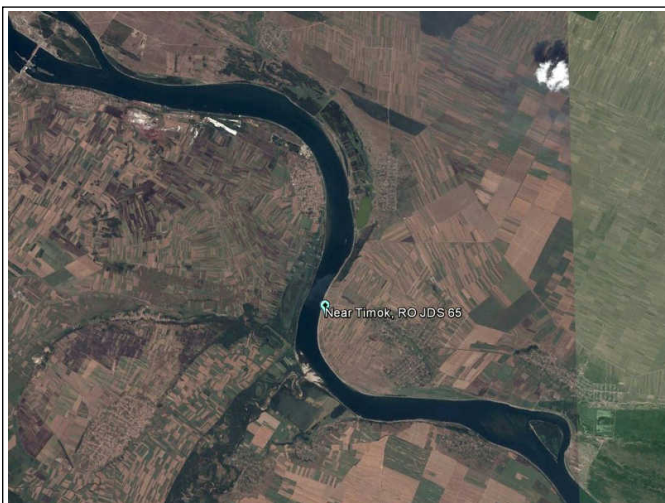


**Danube****Near Timok, RO JDS 65 (RO JDS 65 ), 11.September 2013**

FDA\_ID 206



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



Pic. 2: Monitoring site Near Timok, RO JDS 65

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

Biological quality element fish	None
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**Ecological status class, current survey, 11.September 2013**

Biological quality element fish	FIA 4.00	Class 4	Poor
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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 siteNear Timok, RO JDS 65

Watercourse name	<b>Danube</b>	Federal state	<b>not available</b>
Monitoring site	<b>Near Timok, RO JDS 65</b>	District	
Monitoring site number	<b>RO JDS 65</b>	Community	
Turnus number		Longitude (WGS 84, decimal) O	<b>22.678861</b>
sampling number		Latitude (WGS 84, decimal) N	<b>44.232111</b>
Survey-ID (FDA)	<b>206</b>	Route-ID	
Date	<b>9/11/2013</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>Western Pomtic Danube (943-375,5) (8)</b>	Huet-zonation	<b>bream zone</b>
Biocenotic Region	<b>Metapotamon</b>	Adapt. Reference	<b>121</b>
River km from	<b>850.0</b>	Altitude [m.a.s]	<b>32</b>
River km to	<b>840.0</b>	Ø catchment basin [km²]	<b>577,100</b>
Section length [m]	<b>10,000</b>	Catchment-class	<b>more than 10.000km²</b>
Ø channel width [m]	<b>700</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>2,000.0</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>700</b>	Flow condition	<b>MQ - mean water up to riparian vegetation</b>
pH-value		Visible depth	<b>2</b>
SBV		Fishing conditions	<b>good</b>
Water temperature [°C] (F117)	<b>22.6</b>	Average annual air temperature [°C]	
Conductance, 25°C [µS/cm] (F118)	<b>365</b>		
Methods used and effort			
<b>Strip-fishing, day</b>		Number of runs	<b>1</b>
Fished length [m]	<b>5,015</b>	E-devices output [kW]	<b>11</b>
Fished area [m²]	<b>12,345</b>	Output voltage	<b>600</b>
		Number of anodes	
		Number of strips/sections	<b>15</b>
and additional methods	<b>Fished area [m²]</b>	additional methods	<b>Effort [UE]</b>
E-Fishing by night	<b>5,810</b>		
beach seining	<b>3,000</b>		

