

# EEB review of intercalibration

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on behalf of the

European Environmental Bureau (EEB)

## Aim of the review

To help ensure that Intercalibration is:

- Understandable
- Transparent
- Ultimately successful

So contributing to successful development of later stages of WFD

## Work undertaken

1. A general review of the intercalibration process, focussing on rivers and lakes
2. A detailed look at parts of the intercalibration process, using information from four GIGs

## Overview

- Thanks to JRC staff and GIGs – who have been very helpful
- Technical experts have done a great job
- The Intercalibration process is a major technical achievement
- Some areas where further improvements could be brought about

## Results

### 1. Scope of intercalibration

- WFD concerned with algae, macroinvertebrates, macrophytes, fish
- MS's making progress on all of these but...
- IC has dealt mainly with:
  - in lakes, chlorophyll a
  - in rivers, mainly macroinvertebrates (**some phytoplankton, some macrophytes**)
  - progress on fish in rivers (not lakes)

CONCLUSION: vital that Intercalibration is completed for all biological quality elements

### 2. Public availability of information underlying IC process

- Crucial for openness and transparency that Intercalibration data are publicly accessible
- Datasets should be accessed within a revised Intercalibration Register or placed on CIRCA

#### CONCLUSION

- This process largely complete for lakes
- Quite a bit of work still to do on rivers, where large datasets have been used

### **3. Availability of data on reference sites**

- WFD classifications depend on relationship with reference sites
- Vital that reference sites are of reasonably similar standard in different MSs for system to be fair
- To know whether reference sites of similar (high) quality, quantitative pressure data needed (land use, water quality, hydrology)
  - Pressure data mostly collated for lakes
  - Not yet completed for rivers

Asking experts if rivers meet certain standards with a questionnaire is not a substitute

### **3. continued**

#### CONCLUSIONS

- Availability of lake pressure data has improved process
- We believe river reference site pressure data need to be collated and made available as soon as possible

## 4. The difference between reference condition and High status in rivers

### Issue

- Normative definitions say 'Reference condition' and 'High status' should differ very slightly

#### High status for river invertebrates:

- no signs of alteration from undisturbed conditions in the ratio of sensitive to insensitive taxa

- no signs of alteration from undisturbed conditions in diversity.

*For these two metrics, therefore, effectively no deviation from reference conditions is allowed in High status sites.*

- taxonomic composition and abundance should correspond nearly or totally to the reference condition

*For this metric, slight deviation from reference condition is permissible for High status sites).*

- In rivers, evidence that they differ significantly from each other *in some cases*

**High status = 'No signs of alteration from undisturbed conditions in the ratio of sensitive to insensitive taxa'**

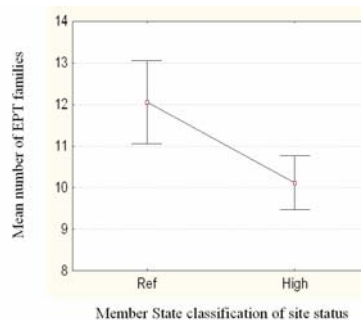
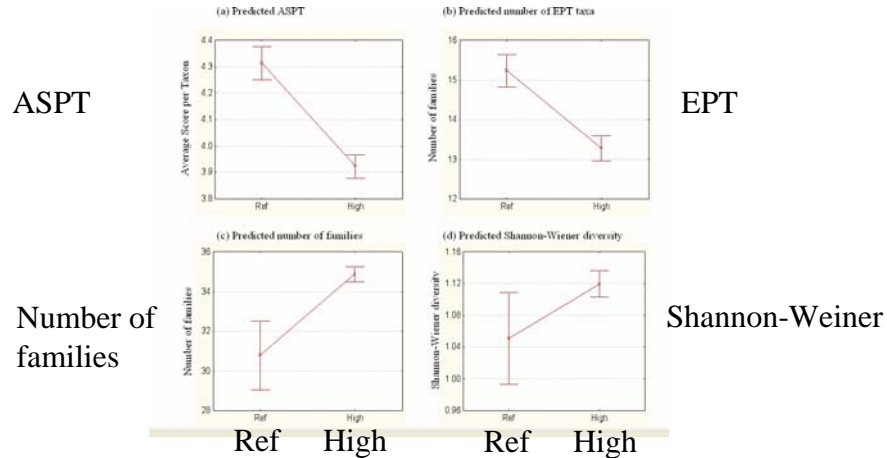


