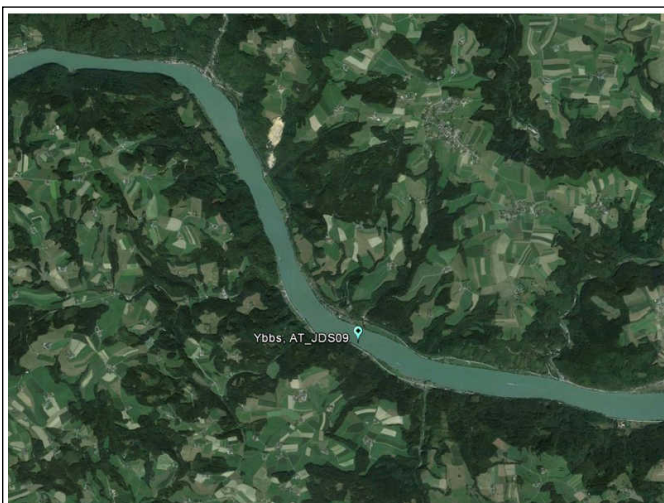


Danube**Ybbs, AT_JDS09 (FW30900057), 17.August 2013****FDA_ID 245**

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



Pic. 2: Monitoring site Ybbs, AT_JDS09

Description of monitoring site

Gefälle laut KWD bei MW total 10cm

Assessment**Estimated assessment of the ecological status class (FÖZ)**

Biological quality element fish	Action required (5)
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Ecological status class, current survey, 17.August 2013

Biological quality element fish	FIA 5.00	Class 5	Bad
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Former classifications

None				
None				
None				

Information about and sampling conditions and location

Table 1: Key data and information on sampling, monitoring site Ybbs, AT_JDS09

Watercourse name	Danube	Federal state	Lower Austria
Monitoring site	Ybbs, AT_JDS09	District	Grein?
Monitoring site number	FW30900057	Community	
Turnus number		Longitude (WGS 84, decimal) O	14.96807
sampling number		Latitude (WGS 84, decimal) N	48.20122
Survey-ID (FDA)	245	Route-ID	
Date	8/17/2013	River-km [monitoring site]	
Contracting authority	ICPDR	Number of planing area	
Contractor	BAW-IGF	Detail waterbody	4103600
Project manager	Vinzenz Bammer		
Reason of survey	JDS 3		
Fishing category	D		
Bioregion		Waters ordinal number	09
Fish bioregion	Eastern Alpine Foothills Danube (2225-2001) (3)	Huet-zonation	barbel zone
Biocenotic Region	Epipotamon large	Adapt. Reference	96
River km from	2,072.0	Altitude [m.a.s]	226
River km to	2,061.0	Ø catchment basin [km²]	92,464
Section length [m]	11,000	Catchment-class	more than 10.000km²
Ø channel width [m]	300	Slope [‰]	0.01
Original stream character	foothills stream -river	Discharge regime	
Actual site character	heavily modified		
Actual impact	impoundment basin	Reference watergauge (name, number)	
Flow [semiquant.]		Distance from source [km]	774.0
Average water depth [m]		Lake above	No
Maximum water depth [m]		Distance lake upstream [km]	
Geology	calcareous	Lake below	
Influence of sediment transport	slightly affected	Distance lake downstream [km]	
Ø wetted width [m]	300	Flow condition	
pH-value		Visible depth	3
SBV		Fishing conditions	excellent
Water temperature [°C] (F117)	20.3	Average annual air temperature [°C]	8.9
Conductance, 25°C [µS/cm] (F118)	352		
Methods used and effort			
Strip-fishing, day		Number of runs	1
Fished length [m]	9,201	E-devices output [kW]	11/13
Fished area [m²]	44,484	Output voltage	600
		Number of anodes	
		Number of strips/sections	35
and additional methods	Fished area [m²]	additional methods	Effort [UE]
E-Fishing by night	11,914	longline	10
beam trawl	2,000	gillnet	5

Comments on survey:

