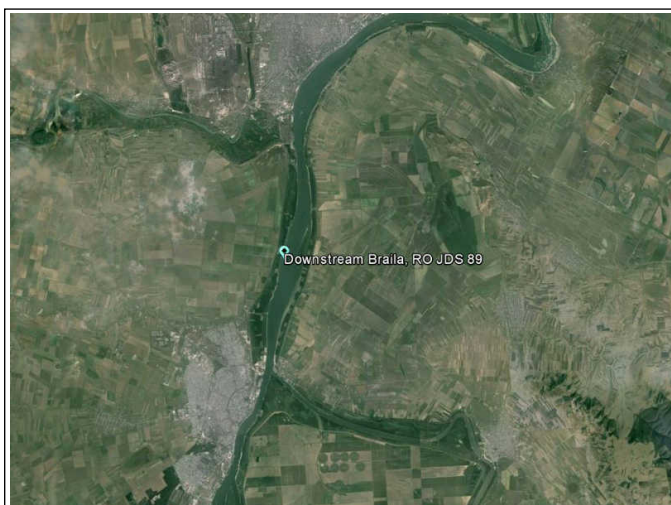


**Danube****Downstream Braila, RO JDS 89 (RO JDS 89 ), 21.September 2013**

FDA\_ID 216



Pic. 1: Map of monitoring site / ÖK 1:50.000

**Description of monitoring site***- no data -***Assessment****Estimated assessment of the ecological status class (FÖZ)**

Biological quality element fish	None
---------------------------------	------

**Ecological status class, current survey, 21.September 2013**

Biological quality element fish	FIA 4.00	Class 4	Poor
---------------------------------	----------	---------	------

**Former classifications**

None				
None				
None				

## Information about and sampling conditions and location

Table 1: Key data and information on sampling, monitoring siteDownstream Braila, RO JDS 89

Watercourse name	<b>Danube</b>	Federal state	<b>not available</b>
Monitoring site	<b>Downstream Braila, RO JDS 89</b>	District	
Monitoring site number	<b>RO JDS 89</b>	Community	
Turnus number		Longitude (WGS 84, decimal) O	<b>28.010167</b>
sampling number		Latitude (WGS 84, decimal) N	<b>45.338083</b>
Survey-ID (FDA)	<b>216</b>	Route-ID	
Date	<b>9/21/2013</b>	River-km [monitoring site]	
Contracting authority	<b>ICPDR</b>	Number of planing area	
Contractor	<b>BAW-IGF</b>	Detail waterbody	
Project manager	<b>Vinzenz Bammer</b>		
Reason of survey	<b>JDS 3</b>		
Fishing category			
Bioregion		Waters ordinal number	
Fish bioregion	<b>Eastern Wallachian Danube (375,5-100) (9)</b>	Huet-zonation	<b>bream zone</b>
Biocenotic Region	<b>Metapotamon</b>	Adapt. Reference	<b>121</b>
River km from	<b>172.0</b>	Altitude [m.a.s]	<b>2</b>
River km to	<b>163.0</b>	Ø catchment basin [km²]	<b>725,000</b>
Section length [m]	<b>9,000</b>	Catchment-class	<b>more than 10.000km²</b>
Ø channel width [m]	<b>940</b>	Slope [‰]	<b>0.04</b>
Original stream character	<b>lowland stream -river</b>	Discharge regime	
Actual site character			
Actual impact		Reference watergauge (name, number)	
Flow [semiquant.]		Distance from source [km]	<b>2,679.0</b>
Average water depth [m]	<b>2m - 5m</b>	Lake above	<b>No</b>
Maximum water depth [m]	<b>5m - 10m</b>	Distance lake upstream [km]	
Geology	<b>calcareous</b>	Lake below	
Influence of sediment transport	<b>slightly affected</b>	Distance lake downstream [km]	
Ø wetted width [m]	<b>940</b>	Flow condition	<b>MQ - mean water up to riparian vegetation</b>
pH-value		Visible depth	<b>1.5</b>
SBV		Fishing conditions	<b>good</b>
Water temperature [°C] (F117)	<b>20</b>	Average annual air temperature [°C]	
Conductance, 25°C [µS/cm] (F118)	<b>386</b>		
Methods used and effort			
<b>Strip-fishing, day</b>		Number of runs	<b>1</b>
Fished length [m]	<b>6,640</b>	E-devices output [kW]	<b>11</b>
Fished area [m²]	<b>19,920</b>	Output voltage	<b>600</b>
		Number of anodes	
		Number of strips/sections	<b>18</b>
and additional methods	<b>Fished area [m²]</b>	additional methods	<b>Effort [UE]</b>
E-Fishing by night	<b>8,760</b>		

### Comments on survey:

- no data -

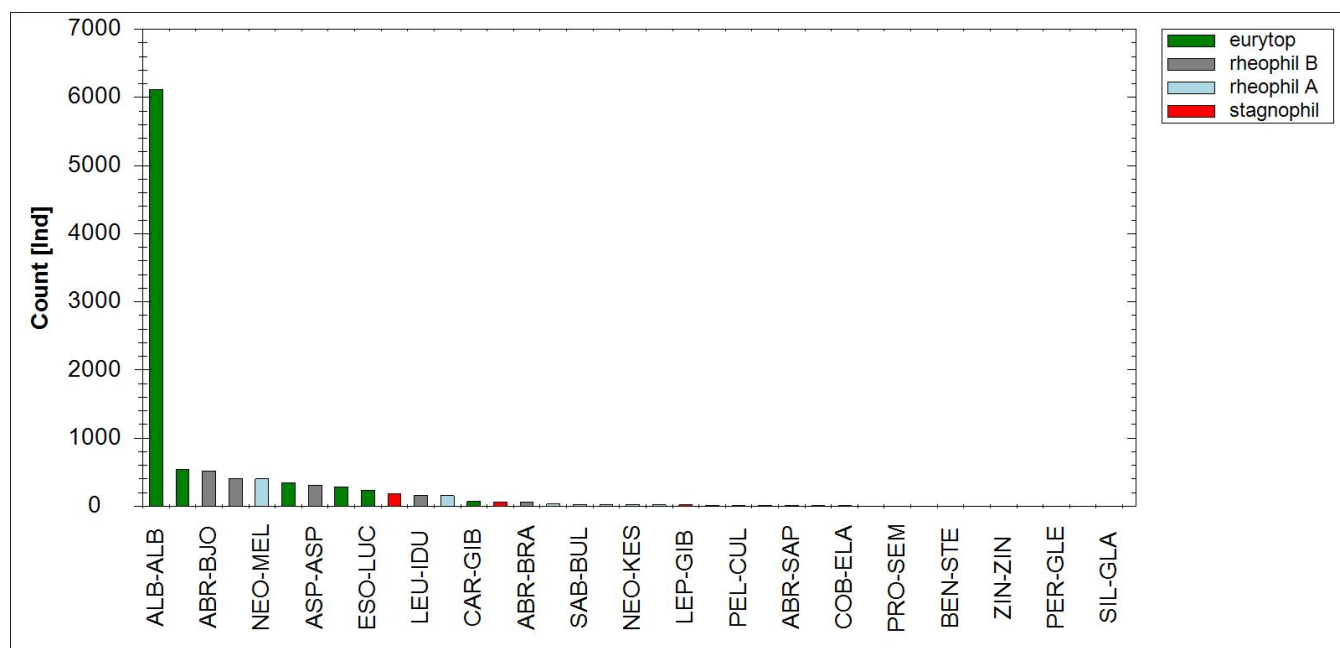
Table 2: Sampling effort at the monitoring site Downstream Braila, RO JDS 89, September 2013