## Comments on survey:

- *no data* -

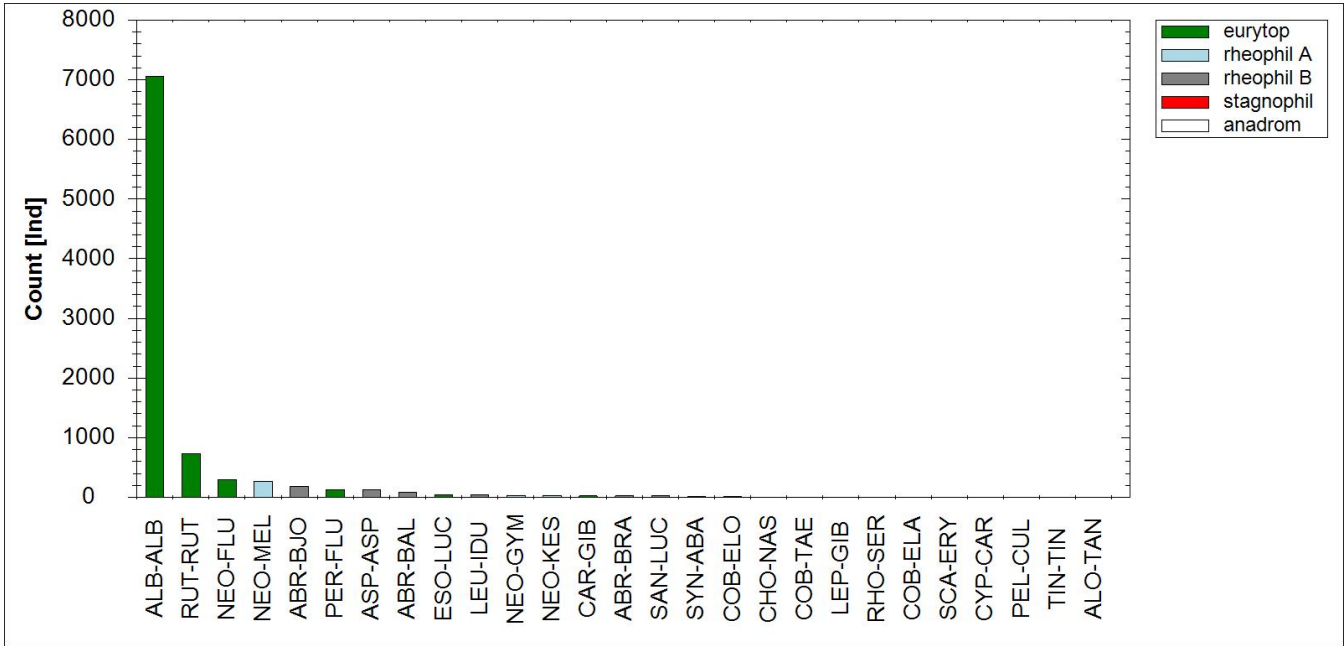
Table 2: Sampling effort at the monitoring site Near Timok, RO JDS 65, September 2013

Habitat	Str. no	DG	Length [m]	Width [m]	UE	Method
rock	16	1	50	30		beach seining
rock	17	1	50	30		beach seining
riffle	18	1	500	2		E-fishing day boat
riffle	19	1	500	2		E-fishing day boat
riffle	20	1	700	2		E-fishing day boat
riffle	21	1	500	2		E-fishing day boat
riffle	22	1	500	2		E-fishing day boat
riffle	23	1	500	2		E-fishing night
riffle	24	1	500	2		E-fishing night
other natural bank	1	1	250	3		E-fishing day boat
other natural bank	2	1	200	3		E-fishing day boat
other natural bank	3	1	250	3		E-fishing day boat
other natural bank	4	1	170	3		E-fishing day boat
other natural bank	5	1	250	3		E-fishing day boat
other natural bank	6	1	260	3		E-fishing day boat
other natural bank	7	1	245	3		E-fishing day boat
other natural bank	8	1	200	3		E-fishing day boat
other natural bank	9	1	250	3		E-fishing day boat
other natural bank	10	1	240	3		E-fishing day boat
other natural bank	11	1	250	3		E-fishing night
other natural bank	12	1	260	3		E-fishing night
other natural bank	13	1	250	3		E-fishing night
other natural bank	14	1	240	3		E-fishing night
other natural bank	15	1	270	3		E-fishing night

