Interim national guidance non-stationary fluvial flood frequency estimation

This project has developed new tools and techniques to help us detect and take account of non-stationarity in flood frequency estimation for flood scheme appraisal.

If you would like a copy of the R Package (nonstat) to carry out non-stationary flood frequency analysis please contact fcerm.evidence@environment-agency.gov.uk.

The digital outputs from the project are also available on request. The results zip file contains results on change point tests, multi-temporal trend testing, split sample tests and non-stationary flood frequency analysis.

You should apply this guidance:

- in the appraisal of all projects submitting a short form business case or outline business case to the Environment Agency for assurance and approval after 1st July 2021. Projects submitting before this date could also be assessed against this guidance to check that it would not lead to different decisions provided this would not unduly slow completion or add significantly to the cost.

- to your FCERM strategy if you have not already submitted it to the Environment Agency for assurance and approval. For existing approved plans and strategies we would not normally expect this advice to be applied until the next review, unless specific investment projects within them are planned before this. In these cases, new project appraisals should adopt the new guidance.

You should use this guidance to understand how and when non-stationarity should be included in the appraisal of FCERM projects schemes and strategies. This guidance should be used in conjunction with the full appraisal guidance.

Development of interim national guidance on non-stationary fluvial flood frequency estimation: summary (PDF, 307KB, 2 pages)

Development of interim national guidance on non-stationary fluvial flood frequency estimation – science report (PDF, 10.9MB, 232 pages)

Development of interim national guidance on non-stationary fluvial flood frequency estimation – practitioner guidance (PDF, 1.21MB, 59 pages)

Development of interim national guidance on non-stationary fluvial flood

frequency estimation – package user guide (PDF, 1.94MB, 49 pages)

Rapid evidence assessment of non-stationarity in sources of UK_flooding – summary (PDF, 266KB, 2 pages)

Rapid evidence assessment of non-stationarity in sources of UK flooding – report (PDF, 4.79MB, 83 pages)

Recommendations for future research and practice on non-stationarity in UK flooding – summary (PDF, 214KB, 2 pages)

Recommendations for future research and practice on non-stationarity in UK flooding – report (PDF, 1.69MB, 59 pages)