Habitat	Str. no	DG	Length [m]	Width [m]	UE	Method
rock	22	1	500	3		E-fishing day boat
rock	23	1	500	3		E-fishing day boat
rock	24	1	800	3		E-fishing day boat
rock	25	1	300	3		E-fishing day boat
rock	26	1	400	3		E-fishing day boat
rock	27	1	400	3		E-fishing day boat
rock	28	1	500	3		E-fishing night
rock	29	1	400	3		E-fishing day boat
rock	30	1	300	3		E-fishing day boat
rock	31	1	400	3		E-fishing night
rock	32	1	500	3		E-fishing night
undet. middle of the river	16	1	500	2		electric beam trawl
undet. middle of the river	17	1	500	2		electric beam trawl
undet. middle of the river	18	1	500	2		electric beam trawl
undet. middle of the river	19	1	500	2		electric beam trawl
undet. middle of the river	20	1	500	2		electric beam trawl
undet. middle of the river	21	1	500	2		electric beam trawl
other natural bank	1	1	350	3		E-fishing day boat
other natural bank	2	1	300	3		E-fishing day boat
other natural bank	3	1	300	3		E-fishing day boat
other natural bank	4	1	310	3		E-fishing night
other natural bank	5	1	310	3		E-fishing night
indefinite waterside	1	1	350	3		E-fishing day boat
indefinite waterside	2	1	300	3		E-fishing day boat
indefinite waterside	3	1	300	3		E-fishing day boat
indefinite waterside	4	1	300	3		E-fishing day boat
indefinite waterside	5	1	300	3		E-fishing day boat
indefinite waterside	6	1	300	3		E-fishing day boat
indefinite waterside	7	1	310	3		E-fishing night
indefinite waterside	8	1	270	3		E-fishing night
indefinite waterside	9	1	320	3		E-fishing night
bluff	1	1	240	3		E-fishing day boat

Table 3: Habitat weighting used at the monitoring site Downstream Braila, RO JDS 89

Habitat	%
bluff	5
indefinite waterside	80
other natural bank	15
rock	0
undet. middle of the river	0

## Catch result, fish assemblage and threatening status



Pic. 2: Species ranking diagramm of catch resultsDanube, Downstream Braila, RO JDS 89

Table 4: Reference fish assemblage, allochthonous species and threat status

Family	English name	Scient. name of species	Reference fish assemblage	FHH	Red List	IUCN	Count
Syngnathidae	Black-striped pipefish	<i>Syngnathus abaster</i>	s	-			66
Petromyzontidae	Ukrainian lamprey	<i>Eudontomyzon mariae</i>	s	II	VU	DD	5
Cyprinidae	Asp	<i>Aspius aspius</i>	b	II	EN	DD	308
	Barbel	<i>Barbus barbus</i>	b	V	NT	LC	15
	Bitterling	<i>Rhodeus amarus</i>	b	II	VU	LC	
	Bleak	<i>Alburnus alburnus</i>	I	-	LC	LC	6,118
	Blue bream	<i>Abramis ballerus</i>	b	-	EN		
	Bream	<i>Abramis brama</i>	I	-	LC		57
	Carp	<i>Cyprinus carpio</i>	b	-	EN	DD	7
	Chub	<i>Squalius cephalus</i>	s	-	LC	LC	
	Crucian carp	<i>Carassius carassius</i>	s	-	EN	LC	
	Dace	<i>Leuciscus leuciscus</i>	s	-	NT	LC	
	Danube bleak	<i>Alburnus mento</i>	s	II	LC	DD	
	Danubian gudgeon	<i>Romanogobio uranoscopus</i>	s	II	CR	DD	
	Gudgeon	<i>Gobio gobio</i>	s	-	LC	LC	
	Ide	<i>Leuciscus idus</i>	b	-	EN	LC	163
	Kessler's gudgeon	<i>Romanogobio kesslerii</i>	s	II	EN	DD	3
	Nase	<i>Chondrostoma nasus</i>	s	-	NT	LC	2
	Prussian carp	<i>Carassius gibelio</i>	b	-	LC		71
	Roach	<i>Rutilus rutilus</i>	I	-	LC	LC	545
	Rudd	<i>Scardinius erythrophthalmus</i>	s	-	LC	LC	
	Sabre carp	<i>Pelecus cultratus</i>	b	II; V	NT	DD	14
	Sunbleak	<i>Leucaspis delineatus</i>	s	-	EN	LC	
	Tench	<i>Tinca tinca</i>	s	-	VU	LC	
	Vimba bream	<i>Vimba vimba</i>	b	-	VU	LC	
	White bream	<i>Blicca bjoerkna</i>	I	-	LC	LC	515
	White-finned gudgeon	<i>Romanogobio vladykovi</i>	I	II	LC	DD	23
Esocidae	Pike	<i>Esox lucius</i>	b	-	NT		232
Gadidae	Burbot	<i>Lota lota</i>	s	-	VU		
Percidae	Danube ruffe	<i>Gymnocephalus baloni</i>	s	II; IV	VU	DD	13
	Perch	<i>Perca fluviatilis</i>	b	-	LC	LC	282
	Pikeperch	<i>Sander lucioperca</i>	b	-	NT	LC	409
	Ruffe	<i>Gymnocephalus cernuus</i>	s	-	LC	LC	
	Schraetser	<i>Gymnocephalus schraetser</i>	b	II; V	VU	VU	34
	Streber	<i>Zingel streber</i>	s	II	EN	VU	
	Volga pikeperch	<i>Sander volgensis</i>	s	-	EN	DD	1
	Zingel	<i>Zingel zingel</i>	b	II; V	VU	VU	2
Siluridae	Wels catfish	<i>Silurus glanis</i>	b	-	VU	LC	1
Gobiidae	Bighead goby	<i>Neogobius kessleri</i>	s	-	NE	DD	24
	Monkey goby	<i>Neogobius fluviatilis</i>	I	-	NE	DD	346
	Racer goby	<i>Neogobius gymnotrachelus</i>	s	-	NE	DD	156
	Round goby	<i>Neogobius melanostomus</i>	s	-	NE	DD	401
	Tubenose goby	<i>Proterorhinus semilunaris</i>	b	-	EN	LC	3
Cobitidae	Balkan loach	<i>Sabanejewia balcanica</i>	s	II	EN	DD	
	Bulgarian golden loach	<i>Sabanejewia bulgarica</i>	s				29