Table 3: Habitat weighting used at the monitoring site Near Timok, RO JDS 65

Habitat	%
other natural bank	100
riffle	0
rock	0

Catch result, fish assemblage and threatening status



Pic. 3: Species ranking diagramm of catch resultsDanube, Near Timok, RO JDS 65

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	-			18
Petromyzontidae	Ukrainian lamprey	<i>Eudontomyzon mariae</i>	s	II	VU	DD	
Cyprinidae	Asp	<i>Aspius aspius</i>	b	II	EN	DD	126
	Barbel	<i>Barbus barbus</i>	b	V	NT	LC	
	Bitterling	<i>Rhodeus amarus</i>	b	II	VU	LC	5
	Bleak	<i>Alburnus alburnus</i>	I	-	LC	LC	7,053
	Blue bream	<i>Abramis ballerus</i>	b	-	EN		89
	Bream	<i>Abramis brama</i>	I	-	LC		22
	Carp	<i>Cyprinus carpio</i>	b	-	EN	DD	2
	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	47
	Kessler's gudgeon	<i>Romanogobio kesslerii</i>	s	II	EN	DD	
	Nase	<i>Chondrostoma nasus</i>	s	-	NT	LC	6
	Prussian carp	<i>Carassius gibelio</i>	b	-	LC		23
	Roach	<i>Rutilus rutilus</i>	I	-	LC	LC	734
	Rudd	<i>Scardinius erythrophthalmus</i>	s	-	LC	LC	3
	Sabre carp	<i>Pelecus cultratus</i>	b	II; V	NT	DD	2
	Sunbleak	<i>Leucaspis delineatus</i>	s	-	EN	LC	
	Tench	<i>Tinca tinca</i>	s	-	VU	LC	2
	Vimba bream	<i>Vimba vimba</i>	b	-	VU	LC	
	White bream	<i>Blicca bjoerkna</i>	I	-	LC	LC	183
	White-finned gudgeon	<i>Romanogobio vladykovi</i>	I	II	LC	DD	
Esocidae	Pike	<i>Esox lucius</i>	b	-	NT		48
Gadidae	Burbot	<i>Lota lota</i>	s	-	VU		
Percidae	Danube ruffe	<i>Gymnocephalus baloni</i>	s	II; IV	VU	DD	
	Perch	<i>Perca fluviatilis</i>	b	-	LC	LC	130
	Pikeperch	<i>Sander lucioperca</i>	b	-	NT	LC	21
	Ruffe	<i>Gymnocephalus cernuus</i>	s	-	LC	LC	
	Schraetser	<i>Gymnocephalus schraetser</i>	b	II; V	VU	VU	
	Streber	<i>Zingel streber</i>	s	II	EN	VU	
	Volga pikeperch	<i>Sander volgensis</i>	s	-	EN	DD	
	Zingel	<i>Zingel zingel</i>	b	II; V	VU	VU	
Siluridae	Wels catfish	<i>Silurus glanis</i>	b	-	VU	LC	
Gobiidae	Bighead goby	<i>Neogobius kessleri</i>	s	-	NE	DD	28
	Monkey goby	<i>Neogobius fluviatilis</i>	I	-	NE	DD	295
	Racer goby	<i>Neogobius gymnotrachelus</i>	s	-	NE	DD	29
	Round goby	<i>Neogobius melanostomus</i>	s	-	NE	DD	265
	Tubenose goby	<i>Proterorhinus semilunaris</i>	b	-	EN	LC	
Cobitidae	Balkan loach	<i>Sabanejewia balcanica</i>	s	II	EN	DD	
	Bulgarian golden loach	<i>Sabanejewia bulgarica</i>	s				

Family	English name	Scient. name of species	Reference fish assemblage	FFH	Red List	IUCN	Count
	Danubian spined loach	<i>Cobitis elongatoides</i>	b	-			11
	Weatherfish	<i>Misgurnus fossilis</i>	s	II	CR	NT	
Balitoridae	Danube bream	<i>Abramis sapo</i>	I	-	EN		
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				1
	European mud-minnow	<i>Umbra krameri</i>	s	II	CR	VU	
	Pontic shad	<i>Alosa immaculata</i>	s	-			
Cobitidae	Balkan spined loach	<i>Cobitis elongata</i>		II			3
	Spined loach	<i>Cobitis taenia</i>		II	VU	LC	5
Centrarchidae	Pumpkinseed	<i>Lepomis gibbosus</i>		-	NE		5

