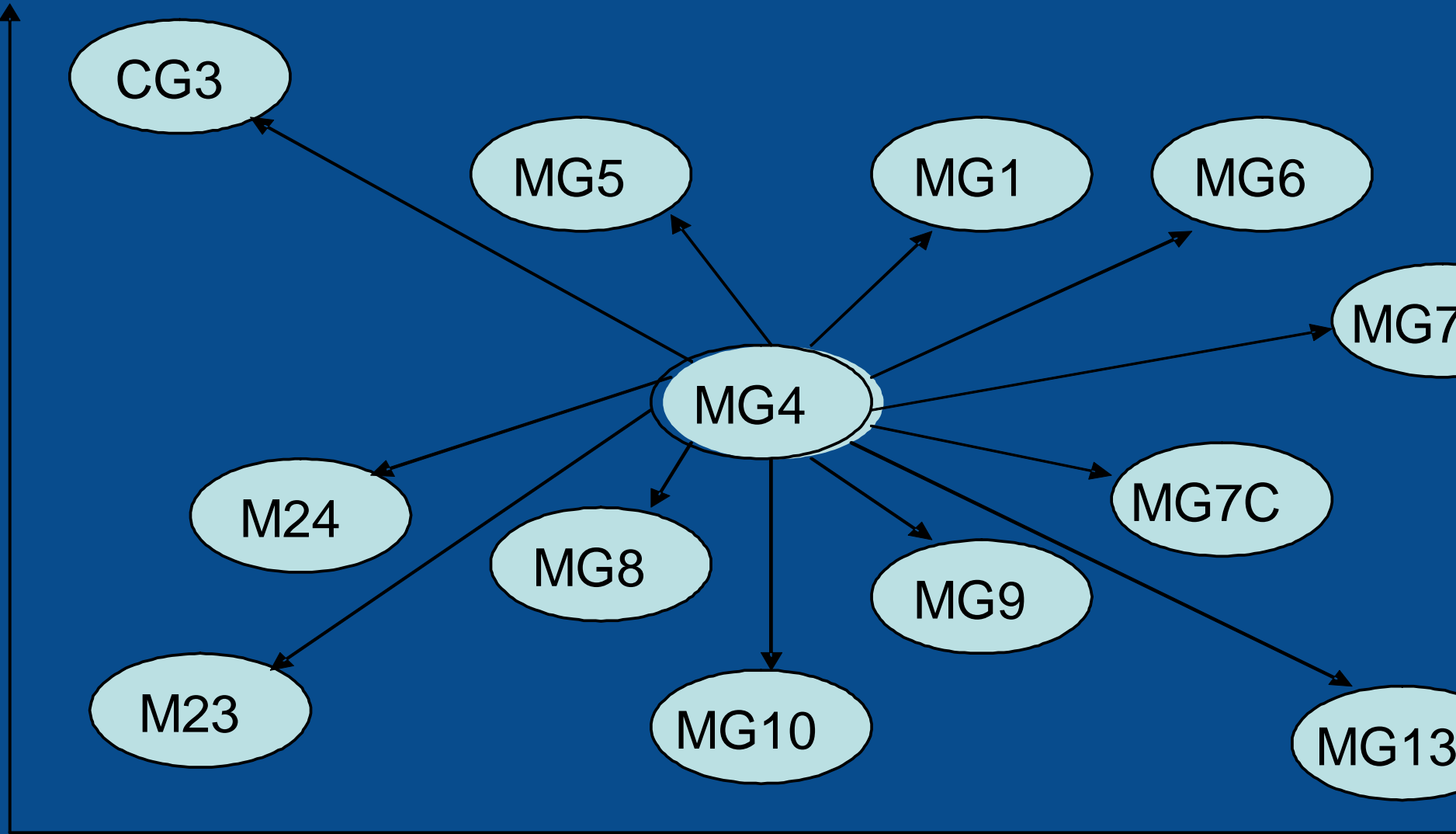
Water table
depth



Implications - What Will Open to Your Wetland?

soil

ng in
ason



Exhaustion of
nutrient supplies

Nutrient o

What can I use the guidelines for?

Setting conservation objectives

Assessing impacts of consents (e.g. Habitats Directive)

Determining optimum site and water level management

Establishing target water and nutrient regimes for site restoration

Have the Guidelines been used in the world?

Paul José (Environment Agency, Anglian Region) will give an example tomorrow of the use of the eco-hydrological guidelines in practice for wetland restoration

Please talk to us about the guidelines and give us feedback!

Where can I find out more?

British Hydrological Society/British Ecological Society
Hydro-ecology conference 18 April 2007

www.natural-england.org.uk

www.environment-agency.gov.uk

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