



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	S	S	S	R	R	S	S	S	L	L
Spot-check	10	9	8	7	6	5	4	3	2	1
Number of wetted channels (threads)		1	1	1	1	1	2	1	1	2

E Erosion/Deposition features

Ring EC, SC or EB if composed of sandy substrate

<b>Left Bank (and close to)</b>										
Erosion/Habitat (NV, NO, EC, SC, EB-Eroding Bank, ET-Er. bank Top only, EE-Er. bank to E only, TOe, LE-Local Erosion)	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	VS	VS	VS	EP	NO	SP	SP	PB	PB

<b>Right Bank (and close to)</b>										
Erosion/Habitat (NV, NO, EC, SC, EB-Eroding Bank, ET-Er. bank Top only, EE-Er. bank to E only, TOe, LE-Local Erosion)	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	SD	NO	EP	PB	PB	SP	VS	VS	SD	NO

<b>Main Channel (highest discharge)</b>										
Deposition, mid-channel (NV, NO, RO, EB, VR, BigBlock, MB, VB, MI, Multiple bars, SP) / BB, AR	EP	EP	BB	RO	EP	NO	RO	BB	BB	BB
Wet channel position: Left-Center-Right (LCR)	CR	CR	CR	L	CR	L	L	L	CR	R
Water Width (m)	8.5	8	12	6.5	14	11	8	35	5.5	
Maximum water depth (m; >m)	1.4	.55	1.1	.8	1	.8	.5	1	.95	3

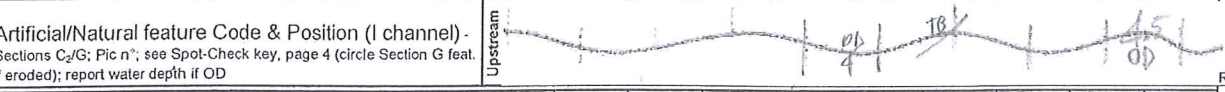
<b>Secondary Channel (most dissimilar from I channel)</b>										
Deposition, mid-channel (NV, NO, RO, EB, VR, BigBlock, MB, VB, MI, Multiple bars, SP) / BB, AR										BB
Wet channel position: Left-Center-Right (LCR)										C
Water Width (m)										3
Maximum water depth (m; >m)										.6
Total Water Width (m)	8.5	8	12	6.5	14	11	8	35	5.5	
Total Channel Width (including bars; m)	23	23	30	26	27	20	34	92	48	43

F Channel Habitat and Modification

Main Channel (highest discharge) AR (✓)	10	9	8	7	6	5	4	3	2	1
Mesohabitat: pool (P) - riffle (R) - other (n)	P	n	R	R	R	P	n	R	P	P

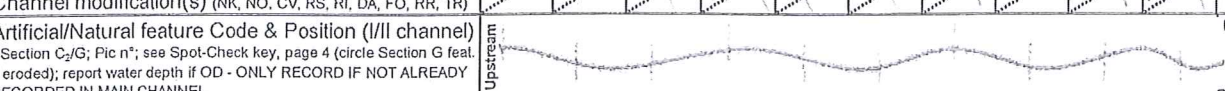
Channel Substrate (NV, BE, BO, CO, GP, SA, SI, CL, PE, RR, CC, AR)	GP	GP	CO	CO	BO	GP	GP	CO	GP	GP
Flow type (FF, CH, BW, UW, CF, RP, UP, SM, NP, DR)	NP	SM	RP	UP	RP	UP	RP	UP	RP	NP

Channel modification(s) (NK, NO, CV, RS, RI, DA, FO, TR)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
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Secondary Channel AR (tick)

Backwater(b)/Artificial channel(a)										
Channel Substrate (NV, BE, BO, CO, GP, SA, SI, CL, PE, AR)										SA
Flow type (FF, CH, BW, UW, CF, RP, UP, SM, NP, DR)										NP
Channel modification(s) (NK, NO, CV, RS, RI, DA, FO, RR, TR)										NO



G ARTIFICIAL FEATURES (UK\_D)