- no data -

Table 2: Sampling effort at the monitoring site Ybbs, AT_JDS09, August 2013

Habitat	Str. no	DG	Length [m]	Width [m]	UE	Method
rip-rap	1	1	170	1.5		E-fishing day boat
rip-rap	2	1	140	1.5		E-fishing day boat
rip-rap	3	1	170	3		E-fishing day boat
rip-rap	4	1	210	3		E-fishing day boat
rip-rap	5	1	165	3		E-fishing day boat
rip-rap	6	1	140	3		E-fishing day boat
rip-rap	7	1	170	3		E-fishing day boat
rip-rap	8	1	300	3		E-fishing day boat
rip-rap	9	1	230	3		E-fishing day boat
rip-rap	10	1	200	3		E-fishing day boat
rip-rap	11	1	155	1.5		E-fishing night
rip-rap	12	1	150	1.5		E-fishing night
rip-rap	13	1	150	3		E-fishing night
rip-rap	14	1	145	3		E-fishing night
rip-rap	15	1	155	3		E-fishing night
rock	1	1	295	6		E-fishing night
rock	1	1			0.64	gillnet
rock	2	1			0.64	gillnet
rock	2	1	305	6		E-fishing night
rock	3	1	324	6		E-fishing night
rock	3	1			0.64	gillnet
rock	4	1			0.63	gillnet
rock	4	1	323	6		E-fishing night
rock	5	1	293	6		E-fishing night
rock	5	1			0.63	gillnet
rock	6	1	113	2		E-fishing night
rock	6	1			1.00	longline
rock	7	1			1.00	longline
rock	7	1	109	2		E-fishing night
rock	8	1	102	2		E-fishing night
rock	8	1			1.00	longline
rock	9	1			1.00	longline
rock	9	1	109	2		E-fishing night
rock	10	1			1.00	longline
rock	10	1	416	6		E-fishing day boat
rock	11	1	358	6		E-fishing day boat
rock	11	1			0.65	gillnet
rock	12	1			0.65	gillnet
rock	12	1	475	6		E-fishing day boat
rock	13	1	341	6		E-fishing day boat
rock	13	1			0.65	gillnet
rock	14	1	352	6		E-fishing day boat
rock	14	1			1.00	longline
rock	15	1			1.00	longline
rock	15	1	434	6		E-fishing day boat
rock	16	1	407	6		E-fishing day boat
rock	16	1			1.00	longline
rock	17	1			1.00	longline
rock	17	1	488	6		E-fishing day boat
rock	18	1	385	6		E-fishing day boat
rock	18	1			1.00	longline

Habitat	Str. no	DG	Length [m]	Width [m]	UE	Method
rock	19	1	432	6		E-fishing day boat
rock	19	1	500	2		beam trawl
rock	20	1	500	2		beam trawl
rock	20	1	432	6		E-fishing day boat
rock	21	1	429	6		E-fishing day boat
rock	22	1	409	6		E-fishing day boat
rock	23	1	411	6		E-fishing day boat
rock	24	1	394	6		E-fishing day boat
rock	25	1	100	2		E-fishing day boat
rock	26	1	97	2		E-fishing day boat
rock	27	1	100	2		E-fishing day boat
rock	28	1	200	2		E-fishing day boat
rock	29	1	91	2		E-fishing day boat
rock	30	1	121	2		E-fishing day boat
rock	31	1	108	2		E-fishing day boat
rock	32	1	103	2		E-fishing day boat
rock	33	1	110	2		E-fishing day boat
rock	34	1	113	2		E-fishing day boat
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
undet. middle of the river	22	1	500	2		electric beam trawl