Family	English name	Scient. name of species	Reference fish assemblage	FHH	Red List	IUCN	Count
	Danubian spined loach	<i>Cobitis elongatoides</i>	b	-			1
	Weatherfish	<i>Misgurnus fossilis</i>	s	II	CR	NT	
Balitoridae	Danube bream	<i>Abramis sapa</i>	I	-	EN		12
Acipenseridae	Danube sturgeon	<i>Acipenser gueldenstaedtii</i>	s	V	RE	EN	
	Fringebarbel sturgeon	<i>Acipenser nudiiventris</i>	s	V	RE	EN	
	Giant sturgeon	<i>Huso huso</i>	s	V	RE	EN	
	Starry sturgeon	<i>Acipenser stellatus</i>	s	V	RE	EN	
	Sterlet	<i>Acipenser ruthenus</i>	s	V	CR	VU	
Clupeidae	Azov shad	<i>Alosa tanaica</i>	s				
	European mud-minnow	<i>Umbra krameri</i>	s	II	CR	VU	
	Pontic shad	<i>Alosa immaculata</i>	s	-			
Gobiidae	Chinese sleeper	<i>Perccottus glenii</i>		-			1
	Mushroom goby	<i>Neogobius eurycephalus</i>		-			189
	Stellate tadpole-goby	<i>Benthophilus stellatus</i>					2
Cobitidae	Balkan spined loach	<i>Cobitis elongata</i>		II			6
	Spined loach	<i>Cobitis taenia</i>		II	VU	LC	26
Centrarchidae	Pumpkinseed	<i>Lepomis gibbosus</i>		-	NE		22

Observed:: reference fish assemblage 31Taxa :: 56Taxa

Taxa complete 37

Count species of reference fish assemblage 9,858

Total count 10,104

Fish ecological reference fish assemblage (Haunschmid et al., 2006)

- I Dominant species
- b Subdominant species
- s Rare species
- a! Allochthon
- N! Neozoa

FFH...Fauna-Flora-Habitat-Directive (Council Directive 92/43/EEC of 21.Mai 1992)

- II Species listed in Annex II of the FFH- Directive (nature reserves have to be set out for this species)
- IV Species listed in Annex IV of the FFH- Directive (strict protection of animals and plants)
- V Species listed in Annex V of the FFH- Directive (species whose collection and use is subject to administrative control)
- RE Regionally extinct
- CR Critically endangered
- EN Endangered
- VU Vulnerable
- NT Near threatened
- LR Lower risk
- LC Least concern
- DD Available data is not sufficient for classification (data deficient)
- NE Not evaluated, usually widespread and replicating alien species

## Abundance and biomass

Table 5: abundance and biomass (e-fishings) Danube, Downstream Braila, RO JDS 89, 9/21/2013

English name	Species Code	Count	Abu [Ind/ha]	95% Konfid.	Biom [kg/ha]	95% Konfid.	Weight [g] median	Mean Weight [g] total	Population structure	Reference fish assemblage
Asp	ASP-ASP	308	164.8		12.2		14.7	74.2	3	b
Balkan spined loach	COB-ELA	6	3.5		0.0		10.1	10.0	3	
Barbel	BAR-BAR	15	0.0		0.0	0.0	10.5	0.0	3	b

