

River name ANACE Site Monte Bembo Date 22.V.11  
 Transect 1 is at downstream end 10 Spot-checks primary secondary  
Bonsarolo Spot-Check GPS           GPS   tick when finished page 1-2  
 Invertebrates sampling

Left Bank	A <sub>l</sub> Banktop land-use and vegetation structure (UK_F)											within a 10 m wide transect
	Left Banktop Criteria (Break in slope, Stable use, non-hydrophilic Veg, Trashline, Rock cover discontinuous, Meander)											
	Banktop height (m)	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	
	Land-use: choose one from nat, BL, CW, MM, MN, MH, SH, RO, TH, RD, OW, WL; agr, BP, CP, EU, PO, OR, OL, VI, TL, RP, WM, RF, FM; urb, UR, IN, WT, MR, SR, RO, WR, SU, RA, QU, PG, AW; nvj - see Spot-Check key page 2 of Form page 3	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	
	Land-use within 5m of Left Banktop	U	U	U	U	U	U	U	U	U	U	
	Left Banktop (B, U, S, C)(circle if not homogeneous)	U	U	U	U	U	U	U	U	U	U	
	Width of the Vegetation strip (m; >m)	>100	>100	>100	10	20	250	0	>30	0	3	
	Left Bank Face (B, U, S, C)(circle if not homogeneous)	B	B	B	B	B	B	B	B	B	B	
	Extension of Bank Face (m)	6	6	6	5.5	6.5	6.5	8	8	9	8	
	B <sub>l</sub> Physical attributes - Left Bank (UK_E)											
Marginal&Bank features: Slope (Vert., Steep, Gentle)/(NV, NO, CoNfluence, Nat. Berm, Art. Berm)												
Berm/Floodplain width (m)	6											
Berm/Floodplain height (m)	0.5											
Bank Modification (NK, NO, RS, RI(N), RT(N), RE(N), PC(B), EM, TR)	RI	RS	RI	RS	RI	RS	RI	RS	RI	RS		
Material (NV, BE, BO, CO, GS, EA, PE, CL - CC, SP, WP, GA, BR, RR, TD, FA, LR, BI, CW)	CC	EA	CC	EA	CC	EA	CC	EA	CC	EA		

Right Bank	A <sub>r</sub> Banktop land-use and vegetation structure (UK_F)											within a 10 m wide transect
	Right Banktop Criteria (Break in slope, Stable use, non-hydrophilic Veg, Trashline, Rock cover discontinuous, Meander)											
	Banktop height (m)	B	B	B	B	B	B	B	B	B	B	
	Land-use: choose one from nat, BL, CW, MM, MN, MH, SH, RO, TH, RD, OW, WL; agr, BP, CP, EU, PO, OR, OL, VI, TL, RP, WM, RF, FM; urb, UR, IN, WT, MR, SR, RO, WR, SU, RA, QU, PG, AW; nvj - see Spot-Check key page 2 of Form page 3	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	
	Land-use within 5m of Right Banktop	U	U	U	U	U	U	U	U	U	U	
	Right Banktop (B, U, S, C)(circle if not homogeneous)	U	U	U	U	U	U	U	U	U	U	
	Width of the Vegetation strip (m; >m)	>100	>100	>100	10	3	3	20	0	0	0	
	Right Bank Face (B, U, S, C)(circle if not homogeneous)	B	B	B	B	B	B	B	B	B	B	
	Extension of Bank Face (m)	5.5	5	8	8	6.5	6	7.5	8	9	8	
	B <sub>r</sub> Physical attributes - Right Bank (UK_E)											
Marginal&Bank features: Slope (Vert., Steep, Gentle)/(NV, NO, CoNfluence, Nat. Berm, Art. Berm)												
Berm/Floodplain width (m)												
Berm/Floodplain height (m)												
Bank Modification (NK, NO, RS, RI(N), RT(N), RE(N), PC(B), EM, TR)	RI	RS	RI	RS	RI	RS	RI	RS	RI	RS		
Material (NV, BE, BO, CO, GS, EA, PE, CL - CC, SP, WP, GA, BR, RR, TD, FA, LR, BI, CW)	CC	EA	CC	EA	CC	EA	CC	EA	CC	EA		