Table 3: Habitat weighting used at the monitoring site Ybbs, AT_JDS09

Habitat	%
rip-rap	100
rock	0
undet. middle of the river	0

Catch result, fish assemblage and threatening status



Pic. 3: Species ranking diagramm of catch results Danube, Ybbs, AT_JDS09

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
Petromyzontidae	Ukrainian lamprey	<i>Eudontomyzon mariae</i>	s	II	VU	DD	
Salmonidae	Brown trout	<i>Salmo trutta fario</i>	s	-	NT		1
	Danube salmon	<i>Hucho hucho</i>	I	II; V	EN	EN	
Thymallidae	Greyling	<i>Thymallus thymallus</i>	s	V	VU	LC	
Cyprinidae	Asp	<i>Aspius aspius</i>	b	II	EN	DD	1
	Barbel	<i>Barbus barbus</i>	I	V	NT	LC	1
	Bitterling	<i>Rhodeus amarus</i>	s	II	VU	LC	
	Black Sea roach	<i>Rutilus meidingeri</i>	s	II; V	EN	EN	
	Blageon	<i>Leuciscus souffia</i>	s	II	EN	LC	
	Bleak	<i>Alburnus alburnus</i>	I	-	LC	LC	191
	Blue bream	<i>Abramis ballerus</i>	s	-	EN		1
	Bream	<i>Abramis brama</i>	I	-	LC		13
	Carp	<i>Cyprinus carpio</i>	s	-	EN	DD	1
	Chub	<i>Squalius cephalus</i>	b	-	LC	LC	17
	Crucian carp	<i>Carassius carassius</i>	s	-	EN	LC	
	Dace	<i>Leuciscus leuciscus</i>	I	-	NT	LC	2
	Danube bleak	<i>Alburnus mento</i>	s	II	LC	DD	
	Danube roach	<i>Rutilus pigus</i>	s	II; V	EN	DD	
	Danubian gudgeon	<i>Romanogobio uranoscopus</i>	s	II	CR	DD	
	Gudgeon	<i>Gobio gobio</i>	s	-	LC	LC	
	Ide	<i>Leuciscus idus</i>	I	-	EN	LC	11
	Italian barbel	<i>Barbus plebejus</i>	s	II		LC	
	Kessler's gudgeon	<i>Romanogobio kesslerii</i>	s	II	EN	DD	
	Minnow	<i>Phoxinus phoxinus</i>	s	-	NT	LC	
	Nase	<i>Chondrostoma nasus</i>	I	-	NT	LC	1
	Prussian carp	<i>Carassius gibelio</i>	s	-	LC		
	Roach	<i>Rutilus rutilus</i>	b	-	LC	LC	64
	Rudd	<i>Scardinius erythrophthalmus</i>	s	-	LC	LC	
	Sabre carp	<i>Pelecus cultratus</i>	s	II; V	NT	DD	
	Spirlin	<i>Alburnoides bipunctatus</i>	s	-	LC	LC	22
	Sunbleak	<i>Leucaspis delineatus</i>	s	-	EN	LC	
	Tench	<i>Tinca tinca</i>	s	-	VU	LC	1
	Vimba bream	<i>Vimba vimba</i>	b	-	VU	LC	1
	White bream	<i>Blicca bjoerkna</i>	b	-	LC	LC	
	White-finned gudgeon	<i>Romanogobio vladykovi</i>	b	II	LC	DD	2
Esocidae	Pike	<i>Esox lucius</i>	b	-	NT		2
Gadidae	Burbot	<i>Lota lota</i>	b	-	VU		
Percidae	Danube ruffe	<i>Gymnocephalus baloni</i>	s	II; IV	VU	DD	
	Perch	<i>Perca fluviatilis</i>	b	-	LC	LC	48
	Pikeperch	<i>Sander lucioperca</i>	b	-	NT	LC	3
	Ruffe	<i>Gymnocephalus cernuus</i>	s	-	LC	LC	
	Schraetser	<i>Gymnocephalus schraetser</i>	b	II; V	VU	VU	21
	Streber	<i>Zingel streber</i>	b	II	EN	VU	5
	Zingel	<i>Zingel zingel</i>	b	II; V	VU	VU	17
Siluridae	Wels catfish	<i>Silurus glanis</i>	b	-	VU	LC	