Observed:: reference fish assemblage 24Taxa :: 56Taxa

Taxa complete 27

Count species of reference fish assemblage 9,143

Total count 9,156

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)

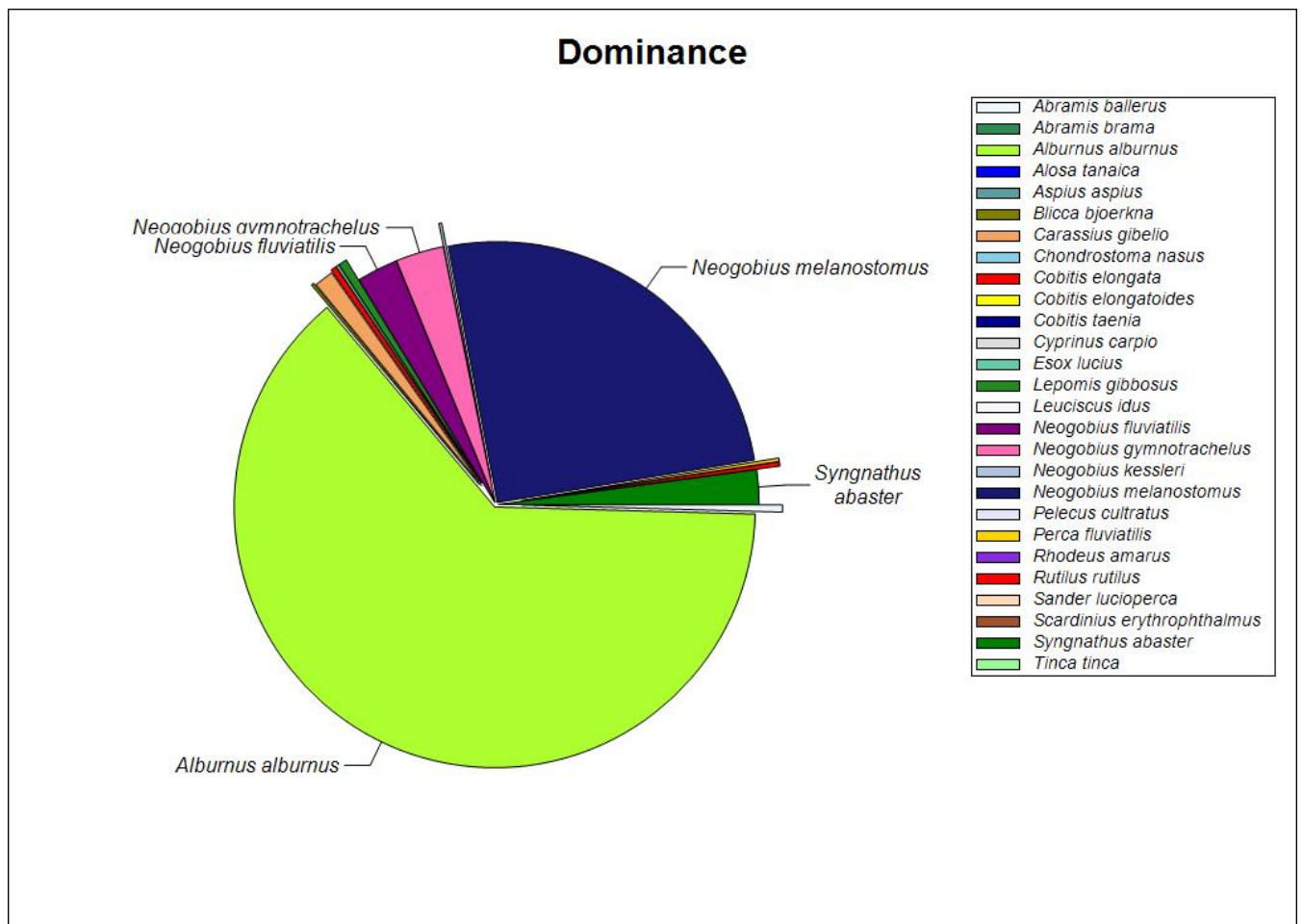
- II Species listed in Annex II of the FFH- Directive (nature reserves have to be set out for this species)
- IV Species listed in Annex IV of the FFH- Directive (strict protection of animals and plants)
- V Species listed in Annex V of the FFH- Directive (species whose collection and use is subject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