Whole site	C Number of selected channel features (UK_C/K)			(Use /A if due to the presence of artificial manufacts)		
	I chann	I chann	II chann	I chann	I chann	II chann
	C <sub>1</sub> - always count <u>AR</u>			C <sub>2</sub> - always count & position in Page 2		
	Riffle(s) <u>AR</u>			NF - No Flow (dry)		
	Pool(s) <u>  </u>			CN - CoNfluence(s)		
	Island/Mature island(s)			CB - Concave bar(s)		
	Unvegetated point bar(s)			AB - Alternate Bars (pairs)		
	Vegetated point bar(s)			TB - Transverse Bar(s)		
	Unvegetated side bar(s)			BS - Bedscarp(s)		
	Vegetated side bar(s) <u>    </u>			NI - Channel Nickpoint/Headcut		
Notes			ED - Eroded alluvial deposits			
			ER - Areas with Exposed Roots in the channel			
			OD - Over-deepened channel			
			LE - Local erosion			
D Extent of channel and bank features (UK_K)			(Use /A if of artificial origin)			
I chann	I chann	II chann	I chann	I chann	II chann	
Count if planned <u>AR</u>			<u>AR</u>			
Free fall			Exposed bedrock			
Chute flow <u>  </u>			Vegetated bedrock/boulders			
Broken standing waves			Discrete unvegetated gravel deposit(s)			
Unbroken standing waves			Discrete unvegetated sand deposit(s)			
Rippled flow <u>    </u>			Unvegetated silt deposit(s)			
Upwelling			Eroding cliff(s)			
Smooth flow <u>  </u>			Stable cliff(s)			
No perceptible flow <u>    </u>			Unvegetated mid-channel bar(s)			
Marginal deadwater			Vegetated mid-channel bar(s) <u>    </u>			
Exposed boulders						

Notes: Scalini in campagna, zona di edificazioni tollerando la disgregazione; in un'isola del canale, c'è un'isola e della sabbia