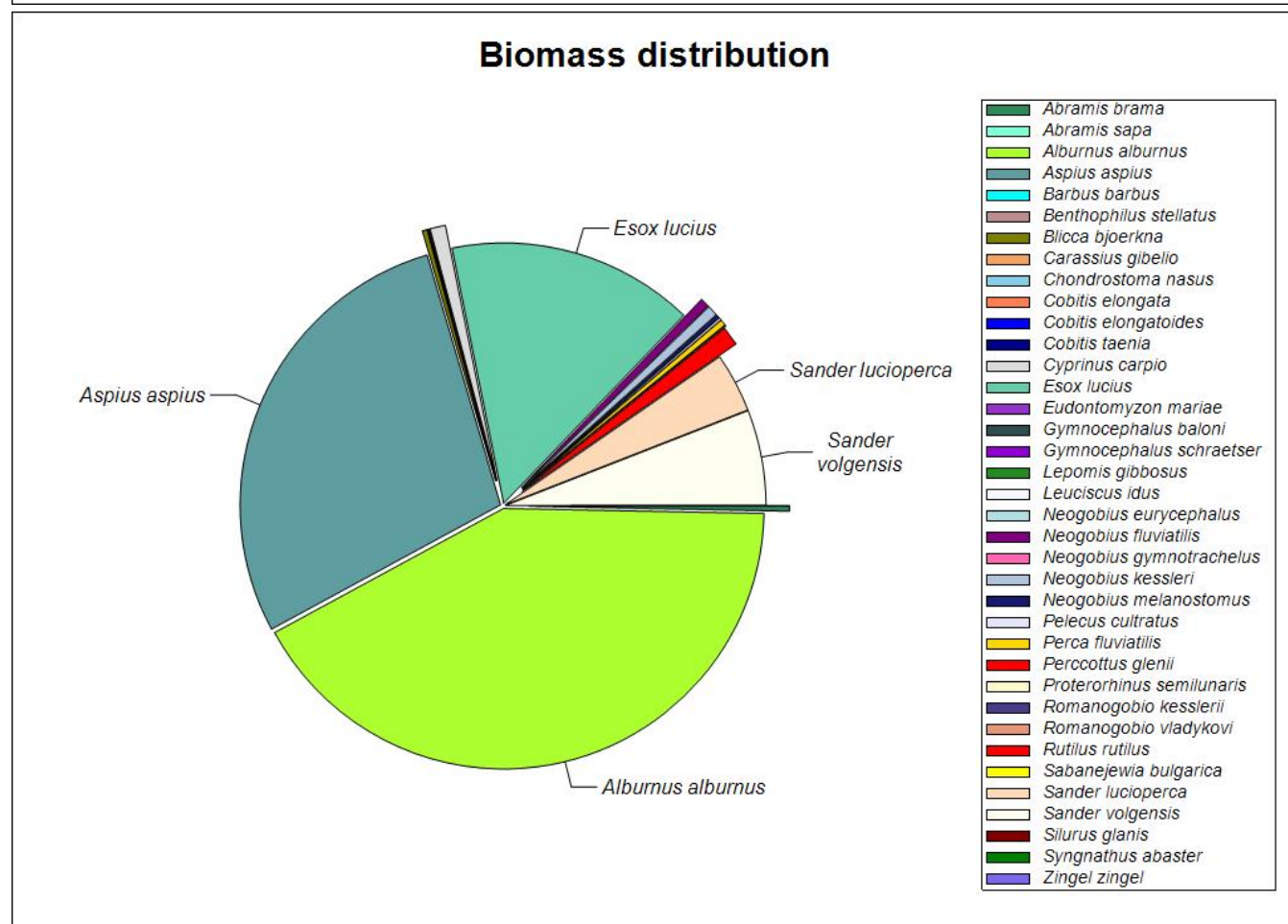
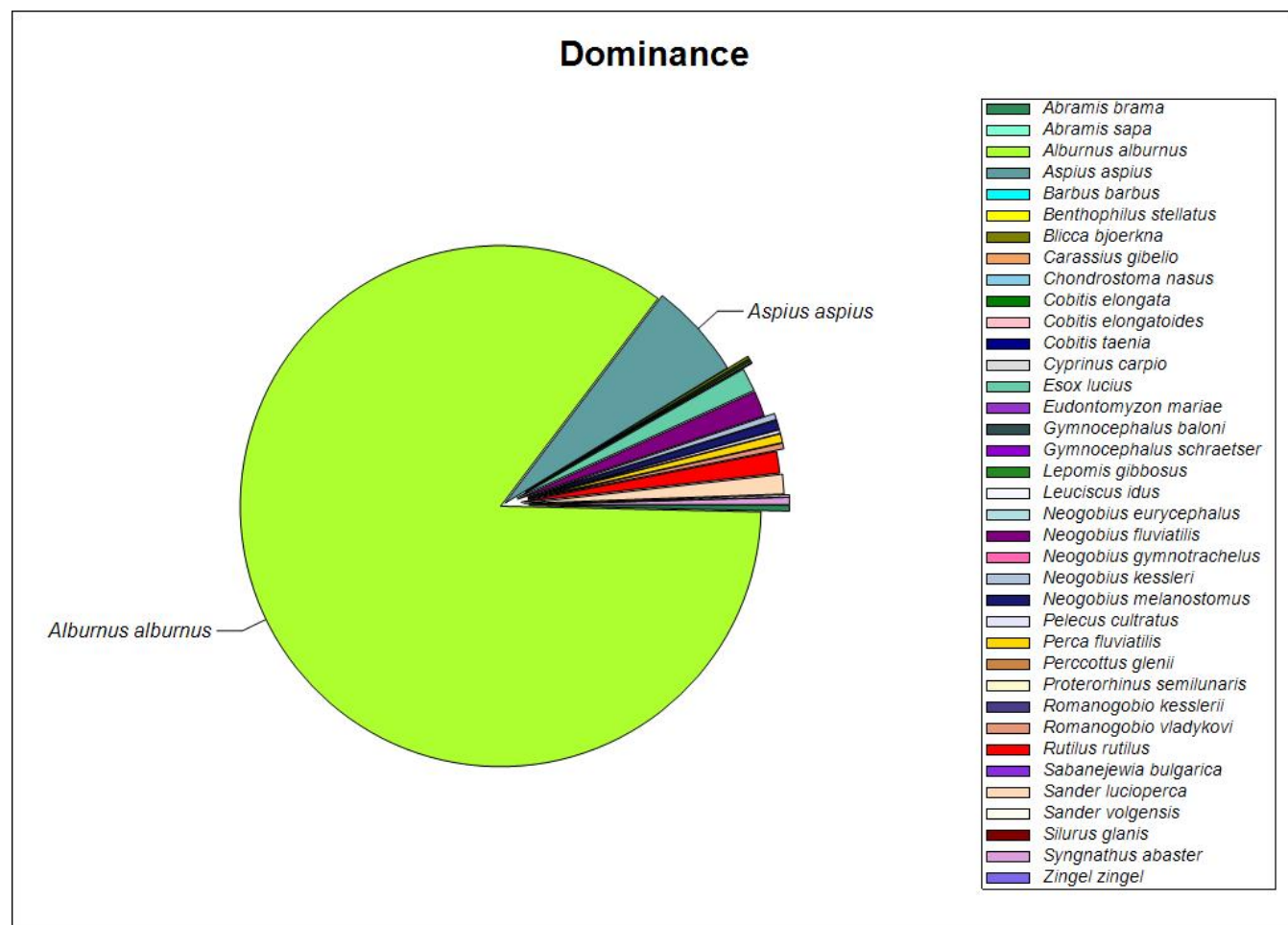
English name	Species Code	Count	Abu [Ind/ha]	95% Konfid.	Biom [kg/ha]	95% Konfid.	Weight [g] median allover	Mean Weight [g] total	Population structure	Reference fish assemblage
Bighead goby	NEO-KES	24	10.6		0.3		9.2	26.8	2	s
Black-striped pipefish	SYN-ABA	66	12.3		0.0		11.8	0.7	1	s
Bleak	ALB-ALB	6,118	2,342.2		18.0		8.5	7.7	1	l
Bream	ABR-BRA	57	9.9		0.1		9.0	13.6	3	l
Bulgarian golden loach	SAB-BUL	29	0.0		0.0	0.0	5.8	0.0	1	s
Carp	CYP-CAR	7	1.8		0.4		19.8	236.4	3	b
Chinese sleeper	PER-GLE	1	0.0		0.0	0.0	5.5	0.0	4	
Danube bream	ABR-SAP	12	0.0		0.0	0.0	10.3	0.0	3	l
Danube ruffe	GYM-BAL	13	0.0		0.0	0.0	9.5	0.0	2	s
Danubian spined loach	COB-ELO	1	2.9		0.0		10.0	6.6	4	b
Idc	LEU-IDU	163	0.0		0.0	0.0	9.4	0.0	2	b
Kessler's gudgeon	ROM-KES	3	0.0		0.0	0.0	7.5	0.0	4	s
Monkey goby	NEO-FLU	346	43.5		0.3		7.3	5.7	1	l
Mushroom goby	NEO-EUR	189	0.0		0.0	0.0	7.8	0.0	1	
Nase	CHO-NAS	2	0.0		0.0	0.0	24.3	0.0	3	s
Perch	PER-FLU	282	15.2		0.2		10.5	10.5	1	b
Pike	ESO-LUC	232	40.2		6.6		25.2	164.6	3	b
Pikeperch	SAN-LUC	409	33.4		1.6		15.2	47.6	3	b
Prussian carp	CAR-GIB	71	0.0		0.0	0.0	12.2	0.0	2	b
Pumpkinseed	LEP-GIB	22	0.0		0.0	0.0	10.6	0.0	2	
Racer goby	NEO-GYM	156	0.0		0.0	0.0	6.0	0.0	1	s
Roach	RUT-RUT	545	36.8		0.5		8.1	13.9	1	l
Round goby	NEO-MEL	401	15.7		0.1		6.7	5.9	1	s
Sabre carp	PEL-CUL	14	5.9		0.1		12.9	11.2	3	b
Schraetser	GYM-SCH	34	0.0		0.0	0.0	10.6	0.0	2	b
Spined loach	COB-TAE	26	0.0		0.0	0.0	9.3	0.0	2	
Stellate tadpole-goby	BEN-STE	2	0.0		0.0	0.0	3.7	0.0	4	
Tubenose goby	PRO-SEM	3	0.0		0.0	0.0	4.1	0.0	4	b
Ukrainian lamprey	EUD-MAR	5	0.0		0.0	0.0	13.6	0.0	3	s
Volga pikeperch	SAN-VOL	1	3.6		2.6		43.0	707.0	4	s
Wels catfish	SIL-GLA	1	0.0		0.0	0.0	14.5	0.0	4	b
White bream	ABR-BJO	515	4.8		0.1		9.3	26.0	2	l
White-finned gudgeon	ROM-VLA	23	9.6		0.0		6.9	3.1	1	l
Zingel	ZIN-ZIN	2	0.0		0.0	0.0	20.0	0.0	4	b