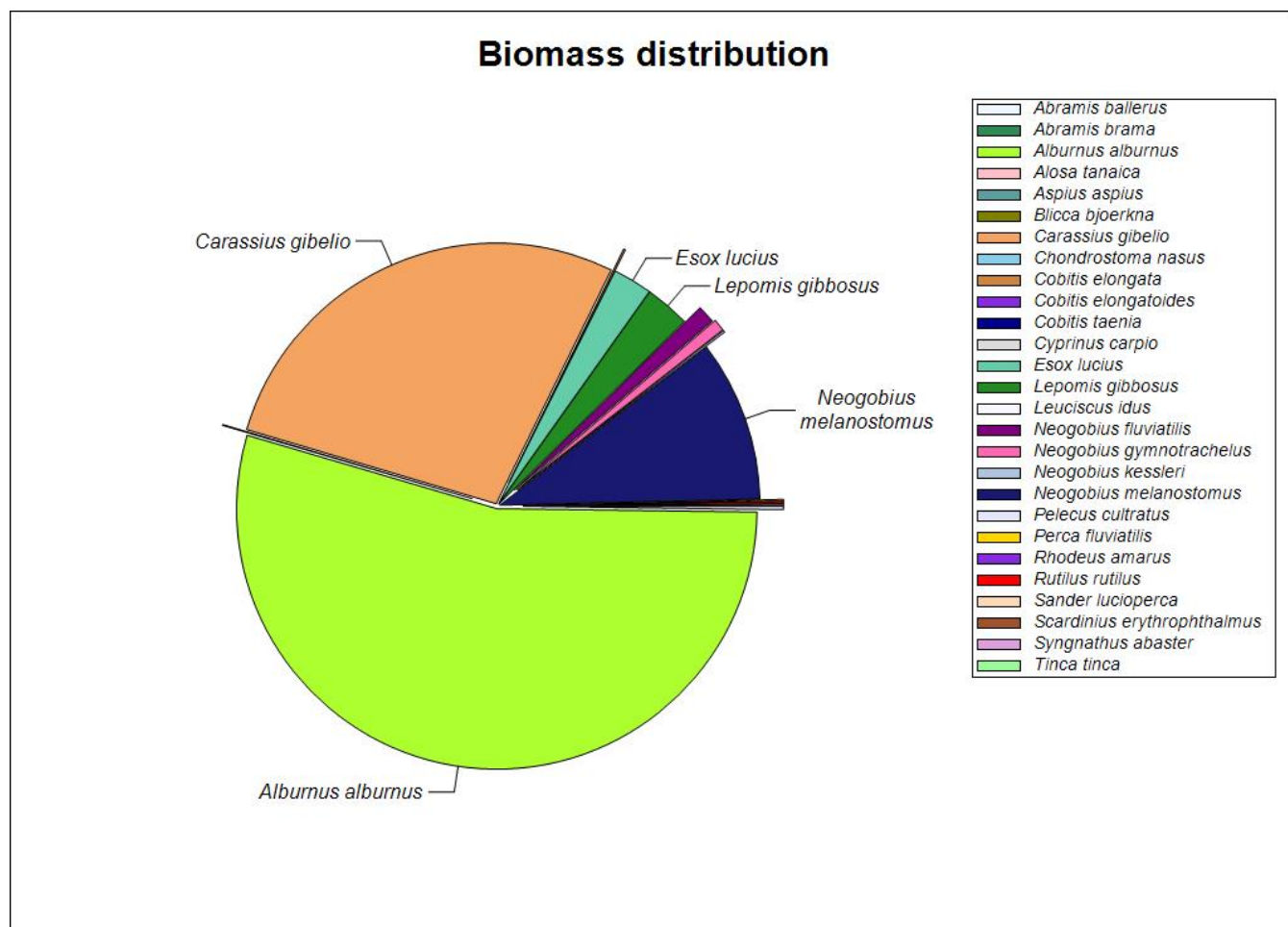
Table 5: abundance and biomass (e-fishings) Danube, Near Timok, RO JDS 65, 9/11/2013

