Transforming abiotic variables

Transformations may be appropriate for environmental variables too, though usually for a different reason (e.g. in order to justify using Euclidean distance as a dissimilarity measure on normalised variables). However, these are usually selective transformations, required only for some variables, and with different transforms potentially applicable to variables of different types. The global **Pre-treatment>Transform (overall)** applies the same simple power or log transform to all variables, whereas **Pre-treatment>Transform (individual)** operates only on highlighted portions (usually sets of variables), and can allow user-defined expressions if a specific formula is appropriate to a certain variable. More sophisticated data manipulations with user-defined expressions are deferred to Section 11; here we concentrate on one or two commonly used transforms for abiotic variables.

In the Ekofisk ws, the Ekofisk environmental sheet holds 9 variables measured on sediments at the same set of 39 sites: total hydrocarbons (THC), several heavy metals, redox and two particle size measures, % mud and ϕ mean. The first variable in the sheet is just distance in km from the oil-field centre, not of itself a measure which organisms in the assemblage will respond to, and which should not be used for any assessment of the pattern of environmental change around the field.

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