31 species of 56

Total 10,104 2,756.7

43.1





Pic. 3: Dominance und Biomass distribution



Shannon-Index: 1.737

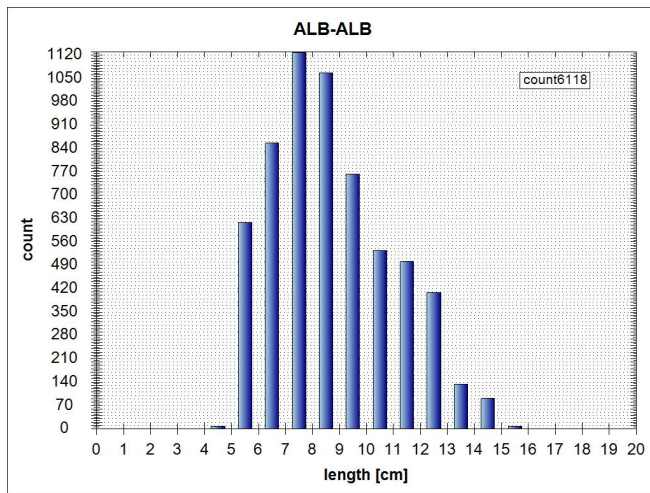
Equitability: 0.481

**Biometrics and catch rate**

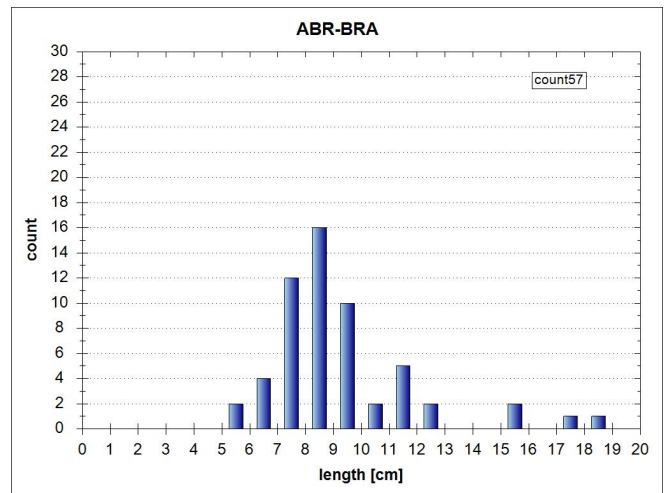
Table 6: biometrics of each species and catch specific parameters

Fish species	Lt [cm]		n	Statist.	Catch-	Catch-effectivity		
	Min	Max		Method	Probability [%]	Min	MW	Max
Asp	7.0	14.7	42.5	308		0.25	0.45	0.60
Balkan spined loach	9.0	10.1	11.0	6		0.25	0.27	0.30
Barbel	6.5	10.5	28.0	15		0.40	0.49	0.50
Bighead goby	4.1	9.2	14.5	24		0.25	0.46	0.70
Black-striped pipefish	7.5	11.8	15.0	66		0.10	0.49	0.70
Bleak	4.5	8.5	15.0	6,118		0.25	0.48	0.60
Bream	5.5	9.0	18.5	57		0.25	0.40	0.70
Bulgarian golden loach	2.2	5.8	9.0	29		0.50	0.68	0.70
Carp	14.5	19.8	27.0	7		0.30	0.47	0.50
Chinese sleeper	5.5	5.5	5.5	1		0.50	0.50	0.50
Danube bream	3.6	10.3	12.5	12		0.25	0.53	0.70
Danube ruffe	7.5	9.5	12.5	13		0.25	0.25	0.25
Danubian spined loach	10.0	10.0	10.0	1		0.50	0.50	0.50
Ide	6.0	9.4	28.0	163		0.25	0.48	0.50
Kessler's gudgeon	7.5	7.5	7.5	3		0.50	0.50	0.50
Monkey goby	1.9	7.3	13.0	346		0.25	0.55	0.70
Mushroom goby	4.5	7.8	13.0	189		0.50	0.50	0.50
Nase	24.0	24.3	24.5	2		0.40	0.40	0.40
Perch	5.0	10.5	41.0	282		0.25	0.47	0.70
Pike	12.0	25.2	46.0	232		0.25	0.48	0.50
Pikeperch	8.6	15.2	48.0	409		0.25	0.43	0.70
Prussian carp	9.0	12.2	22.0	71		0.25	0.50	0.70
Pumpkinseed	6.0	10.6	15.0	22		0.25	0.49	0.50
Racer goby	2.6	6.0	9.0	156		0.50	0.51	0.70
Roach	5.0	8.1	18.0	545		0.25	0.45	0.70
Round goby	1.5	6.7	12.5	401		0.25	0.55	0.70
Sabre carp	3.4	12.9	16.0	14		0.25	0.37	0.70
Schraetser	7.9	10.6	16.5	34		0.25	0.48	0.70
Spined loach	8.0	9.3	12.0	26		0.50	0.50	0.50
Stellate tadpole-goby	3.5	3.7	3.9	2		0.70	0.70	0.70
Tubenose goby	3.9	4.1	4.5	3		0.25	0.55	0.70
Ukrainian lamprey	9.0	13.6	17.0	5		0.25	0.36	0.50
Volga pikeperch	43.0	43.0	43.0	1		0.40	0.40	0.40
Wels catfish	14.5	14.5	14.5	1		0.50	0.50	0.50
White bream	3.8	9.3	23.0	515		0.25	0.39	0.70
White-finned gudgeon	3.7	6.9	10.0	23		0.30	0.62	0.70
Zingel	19.6	20.0	20.5	2		0.70	0.70	0.70
37 species		Sum	10,104					

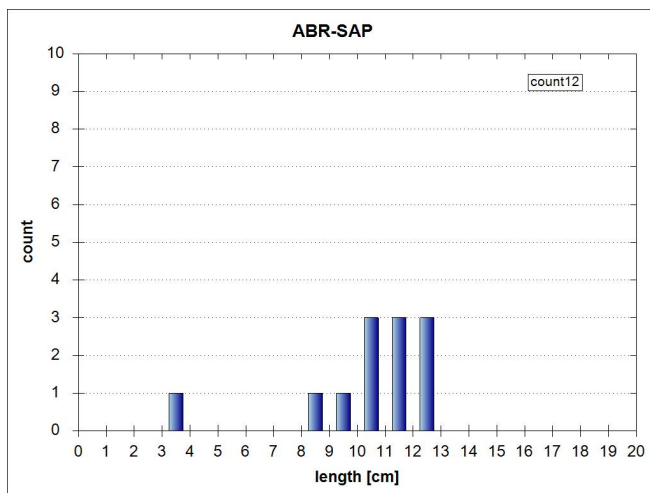
## Population structure of dominant species and subdominant species (total catch)