Figure 9. Comparison of number of Ephemeroptera, Plecoptera, Trichoptera (EPT) families in reference and High status sites in France R-C4 rivers. Difference significant at  $p < 0.05$  (Table 11). Error bars show 95% confidence intervals of the mean.

In this French R-C4 river type High status sites (according to national classification system) had significantly lower values for sensitive taxa (EPT) than reference sites = signs of alteration from undisturbed condition

**High status = ‘No signs of alteration in (i) diversity  
(ii) the ratio of sensitive to insensitive taxa’**



In this UK R-C4 river type High status sites (according to national classification system) had significantly different values for four metrics compared to reference sites = evidence not compliant with normative definition

## 5. What constitutes Good status in rivers?

### Issue

- In some MSs Good status appears to deviate more from reference condition than is consistent with normative definitions
- Directive states difference between reference and Good status should be ‘slight’

But...what is ‘slight’ change

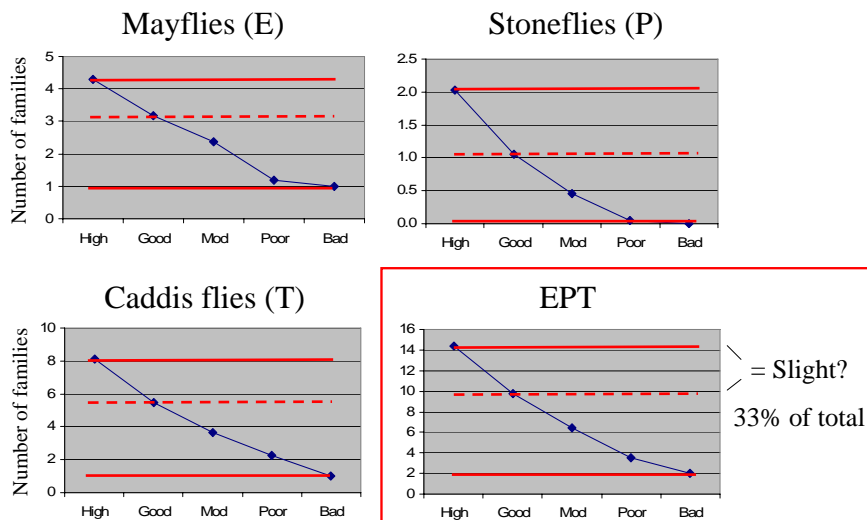
- Lakes: clear definition (chlorophyll concentration leading to loss of plants)
- River invertebrates: no obvious ‘break point’

## What is slight change?

- No definition of slight: scientific literature suggests *maximum* around 25%; some invertebrate metrics show more change than this

## Sensitive invertebrates: a slight change?

UK R-C4



## What is slight change?

CONCLUSION: some risk that rivers classified 'Good' will have experienced more than a 'slight' change

SOLUTION: better definition of 'slight' for river invertebrates (and not simply a statistical solution)

## Overall conclusions (1)

This first, limited, intercalibration must be as high quality and transparent as possible

- Revisit High and Good status definitions; revisit slight change for river inverts
- GIGs need to ensure reference/pressure data for rivers available (**new comment: and lakes**)
- Commission and Member States need to ensure that GIGs make all used information available to stakeholders

## Overall conclusions (2)

It is *vital* that Intercalibration is fully completed for all biological quality elements:

- Commission and Member States need to give a clear commitment to complete Intercalibration of *all* BQEs after first result published
- Use data from first round of monitoring to do this
- Ensure that resources and political will are there in all Member States

Also: *essential* that Member States agree to adjust national classification systems before second round of river basin management plans to take account of complete Intercalibration