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	126	0.0		0.0	0.0	19.0	0.0	2	b
Azov shad	ALO-TAN	1	0.0		0.0	0.0	17.0	0.0	4	s
Balkan spined loach	COB-ELA	3	9.6		0.1		9.3	4.8		
Bighead goby	NEO-KES	28	4.8		0.1		7.8	10.9	1	s
Bitterling	RHO-SER	5	0.0		0.0	0.0	5.0	0.0	2	b
Black-striped pipefish	SYN-ABA	18	58.6		0.1		9.2	0.9	2	s
Bleak	ALB-ALB	7,053	1,737.5		22.4		8.2	12.9	1	I

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
Blue bream	ABR-BAL	89	12.0		0.1		7.8	7.1	3	b
Bream	ABR-BRA	22	0.0		0.0	0.0	6.9	0.0	3	l
Carp	CYP-CAR	2	0.0		0.0	0.0	21.3	0.0	4	b
Danubian spined loach	COB-ELO	11	0.0		0.0	0.0	6.6	0.0	3	b
Idu	LEU-IDU	47	0.0		0.0	0.0	16.4	0.0	3	b
Monkey goby	NEO-FLU	295	69.6		0.5		7.0	6.6	1	l
Nase	CHO-NAS	6	0.0		0.0	0.0	17.3	0.0	3	s
Perch	PER-FLU	130	5.8		0.0		7.7	7.3	1	b
Pike	ESO-LUC	48	4.8		1.0		21.3	210.4	3	b
Pikeperch	SAN-LUC	21	0.0		0.0	0.0	19.8	0.0	2	b
Prussian carp	CAR-GIB	23	32.6		11.4		20.7	349.9	2	b
Pumpkinseed	LEP-GIB	5	14.4		1.2		7.8	80.1	3	
Racer goby	NEO-GYM	29	81.6		0.3		6.2	3.8	2	s
Roach	RUT-RUT	734	7.2		0.1		5.0	8.7	1	l
Round goby	NEO-MEL	265	695.9		4.1		6.7	5.9	1	s
Rudd	SCA-ERY	3	0.0		0.0	0.0	10.5	0.0	3	s
Sabre carp	PEL-CUL	2	0.0		0.0	0.0	28.0	0.0	4	b
Spined loach	COB-TAE	5	0.0		0.0	0.0	9.2	0.0	3	
Tench	TIN-TIN	2	0.0		0.0	0.0	14.0	0.0	4	s
White bream	ABR-BJO	183	4.8		0.0		6.4	4.4	3	l
24 species of 56	Total	9,156	2,739.2		41.3					