Family	English name	Scient. name of species	Reference fish assemblage	FFH	Red List	IUCN	Count
Cottidae	Bullhead	<i>Cottus gobio</i>	s	II	NT	LC	
Cobitidae	Spined loach	<i>Cobitis taenia</i>	s	II	VU	LC	
	Weatherfish	<i>Misgurnus fossilis</i>	s	II	CR	NT	
Balitoridae	Danube bream	<i>Abramis sapo</i>	b	-	EN		3
	Stone loach	<i>Barbatula barbatula</i>	s	-	LC	LC	
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	
Gobiidae	Bighead goby	<i>Neogobius kessleri</i>		-	NE	DD	17
	Racer goby	<i>Neogobius gymnotrachelus</i>		-	NE	DD	3
	Round goby	<i>Neogobius melanostomus</i>		-	NE	DD	1,139
Anguillidae	Eel	<i>Anguilla anguilla</i>		-	RE		1

Observed:: reference fish assemblage 23Taxa :: 55Taxa

Taxa complete 27

Count species of reference fish assemblage 429

Total count 1,589

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)

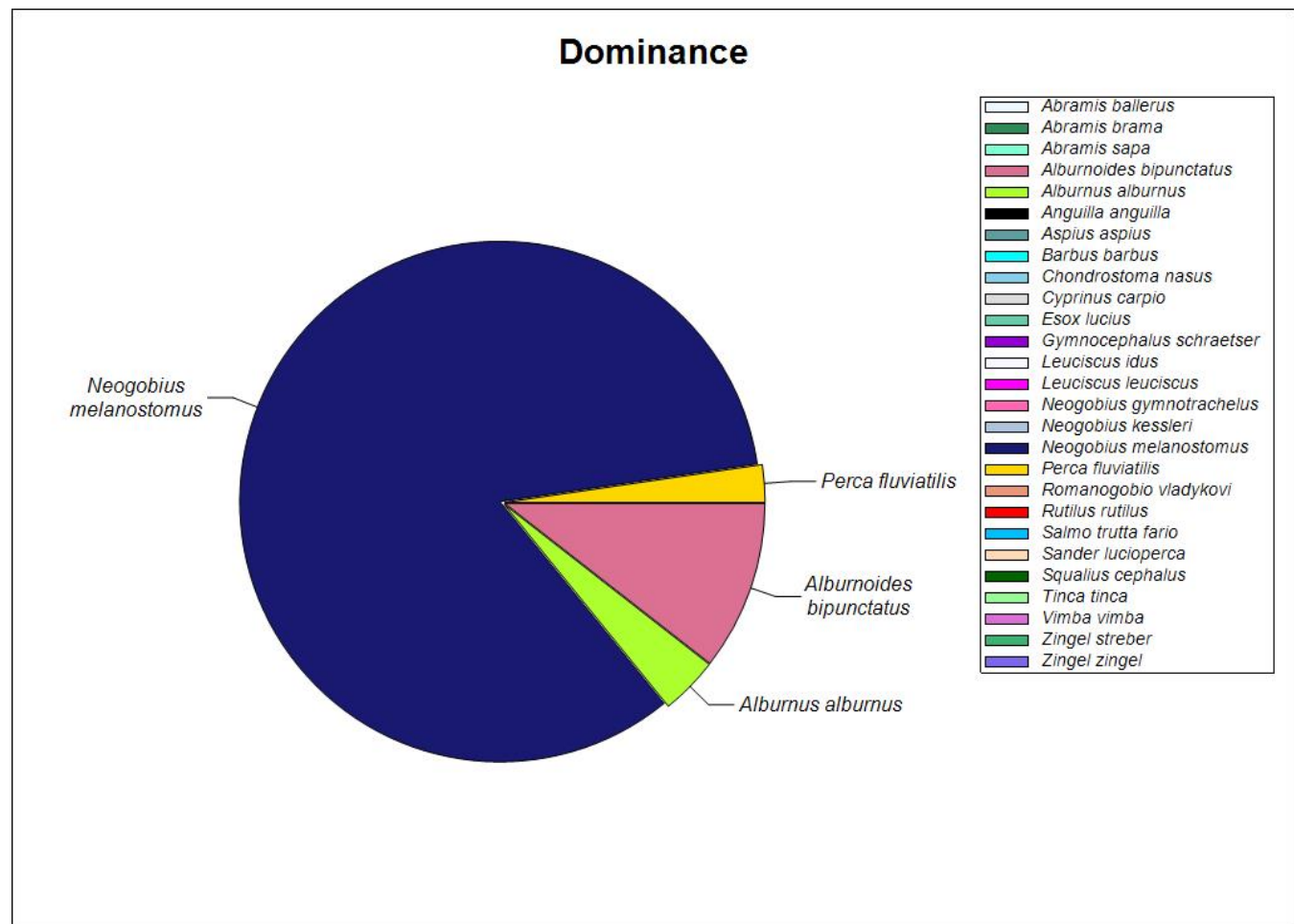
- II Species listed in Annex II of the FFH- Directive (nature reserves have to be set out for this species)
- IV Species listed in Annex IV of the FFH- Directive (strict protection of animals and plants)
- V Species listed in Annex V of the FFH- Directive (species whose collection and use is subject 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