PHYSICAL ATTRIBUTES OF BANKS AND CHANNEL (UK_E)											Transect 1 is at downstream end		long = 5 times water width
Water Sinuosity - Left Bend, Straight, Right Bend	5	5	5	5	5	5	5	5	5	R	L		
Spot-check	10	9	8	7	6	5	4	3	2	1			
Number of wetted channels (threads)	1	1	2	2	1	2	1	2	1	3			
<b>E Erosion/Deposition features</b>	Ring EC, SC or EB if composed of sandy substrate												
<b>Left Bank</b> (and close to)													
Erosion/Habitat (NV, NO, EC, SC, EB-Eroding Bank, ET-Er. bank Top only, EE-Er. bank toE only, TOa, LE-Local Erosion)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		
Deposition (NV, NO, PB(b), VP(b), SB(b), VS(b), Alternate Bars, Concave Bar, BigBlock, Sand Dep., SParse dep.)/BB, AR	VS	NO	NO	NO	NO	NO	VS	NO	VS	SP			
<b>Right Bank</b> (and close to)													
Erosion/Habitat (NV, NO, EC, SC, EB-Eroding Bank, ET-Er. bank Top only, EE-Er. bank toE only, TOa, LE-Local Erosion)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	LE		
Deposition (NV, NO, PB(b), VP(b), SB(b), VS(b), Alternate Bars, Concave Bar, BigBlock, Sand Dep., SParse dep.)/BB, AR	NO	NO	SP	SP	NO	SP	SP	SP	VP	VS			
<b>Main Channel</b> (highest discharge)													
Deposition, mid-channel (NV, NO, RO, EB, VR, BigBlock, MB, VB, MI, Multiple bars, SP) / BB, AR	NO	NO	VP	VB	NO	MB	NO	MB	AR	MI	MI		
Wet channel position: Left-Center-Right (LCR)	CR	LCR	R	R	LCR	L	R	R	C	L			
Water Width (m)	5	3.5	3	2.9	5	1.5	2.3	2	2	3.1			
Maximum water depth (m; >m)	0.25	0.5	0.5	0.3	0.03	0.1	0.05	0.1	0.2	0.1			
<b>Secondary Channel</b> (most dissimilar from I channel)													
Deposition, mid-channel (NV, NO, RO, EB, VR, BigBlock, MB, VB, MI, Multiple bars, SP) / BB, AR			NO	NO							NO		
Wet channel position: Left-Center-Right (LCR)			L	L			R		L		R		
Water Width (m)			1.5	2			1.1		2		1.5		
Maximum water depth (m; >m)			0.2	0.3			0.1		0.1		0.1		
Total Water Width (m)	5	3.5	4.5	4.9	5	2.6	2.3	1	3	6			
Total Channel Width (including bars; m)	7.5	10	8	8	6.5	6.5	6	10	16	10.5			
<b>F Channel Habitat and Modification</b>	10	9	8	7	6	5	4	3	2	1			
<b>Main Channel</b> (highest discharge) AR (✓)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Mesohabitat: pool (P) - riffle (R) - other (n)	P	P	P	P	R	R	P	n	P	R			
Channel Substrate (NV, BE, BO, CO, GP, SA, SI, CL, PE, RR, CC, AR)	CC	SI	SI	SI	CC	CC	CC	SI	CC	SI			
Flow type (FF, CH, BW, UW, CF, RP, UP, SM, NP, DR)	SM	NP	NP	NP	UW	RP	RP	SM	NP	SM			
Channel modification(s) (NK, NO, CV, RS, RI, DA, FO, TR)	RI	TR	RI	TR	DA	TR	RI	RI	TR	RI			
Artificial/Natural feature Code & Position (I channel) - Sections C <sub>2</sub> /G; Pic n <sup>o</sup> ; see Spot-Check key, page 4 (circle Section G feat. if eroded); report water depth if OD													
<b>Secondary Channel</b> AR (tick)			✓	✓	✓	✓	✓	✓	✓	✓			
Backwater(b)/Artificial channel(a)													
Channel Substrate (NV, BE, BO, CO, GP, SA, SI, CL, PE, AR)			CC	SI	SI	CC	CC	SI	CC	SI			
Flow type (FF, CH, BW, UW, CF, RP, UP, SM, NP, DR)			RP	SM	NP	RP	RP	SM	NP	SM			
Channel modification(s) (NK, NO, CV, RS, RI, DA, FO, RR, TR)			RI	RI		RI		RI	TR	RI			
Artificial/Natural feature Code & Position (II channel) - Section C <sub>2</sub> /G; Pic n <sup>o</sup> ; see Spot-Check key, page 4 (circle Section G feat. if eroded); report water depth if OD - ONLY RECORD IF NOT ALREADY RECORDED IN MAIN CHANNEL													
<b>G ARTIFICIAL FEATURES (UK_D)</b>							I Channel			II Channel			
(whole site: Sweep-up&Spot-checks)	Major(m)	Interm.(I)	Minor(s)				Major(m)	Interm.(I)	Minor(s)	Major(m)	Interm.(I)	Minor(s)	
B - Bridges													
W - Weirs/slucices/dams													
F - Fords													
none <input type="checkbox"/>													
C - Culverts													
<b>H Channel vegetation types/Organic debris</b>	to be assessed over a 10m wide transect: use ✓ (present), E (>33% area), W												
none (tick) or Not Visible (NV)													
Liverworts/mosses/lichens													
Emergent broad-leaved herbs													
Emergent reeds/sedges/rushes/grasses													
Floating-leaved (rooted)													
Free-floating													
Amphibious													
Submerged broad-leaved													
Submerged liner-leaved													
Submerged fine-leaved													
Filamentous algae													
Living parts of Terrestrial Plants (TP)													
CPOM													
FPOM													
LOD/Xylal (e.g. fallen trees)													
	10	9	8	7	6	5	4	3	2	1	Sw_up		

within a 1 m wide transect

within a 10 m wide transect

Use end column for overall assessment over 500m, including types not occurring in spot-checks (use ✓, E or NV)  
 main channel  secondary channel