Pic. 4: Dominance und Biomass distribution

Shannon-Index: 1.042

Equitability: 0.316

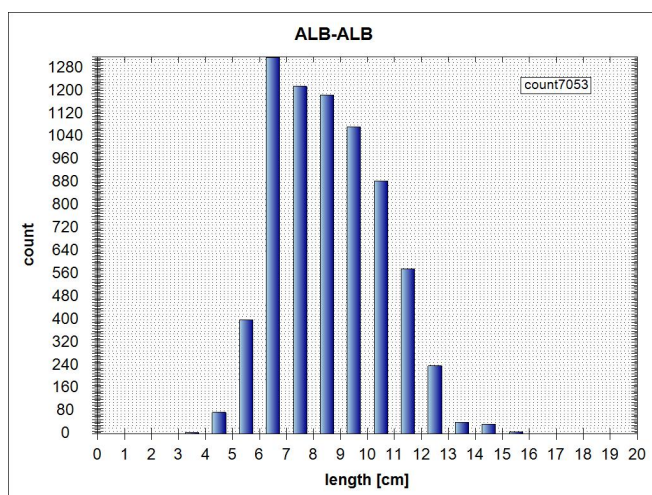
**Biometrics and catch rate**

Table 6: biometrics of each species and catch specific parameters

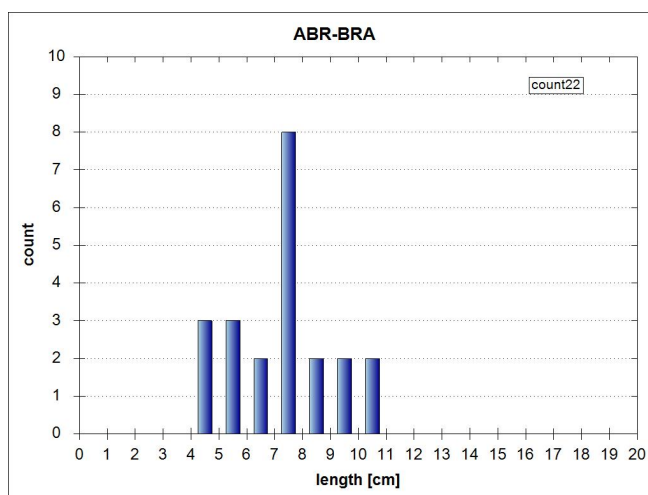
Fish species	Lt [cm]			n	Statist. Method	Catch-Probability [%]	Catch-effectivity		
	Min	Max	Max				Min	MW	Max
Asp	4.0	19.0	57.0	126			0.50	0.50	0.50
Azov shad	17.0	17.0	17.0	1			0.50	0.50	0.50
Balkan spined loach	8.5	9.3	10.0	3			0.10	0.23	0.30
Bighead goby	5.5	7.8	14.5	28			0.10	0.52	0.70
Bitterling	4.0	5.0	6.0	5			0.50	0.50	0.50
Black-striped pipefish	4.5	9.2	14.0	18			0.05	0.49	0.70
Bleak	1.0	8.2	15.0	7,053			0.05	0.48	0.70
Blue bream	4.5	7.8	10.5	89			0.10	0.45	0.70
Bream	4.0	6.9	10.0	22			0.70	0.70	0.70
Carp	18.5	21.3	24.0	2			0.50	0.50	0.50
Danubian spined loach	6.0	6.6	7.2	11			0.70	0.70	0.70
Ide	6.5	16.4	24.0	47			0.50	0.50	0.50
Monkey goby	2.5	7.0	11.5	295			0.10	0.48	0.70
Nase	15.0	17.3	21.0	6			0.50	0.50	0.50
Perch	4.0	7.7	18.0	130			0.10	0.49	0.70
Pike	14.0	21.3	31.0	48			0.30	0.50	0.70

Fish species	Lt [cm]		n	Statist.	Catch-	Catch-effectivity		
	Min	Max		Method	Probability [%]	Min	MW	Max
Pikeperch	6.0	19.8	50.0	21		0.10	0.42	0.50
Prussian carp	5.0	20.7	35.0	23		0.10	0.58	1.00
Pumkinseed	2.0	7.8	15.0	5		0.20	0.38	0.50
Racer goby	4.0	6.2	9.0	29		0.05	0.49	0.70
Roach	3.5	5.0	18.0	734		0.10	0.49	0.70
Round goby	4.0	6.7	10.5	265		0.05	0.35	0.70
Rudd	9.5	10.5	11.0	3		0.50	0.50	0.50
Sabre carp	28.0	28.0	28.0	2		0.50	0.50	0.50
Spined loach	9.0	9.2	9.5	5		0.50	0.50	0.50
Tench	14.0	14.0	14.0	2		0.50	0.50	0.50
White bream	3.5	6.4	16.0	183		0.10	0.49	0.50
27 species		Sum	9,156					