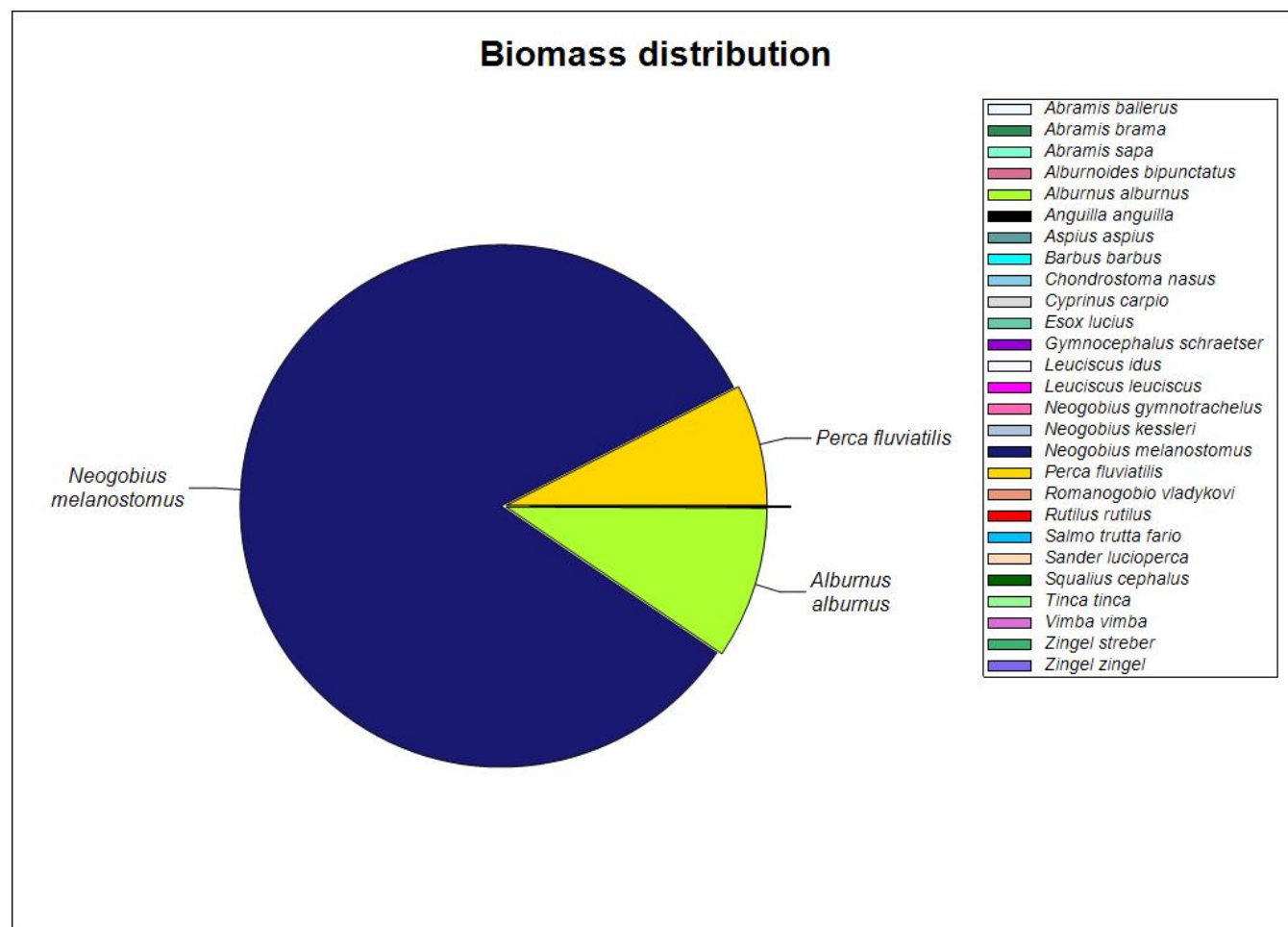
Abundance and biomass

Table 5: abundance and biomass (e-fishings) Danube, Ybbs, AT_JDS09, 8/17/2013

English name	Species Code	Count	Abu [Ind/ha]	95% Konfid.	Biom [kg/ha]	95% Konfid.	Weight [g] median all over	Mean Weight [g] total	Population structure	Reference fish assemblage
Asp	ASP-ASP	1	0.0		0.0	0.0	23.5	0.0	4	b
Barbel	BAR-BAR	1	0.0		0.0	0.0	4.0	0.0	4	I
Bighead goby	NEO-KES	17	0.0		0.0	0.0	12.9	0.0	3	
Bleak	ALB-ALB	191	28.7		1.0		13.4	35.3	3	I
Blue bream	ABR-BAL	1	0.0		0.0	0.0	17.0	0.0	4	s
Bream	ABR-BRA	13	0.0		0.0	0.0	32.5	0.0	3	I
Brown trout	SAL-TFF	1	0.0		0.0	0.0	25.0	0.0	4	s

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
Carp	CYP-CAR	1	0.0		0.0	0.0	86.0	0.0	4	s
Chub	SQU-CEP	17	0.0		0.0	0.0	15.6	0.0	3	b
Dace	LEU-LEU	2	0.0		0.0	0.0	12.3	0.0	4	l
Danube bream	ABR-SAP	3	0.0		0.0	0.0	20.3	0.0	4	b
Eel	ANG-ANG	1	0.0		0.0	0.0	55.0	0.0	4	
Ides	LEU-IDU	11	0.0		0.0	0.0	27.9	0.0	3	l
Nase	CHO-NAS	1	0.0		0.0	0.0	4.0	0.0	4	l
Perch	PER-FLU	48	18.5		0.8		13.0	43.6	1	b
Pike	ESO-LUC	2	0.0		0.0	0.0	67.3	0.0	3	b
Pikeperch	SAN-LUC	3	0.0		0.0	0.0	29.0	0.0	3	b
Racer goby	NEO-GYM	3	0.0		0.0	0.0	4.8	0.0	4	
Roach	RUT-RUT	64	0.0		0.0	0.0	18.4	0.0	3	b
Round goby	NEO-MEL	1,139	668.2		8.9		9.5	13.4	1	
Schraetser	GYM-SCH	21	0.0		0.0	0.0	16.5	0.0	3	b
Spirlin	ALB-BIP	22	84.3		0.0		2.1	0.1	4	s
Streber	ZIN-STR	5	0.0		0.0	0.0	19.3	0.0	3	b
Tench	TIN-TIN	1	0.0		0.0	0.0	8.5	0.0	4	s
Vimba bream	VIM-VIM	1	0.0		0.0	0.0	29.5	0.0	4	b
White-finned gudgeon	ROM-VLA	2	0.0		0.0	0.0	4.8	0.0	4	b
Zingel	ZIN-ZIN	17	0.0		0.0	0.0	23.7	0.0	3	b
23 species of 55		Total	1,589	799.7		10.8				