*Handwritten notes:* 200m, 10m

*Handwritten notes:* benthos

I LAND-USE WITHIN 50m OF BANKTOP AND ON BANKFACE Use √ (present), E (> 33% banklength) or W (whole stretch)

Natural	Left		Right		Natural	Left		Right	
	Top	Face	Face	Top		Top	Face	Face	Top
Broadleaf/mixed woodland/Mediterranean forest - BL					Natural grassland - GR				
Coniferous woodland (semi-natural) - CW					Moorland/heath - MH				
Dehezza/Montado/Sugherete (semi-natural) - MN					Rock, scree or sand dunes - RD				
Mediterranean 'macchia' - MM					Natural open water - OW				
Scrub & shrubs - SH	√	VE	VE	√	Wetland (e.g. bog, marsh, fen) - WL				
Tall herb/rank vegetation - TH				VE	Other.....				
Agriculture	Top	Face	Face	Top	Urban	Top	Face	Face	Top
Broadleaf/mixed plantation/coppice - BP					Urban - UR				√
Coniferous plantation - CP				√	Industry - IN				
Eucalyptus plantation - EU	√			√	Small houses (Suburban development)/Untilled land - SU	VE			
Populus plantation - PO					Water treatment plant - WT				VE
Orchard - OR	√				Main road (e.g. > 10.5 m wide, highway) - MR				
Olive trees - OL	√				Road (e.g. not affecting river channel and banks) - SR	W			√
Vineyard - VI					White road/large footway - WR				√
Tilled land - TL					Railway - RA				
Grassland/pasture - RP	√			VE	Quarrying - QU				
Winter water meadows - WM					Parkland or gardens - PG				
Rice fields - RF					Artificial open water - AW				
Farming/Breeding - FM					Other.....				
Field/land extensively irrigated					Other.....				

J BANK PROFILES Use √ (present), E (> 33% banklength) or W (whole stretch)

Natural/ Unmodified	Left	Right	Artificial/modified	Left	Right
Vertical /Undercut			Resectioned (reprofiled)		
Vertical with toe			Reinforced - whole	√	√
Steep (35° < b ≤ 70°)			Reinforced - top only		
Gentle (≤ 35°)			Reinforced - toe only	E	E
Composite			Artificial two-stage	√	
Natural berm			Poached bank		
Notes			Embanked	√	
			Set-back embankment		

K EXTENT OF TREES AND ASSOCIATED FEATURES Use √ (present), E (> 33% banklength) or W (whole stretch) \*record even if <1%

Trees (tick one box per bank)	Left	Right	Shading of channel	Left	Right
None <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			W
Isolated/scattered <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Overhanging boughs		W
Regularly spaced, single <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Exposed bankside roots		W
Occasional clumps <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Underwater tree roots (TP)		W
Semi-continuous <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Large woody debris	√	
Continuous <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fallen trees (inside the channel)		W
			Fallen/leaning trees on the lower bank		W

L TREE VEGETATION on banktop/bankface/channel Use √ (present), E (> 33% banklength) or W (whole stretch) \*record even if <1%

	Banktop	Bankface	Channel	Use P (present), E (> 33% banklength) or W	Banktop	Bankface	Channel
*Alder ( <i>Alnus</i> )				Ash ( <i>Fraxinus</i> )			
*Elm ( <i>Ulmus</i> )				Salt cedar ( <i>Tamarix</i> )		√	
Willow ( <i>Salix</i> )				Oleander ( <i>Nerium oleander</i> )			
Poplar ( <i>Populus</i> )				Platanus ( <i>Platanus</i> )			
Not applied <input type="checkbox"/>				Other.....			