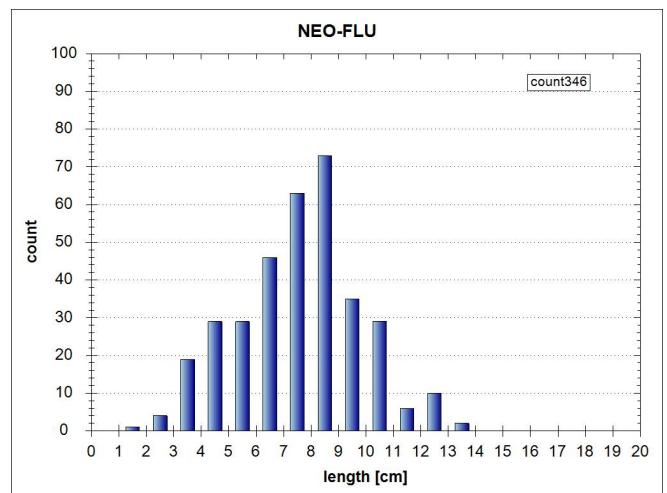
Bleak (*Alburnus alburnus*), 1



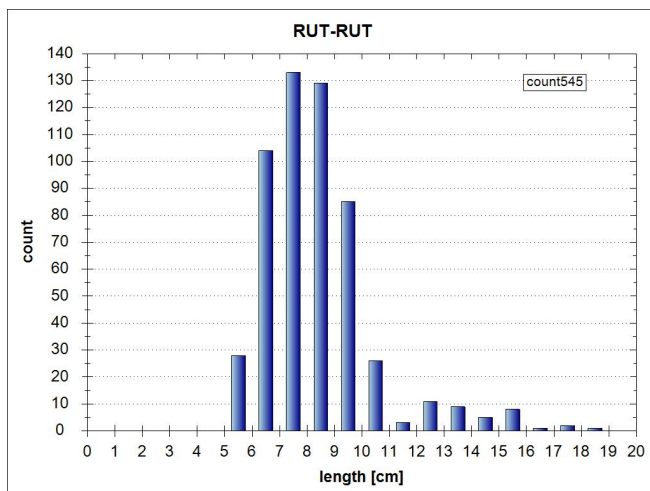
Bream (*Abramis brama*), 3



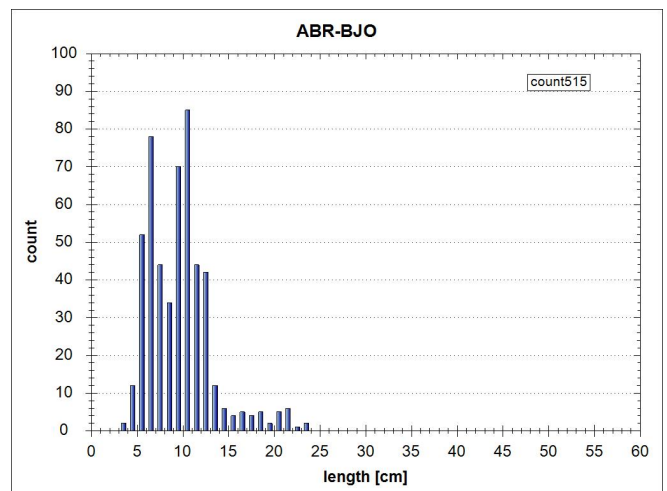
Danube bream (*Abramis sapa*), 3



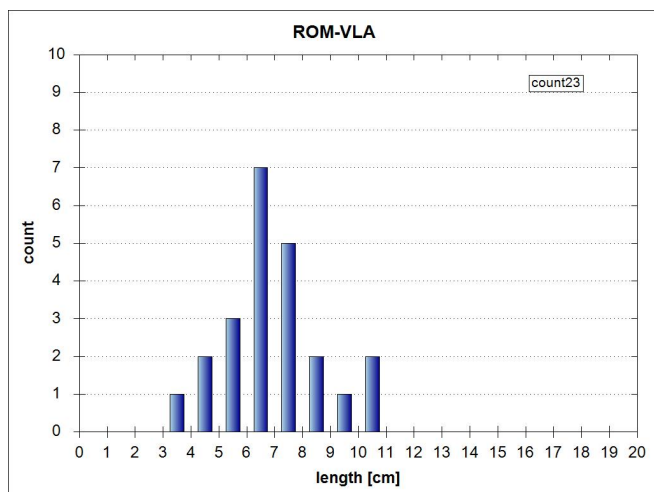
Monkey goby (*Neogobius fluviatilis*), 1