Pic. 4: Dominance und Biomass distribution

Shannon-Index: 1.185

Equitability: 0.359

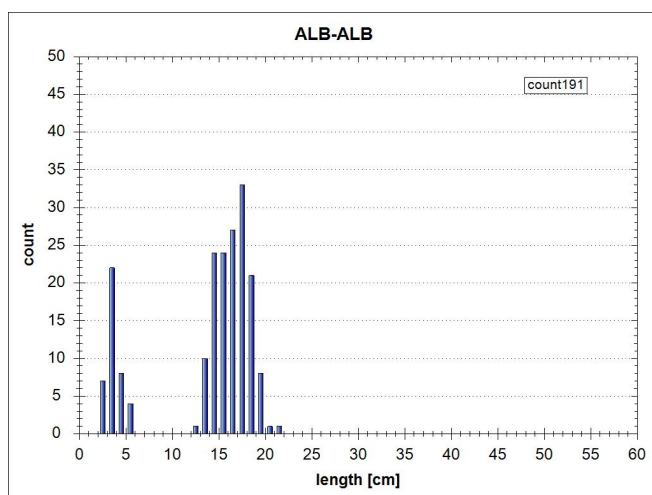
Biometrics and catch rate

Table 6: biometrics of each species and catch specific parameters

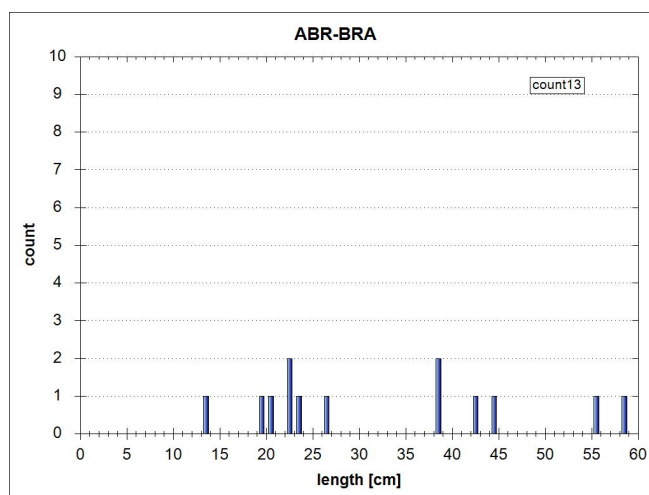
Fish species	Lt [cm]			n	Statist. Method	Catch- Probability [%]	Catch-effectivity		
	Min	Max					Min	MW	Max
Asp	23.5	23.5	23.5	1			1.00	1.00	1.00
Barbel	4.0	4.0	4.0	1			0.10	0.10	0.10
Bighead goby	11.0	12.9	15.0	17			0.10	0.48	0.80
Bleak	2.0	13.4	21.0	191			0.01	0.51	1.00
Blue bream	17.0	17.0	17.0	1			1.00	1.00	1.00
Bream	13.5	32.5	58.0	13			0.70	0.77	1.00
Brown trout	25.0	25.0	25.0	1			1.00	1.00	1.00
Carp	86.0	86.0	86.0	1			1.00	1.00	1.00
Chub	3.0	15.6	38.0	17			0.03	0.61	1.00
Dace	5.5	12.3	19.0	2			0.20	0.35	0.50
Danube bream	18.0	20.3	22.5	3			0.70	0.70	0.70
Eel	55.0	55.0	55.0	1			1.00	1.00	1.00
Ide	21.0	27.9	49.5	11			0.50	0.95	1.00
Nase	4.0	4.0	4.0	1			0.10	0.10	0.10
Perch	6.0	13.0	25.0	48			0.10	0.69	1.00
Pike	51.5	67.3	83.0	2			1.00	1.00	1.00

Fish species	Lt [cm]		n	Statist.	Catch-	Catch-effectivity		
	Min	Max		Method	Probability [%]	Min	MW	Max
Pikeperch	25.5	29.0	31.0	3		1.00	1.00	1.00
Racer goby	2.4	4.8	6.6	3		0.70	0.70	0.70
Roach	7.0	18.4	29.0	64		0.50	0.76	1.00
Round goby	1.9	9.5	17.5	1,139		0.10	0.37	1.00
Schraetser	13.2	16.5	18.5	21		0.70	0.71	0.80
Spirlin	1.5	2.1	3.0	22		0.50	0.50	0.50
Streber	17.2	19.3	23.5	5		0.70	0.70	0.70
Tench	8.5	8.5	8.5	1		0.50	0.50	0.50
Vimba bream	29.5	29.5	29.5	1		0.70	0.70	0.70
White-finned gudgeon	4.5	4.8	5.0	2		0.70	0.70	0.70
Zingel	17.0	23.7	30.0	17		0.70	0.70	0.70
27 species		Sum	1,589					

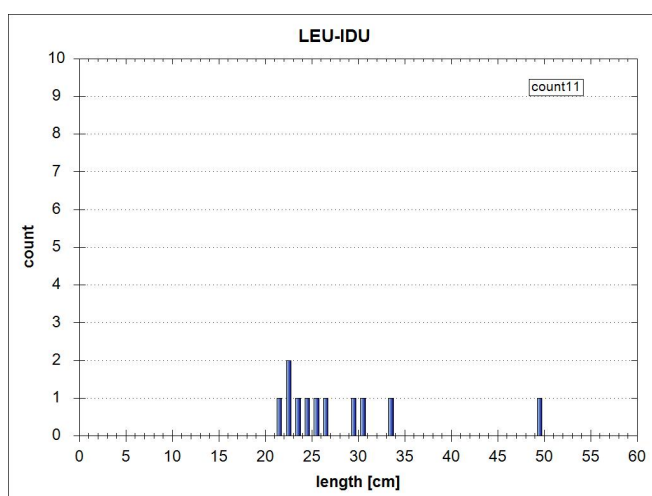
Population structure of dominant species and subdominant species (total catch)