M NOTABLE NUISANCE PLANT SPECIES Use √ (present), E (> 33% banklength) or W (whole stretch) \*record even if <1%

Bush/shrub	Banktop	Bankface	Channel	Trees	Banktop	Bankface	Channel
<i>Amorpha fruticosa</i>				<i>Ailanthus altissima</i>			
<i>Arundo</i> spp.		√		<i>Robinia pseudoacacia</i>			
<i>Buddleja davidii</i>				Aquatic			
<i>Impatiens</i> spp.				<i>Azolla caroliniana</i>			
<i>Reynoutria japonica</i>				<i>Elodea</i> spp.			
<i>Rubus</i> spp.		VE		<i>Lagarosiphon major</i>			
Not applied <input type="checkbox"/>				Other.....			
None <input type="checkbox"/>				Other.....			

**N FIELD SURVEY DETAILS**







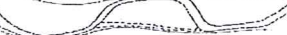
Date: 22/11/2011  
 River name: Canale Monte Depuratore  
 Site Name/Number: Barisardo  
 Region/Province: Sardegna (04)  
 Site Reference/Code: INHABIT 526  
 Map Reference:  
 Spot-check 2 (GPS): 39°49'22.80"N  
 Spot-check 10 (GPS): 09°39'07.01"E  
 Surveyor name: Puligini  
 Accredited Surveyor code:  
 Institute/Affiliation: CNR-IRSA  
 Data entry in db by:  
 Is the site part of a river or an artificial channel? River  Artificial   
 Are adverse conditions affecting survey? No  Yes   
 If yes, state  
 Is bed of river visible? barely or not  partially  entirely   
 Site surveyed from: left bank  right bank  channel   
 Was a range-finder used to measure channel/water width, etc.? No  Yes   
 Number of photographs taken: 130  
 Photo references:  
 Application time: 12.45 - 14.20 (1h 35')

**O PREDOMINANT VALLEY FORM (within the horizon limit)** (tick one box only)

Shallow vee   Concave/bowl    
 Deep vee   Asymmetrical valley    
 Gorge   U-shaped valley    
 No obvious valley sides  

Distinct flat valley bottom?  No  Yes  
 Natural terraces  No  Yes

**P CHANNEL FORM (tick one box only)**

Meandering   Sinuous    
 Braided   Constrained (natural)    
 Anastomosed   Constrained (artificial)    
 Wandering   Other (state)

**Q GENERAL FEATURES/DEGRADATION OF SITE**

Cut face on bar forms	no	Is the channel choked with vegetation?	✓
Lobate bars	no	Weed-cutting/Bank mowing	no
Rocks roughened or with sharp edges & corners	no	Is channel obviously realigned?	yes
Coarse material in riffles embedded	no	Is channel obviously over-deepened?	no
Siltation in pools	E	Is water impounded by weir/dam?	✓
Tillage of fields perpendicular to river course	no	Is river affected by hydro-peaking?	No <input checked="" type="checkbox"/> Yes <input type="checkbox"/>

**Q FEATURES OF SPECIAL INTEREST**

None <input checked="" type="checkbox"/>	Very large boulders (>1 m)	Fen(s)	Giant's Cauldrons
Braided channels	*Leafy debris	Bog(s)	Floodplain boulder deposits
Side channel(s) e.g. oxbow	Fringing reed-bank(s)	Wet woodland(s)	Other (state)
*Natural waterfall(s) >5m high	Quaking bank(s)	Marsh(es)	
*Natural waterfall(s) <5m high	*Sink hole(s)	Springs in channel and banks	
Natural cascade(s)	Backwater(s)(large areas)	Petrifying springs	
*Debris dam(s)	Water meadow(s)	Natural open water	

Riparian habitat(s) of HABITAT Directive: None  Not applied

Notes

CNR-IRSA Water Research Institute, Brugherio (MI), Italy - e-mail: cnr\_rhs@irsa.cnr.it, tel ++39 039 216941, fax ++39 039 2004692  
 CARAVAGGIO was developed with the collaboration of CNR-ISE (Pallanza, VB, I) and APPA Bolzano (BZ, I) and is based on the River Habitat Survey method proposed by the U.K. Environment Agency



INHABIT feb11

Method developed and tested within the framework of the STAR and Euro-limpacs E.U. projects