Roach (*Rutilus rutilus*), 1

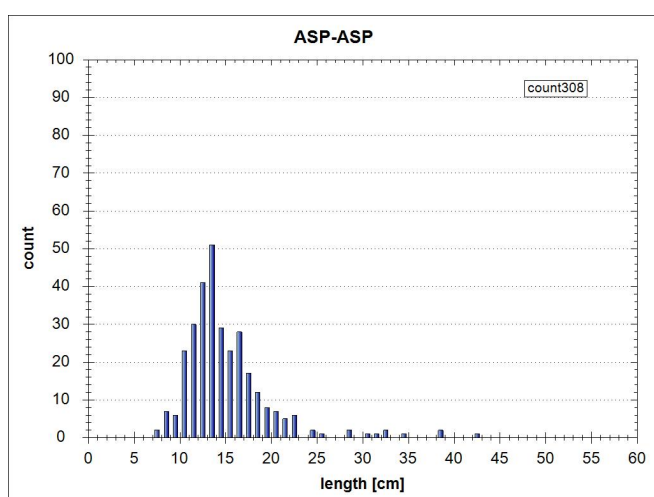


White bream (*Blicca bjoerkna*), 2

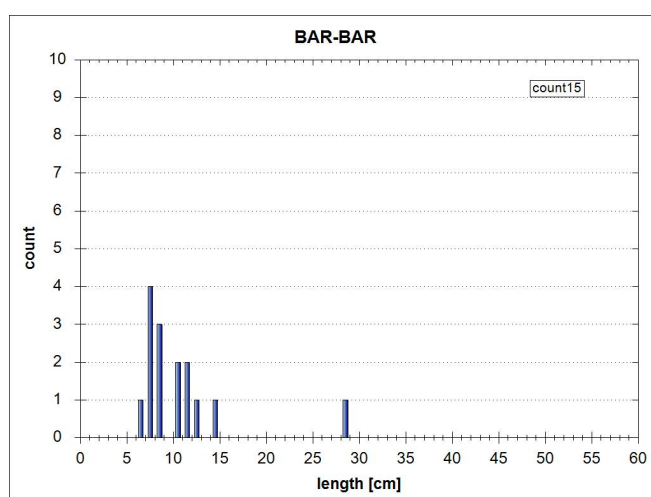


White-finned gudgeon (*Romanogobio vladykovi*), 1

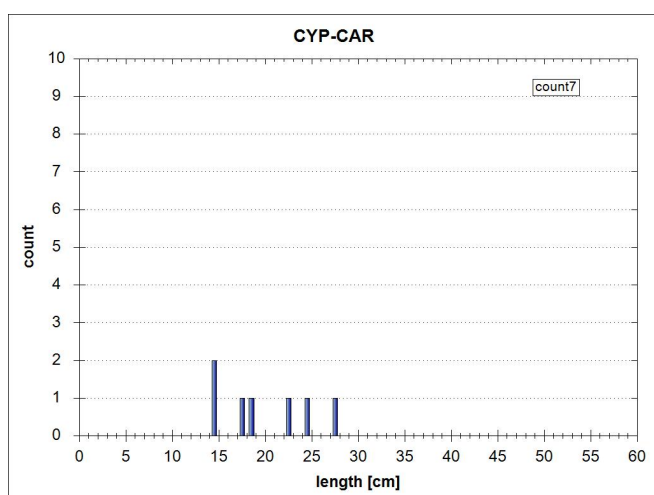
Pic. 4: Length-frequency diagram of dominant species (n>3), Sep. 2013



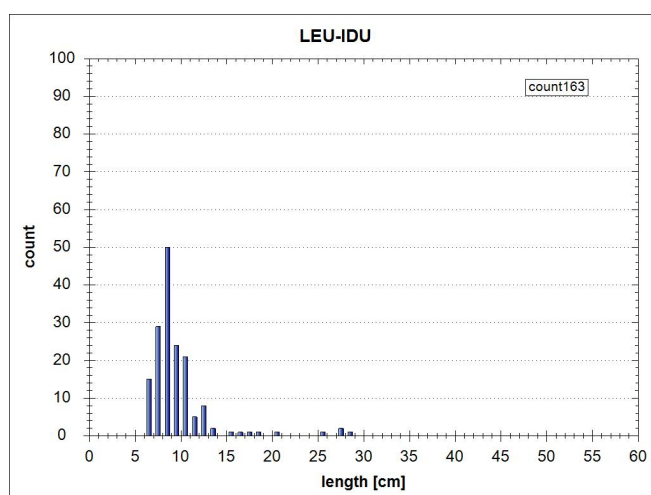
Asp (*Aspius aspius*), 3



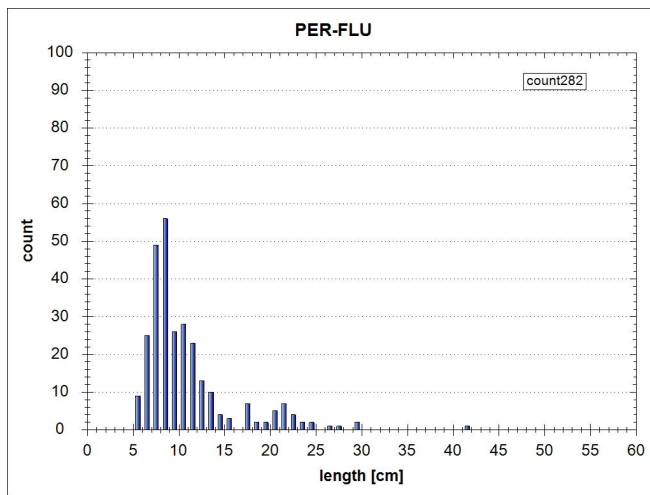
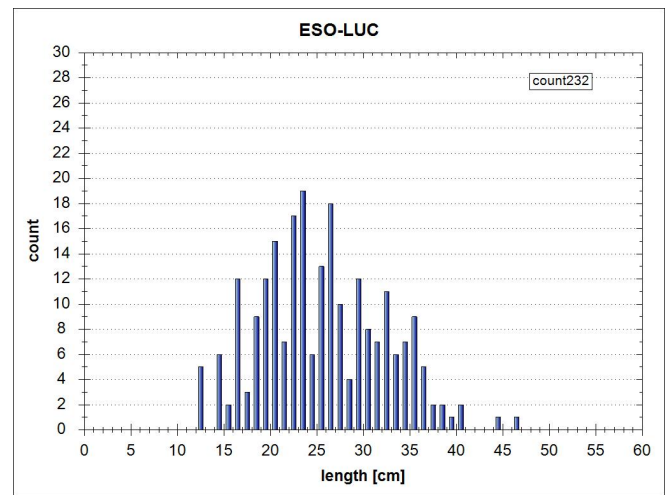
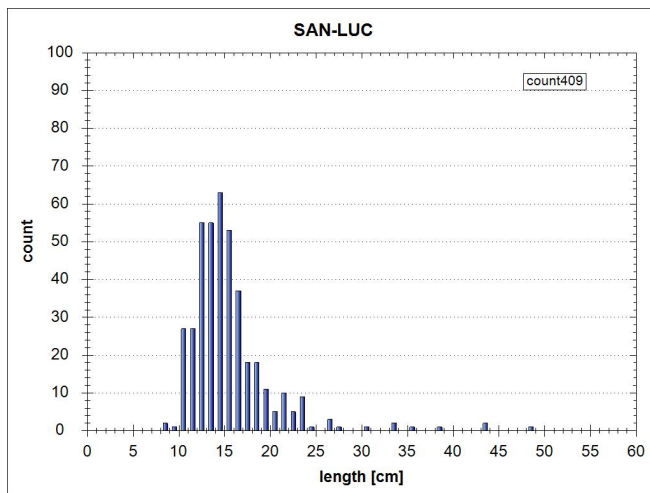
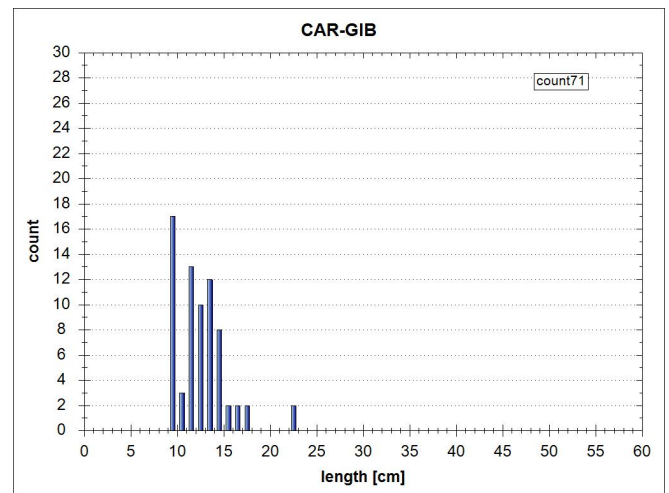
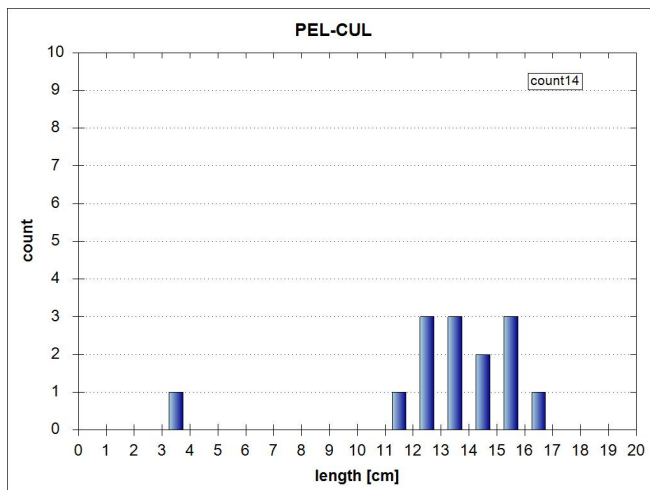
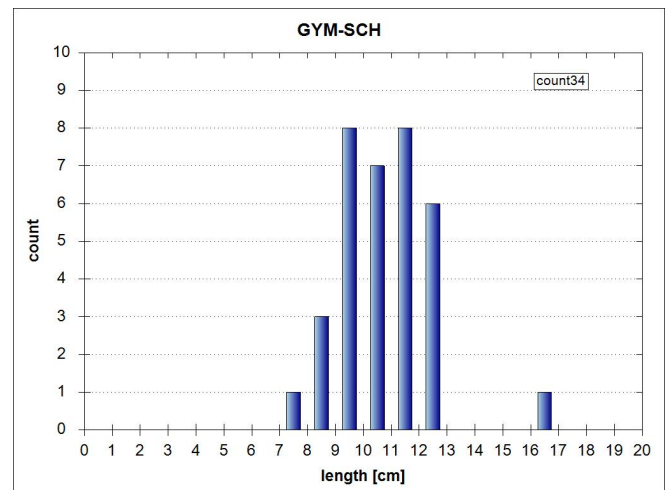
Barbel (*Barbus barbus*), 3