Bleak (*Alburnus alburnus*), 3

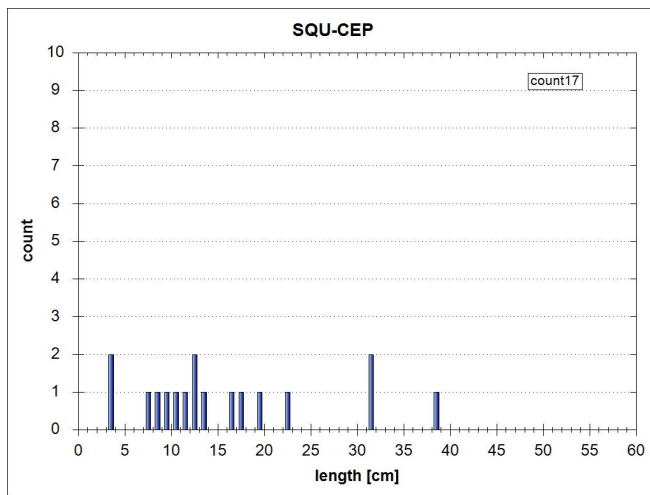
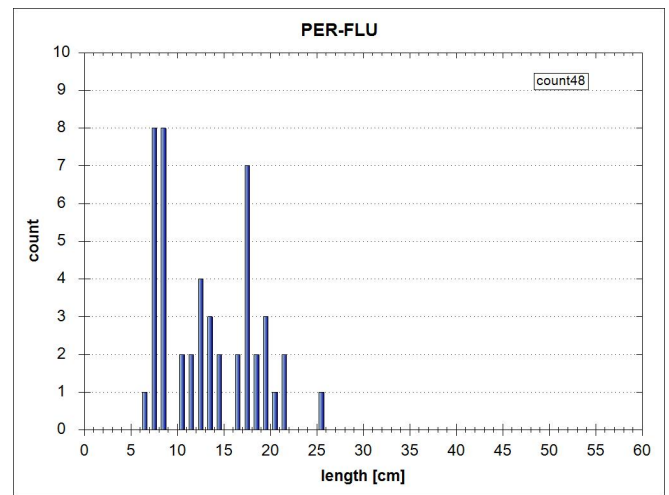
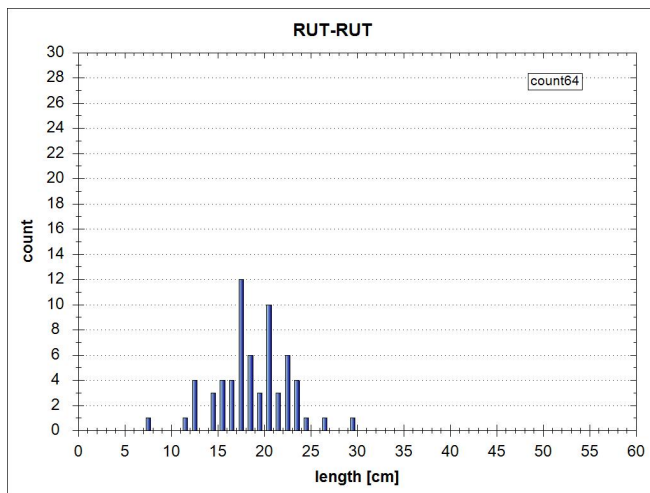
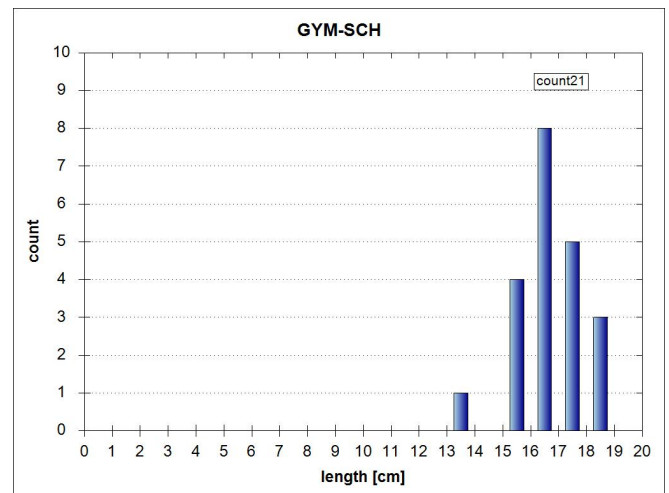
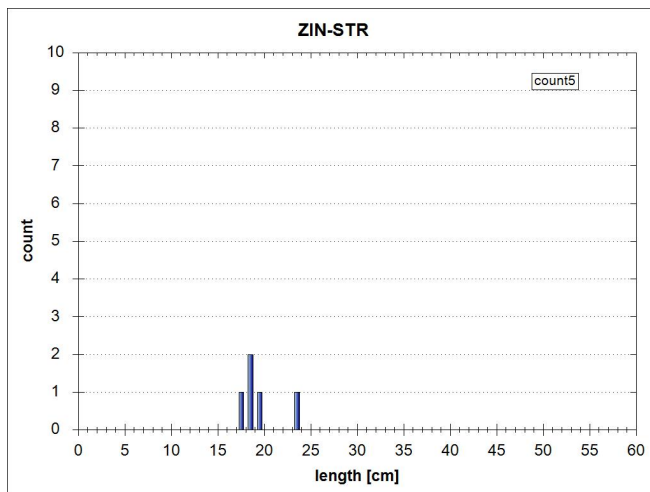
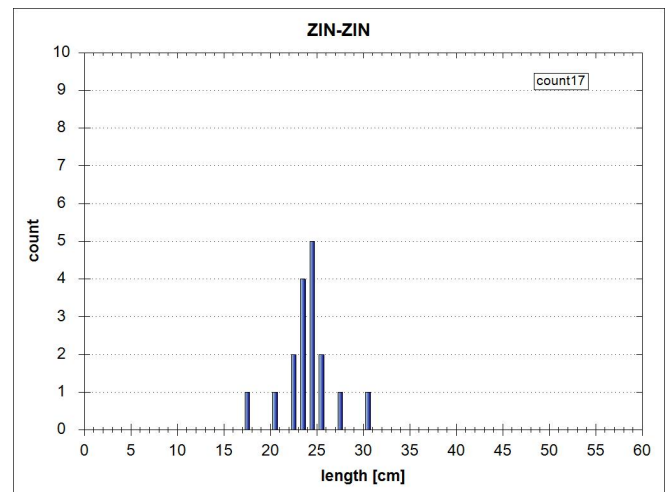