(whole site: Sweep-up & Spot-checks)	Major(m) Interm.(I) Minor(s)			I Channel			II Channel		
	Major(m)	Interm.(I)	Minor(s)	Major(m)	Interm.(I)	Minor(s)	Major(m)	Interm.(I)	Minor(s)
B - Bridges									
W - Weirs/sluices/dams									
F - Fords									
none <input type="checkbox"/>									
C - Culverts									

H Channel vegetation types/Organic debris

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

Conifer  
Juniper  
opercula  
Sphagnum  
4000 feet

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

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	E	✓	E	W	Natural grassland - GR				
Coniferous woodland (semi-natural) - CW					Moorland/heath - MH				
Dehezza/Montado/Sugherete (semi-natural) - MN					Rock, scree or sand dunes - RD	✓	E	✓	✓
Mediterranean 'macchia' - MM	✓	✓	✓	✓	Natural open water - OW				
Scrub & shrubs - SH					Wetland (e.g. bog, marsh, fen) - WL				
Tall herb/rank vegetation - TH					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				
Populus plantation - PO					Water treatment plant - WT				
Orchard - OR					Main road (e.g. > 10.5 m wide, highway) - MR				
Olive trees - OL					Footpad (e.g. not affecting river channel and banks) - SR				
Vineyard - VI					White road/large footway - WR				✓
Tilled land - TL					Railway - RA				
Grassland/pasture - RP					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		
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	W
None	<input type="checkbox"/>	<input type="checkbox"/>		W
Isolated/scattered	<input type="checkbox"/>	<input type="checkbox"/>	*Overhanging boughs	W
Regularly spaced, single	<input type="checkbox"/>	<input type="checkbox"/>	*Exposed bankside roots	W
Occasional clumps	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Underwater tree roots (TP)	✓
Semi-continuous	<input type="checkbox"/>	<input type="checkbox"/>	Large woody debris	✓
Continuous	<input type="checkbox"/>	<input type="checkbox"/>	Fallen trees (inside the channel)	W
			Fallen/leaning trees on the lower bank	✓

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> )			✓				
*Elm ( <i>Ulmus</i> )							
Willow ( <i>Salix</i> )							
Poplar ( <i>Populus</i> )							
Not applied <input type="checkbox"/>							
None <input type="checkbox"/>							
Other.....							

M NOTABLE NUISANCE PLANT SPECIES

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

	Banktop	Bankface	Channel		Banktop	Bankface	Channel
Bush/schrub				Trees			
<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.				<i>Lagarosiphon major</i>			
Not applied <input type="checkbox"/>				Other.....			
None <input checked="" type="checkbox"/>				Other.....			








**N FIELD SURVEY DETAILS**

Date: 18/1/2011  
 River name: Fiume Vedda  
 Site Name/Number: Dorsoli-Gonoppa  
 Region/Province: Sardegna (NU)  
 Site Reference/Code: INHABIT SAT  
 Map Reference:  
 Spot-check 2 (GPS): 40° 3' 04" N  
 Spot-check 10 (GPS): 09° 31' 68" E

Surveyor name: Buffagni  
 Accredited Surveyor code:  
 Institute/Affiliation: CNR-IRSA







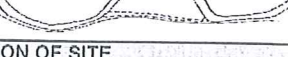
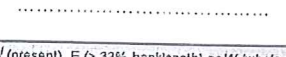
Is the site part of a river or an artificial channel?  
 River  Artificial   
 Are adverse conditions affecting survey?  
 No  Yes   
 If yes, state  
 Is bed of river visible?  
 barely or not  partially  entirely   
 Site surveyed from:  
 left bank  right bank  channel   
 Was a range-finder used to measure channel/water width, etc.?  
 No  Yes   
 Number of photographs taken: 170  
 Photo references:  
 Application time: 2h 40m

**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)    
 Anasomosed   Constrained (artificial)    
 Wandering   Other (state)  

**Q GENERAL FEATURES/DEGRADATION OF SITE**

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

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

**Q FEATURES OF SPECIAL INTEREST**

None <input type="checkbox"/>	Very large boulders (>1 m)	E	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	-		

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

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

Notes

nel fiume a rano naturale di Siphonurus grani che si deposita in ogni  
 giorno  
 - fiume bellissimo.

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



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