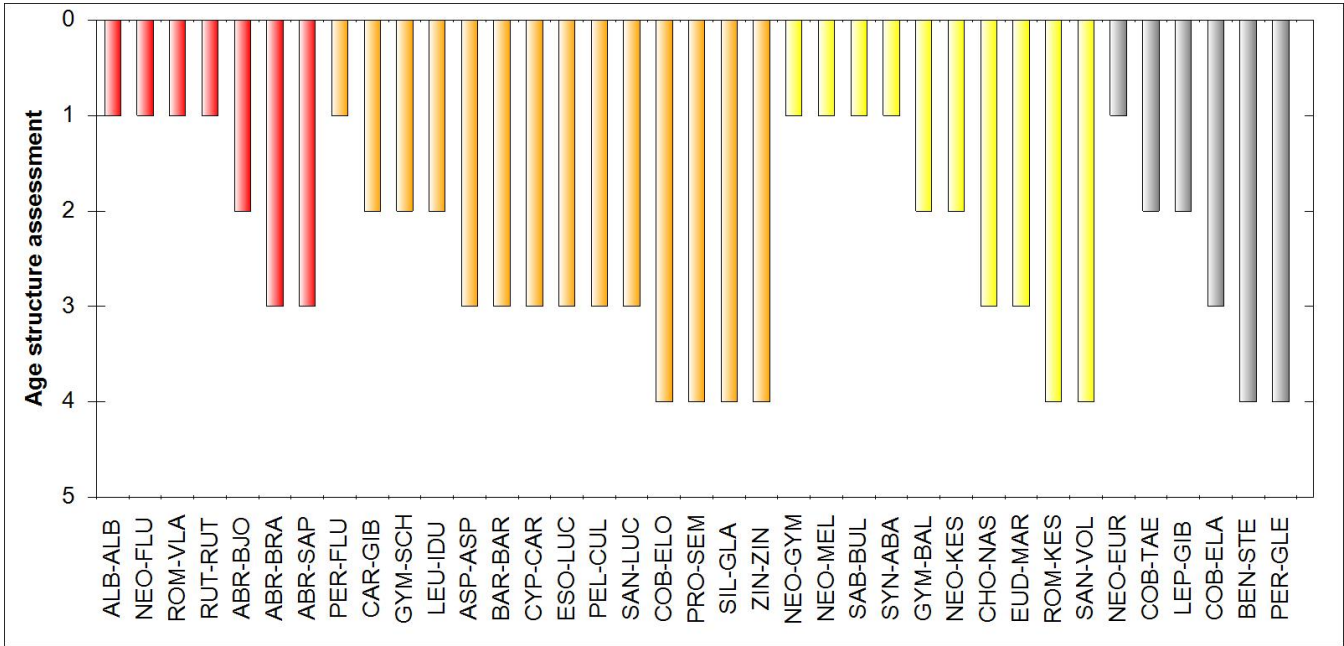
Carp (*Cyprinus carpio*), 3



Ide (*Leuciscus idus*), 2

Perch (*Perca fluviatilis*), 1Pike (*Esox lucius*), 3Pikeperch (*Sander lucioperca*), 3Prussian carp (*Carassius gibelio*), 2Sabre carp (*Pelecus cultratus*), 3Schraetser (*Gymnocephalus schraetser*), 2

Pic. 5: Length-frequency diagram of subdominant species (n&gt;3), Sep. 2013



Pic. 6: Age structure of present species

**Comment on population structure of dominat and subdominant species**

- no comment -

**Fish ecological assessment (FIA, FISH INDEX AUSTRIA)**

Table 7: fish ecologic assessment, Danube, Downstream Braila, RO JDS 89, 9/21/2013

Rating					
Stock data	Abundance Ind/ha	Biomass kg/ha			ko-criterion biomass
	2,753.2	43.1		ko-crit	4
<b>1. Species</b>	<b>Reference fish assemblage</b>	<b>actual (current)</b>	<b>Ratio/Deviation</b>	<b>Partial rating</b>	
<b>Species</b>					
Dominant species	7	7	100%	1.0	
Subdominant species	17	14	82%	1.0	
Rare species	32	10	31%	2.0	
				1.3	
<b>Ecological guilds</b>					
Flow	6	4	2	3.0	
Reproduction	8	4	4	4.0	
				3.5	
<b>Species diversity &amp; guilds overall</b>					<b>1.7</b>
<b>2. Dominance</b>	<b>Reference fish assemblage</b>	<b>actual (current)</b>	<b>Difference</b>		
<b>Fish region index</b>	6.5	6.4	0.1		<b>1.0</b>
<b>3. Population structure</b>	<b>Reference fish assemblage</b>	<b>actual (current)</b>		<b>Partial rating (1-5)</b>	
Dominant species	7	7		1.7	
Subdominant species	17	14		3.3	
					<b>2.2</b>
Fishindex Austria without active ko-criterion					<b>1.84</b>
<b>Biological quality element fish</b>		<b>FIA 4.00</b>	<b>Class 4</b>	<b>Poor</b>	

Date of Assessment:3/18/2014

Comment BAW-IGF

- no comment -

## **Discussion of fish ecological assessment, plausibility, deficits and measures (AN)**

*Recommended improvements with priority ranking if possible;*