Bream (*Abramis brama*), 3

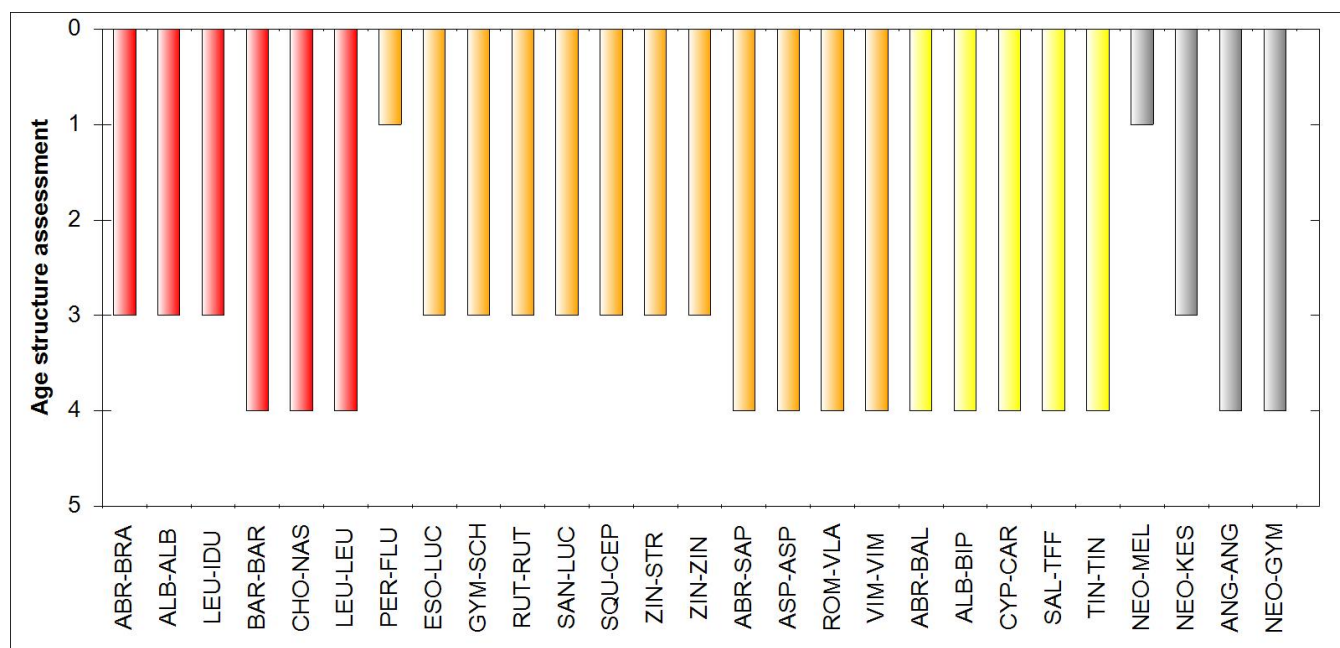


Ide (*Leuciscus idus*), 3

Pic. 5: Length-frequency diagram of dominant species (n>3), Aug. 2013

Chub (*Squalius cephalus*), 3Perch (*Perca fluviatilis*), 1Roach (*Rutilus rutilus*), 3Schraetser (*Gymnocephalus schraetser*), 3Streber (*Zingel streber*), 3Zingel (*Zingel zingel*), 3

Pic. 6: Length-frequency diagram of subdominant species (n>3), Aug. 2013



Pic. 7: Age structure of present species

Comment on population structure of dominant and subdominant species

- no comment -

Fish ecological assessment (FIA, FISH INDEX AUSTRIA)

Table 7: fish ecologic assessment, Danube, Ybbs, AT_JDS09, 8/17/2013

Rating					
Stock data	Abundance Ind/ha	Biomass kg/ha			ko-criterion biomass
	131.6	1.8		ko-crit	5
1. Species	Reference fish assemblage	actual (current)	Ratio/Deviation	Partial rating	
Species					
Dominant species	7	6	86%	3.0	
Subdominant species	15	12	80%	1.0	
Rare species	33	5	15%	3.0	
				2.3	
Ecological guilds					
Flow	6	5	1	2.0	
Reproduction	7	3	4	4.0	
				3.0	
Species diversity & guilds overall					2.6
2. Dominance	Reference fish assemblage	actual (current)	Difference		
Fish region index	6.2	6.6	0.4		2.0
3. Population structure	Reference fish assemblage	actual (current)		Partial rating (1-5)	
Dominant species	7	6		3.7	
Subdominant species	15	12		3.5	
					3.7
Fishindex Austria without active ko-criterion					3.01
Biological quality element fish		FIA 5.00	Class 5	Bad	

Date of Assessment:3/19/2014

Comment BAW-IGF

- no comment -

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

Recommended improvements with priority ranking if possible;