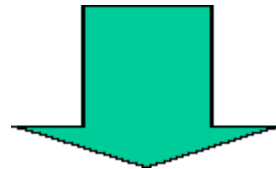


Characterisation

Hydro-Morphology Risk Assessments

Pressures and Impact Assessment

- Development of UK Technical Advisory Group guidance (water resources & morphology)
- Application using a number of approaches
 - Hydromorphology Assessment Methods (River Habitat Survey, RHS)
 - Expert Judgement (local staff – Ecologists, Hydrologists Environment Protection Officers)
 - Map based approach – UK TAG



Characterisation report: December 2004

Specific pressures	Description
River substrate manipulation	Removal of silt and/or substrate from a river channel – includes dredging for navigation, for creating on-line ponds and for fisheries enhancement e.g. pool creation; addition of gravel for spawning areas
Bed and bank reinforcement	Strengthening of river beds for various purposes (e.g. ford construction, erosion control); flood protection using flood walls, embankments; bank protection using gabion baskets, boulders, sheet piling, wood, willow spiling, geotextiles, etc.
River resectioning	Reprofiling of bank-face, changes to gradient of channel bed, introduction of artificial substrate
River straightening	Engineering to produce ditch-like channels
River realignment	Removal of meanders: increase in channel gradient, flow velocity, flood capacity
River channelisation	Straightening, widening, and deepening of channel
Culverting	Complete enclosure of river channel, often impassable to fish
Flow manipulation	Placement of boulders, deflectors, etc. for redirecting pattern of water flow
Impounding	Backing-up of water through the construction of dams, weirs, sluices, fords, etc.
Construction	Building instream structures for a range of purposes – structures include outfalls, jetties, piers, boat slipways, flood relief channels, flood storage areas, bridge supports
Intensive use	Grazing, removal of riparian vegetation, management of riparian vegetation, poaching, erosion from boat traffic

Specific pressures	Severity of pressure	Measured attribute	Morphological criteria for high/good boundary	Morphological criteria for good/moderate boundary	Morphological criteria for identification of provisional HMWB
River substrate manipulation	Intermediate	Proportion of natural substrate removed Proportion of unnatural/artificial substrate introduced	<5% of river bed manipulated	<15% of bed with artificial substrate (AR in RHS)	>50% of bed with artificial substrate (AR in RHS)
Bed and bank reinforcement	Intermediate	Proportion of bank length affected	<5% of either bank affected, no critical areas affected.	<15% of either bank affected	>60% of either bank affected
River resectioning	Intermediate	1. Proportion of bank length affected 2. Proportion of channel length affected	1. <5% of length affected on either bank 2. <5% channel length affected	1. <15% of length affected on either bank 2. <15% of channel length affected	1. >60% of length affected on either bank 2. >60% of channel length affected
River straightening	Major	Proportion of river length affected	<5% of river length affected	<15% of river length affected	1. >50% of river length affected
River realignment	Major	Proportion of river length affected	<5% of river length affected	<15% of river length affected	>50% of river length affected