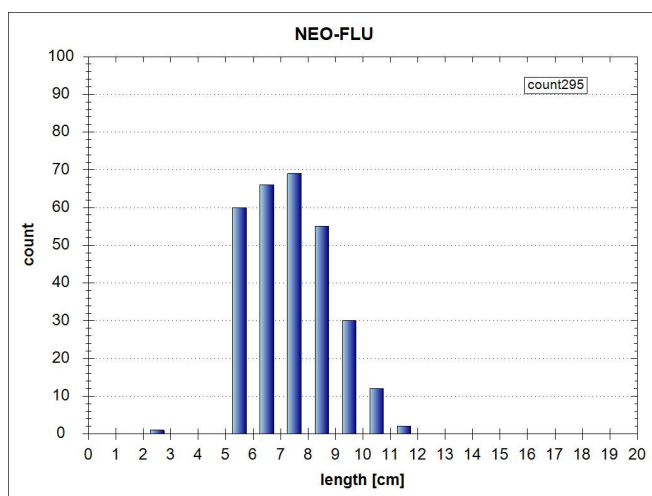
### Population structure of dominant species and subdominant species (total catch)



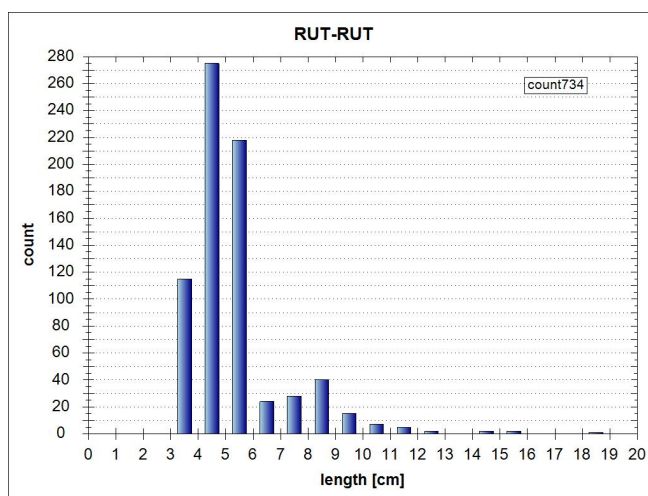
Bleak (*Alburnus alburnus*), 1



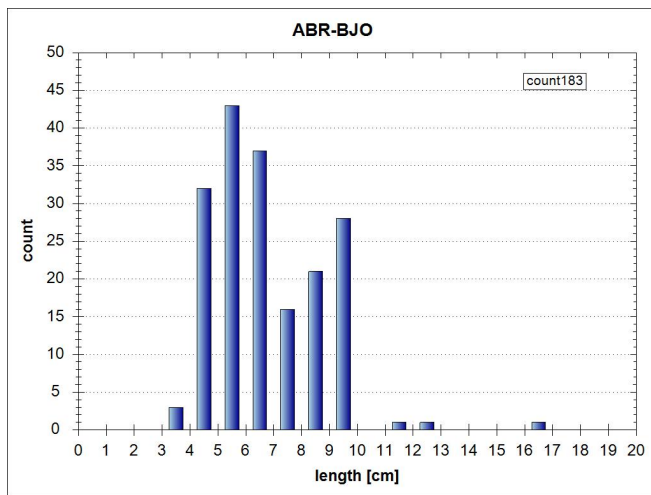
Bream (*Abramis brama*), 3



Monkey goby (*Neogobius fluviatilis*), 1

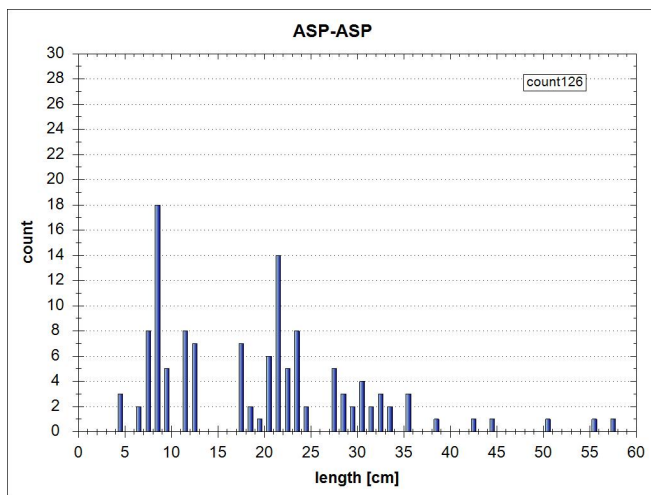


Roach (*Rutilus rutilus*), 1

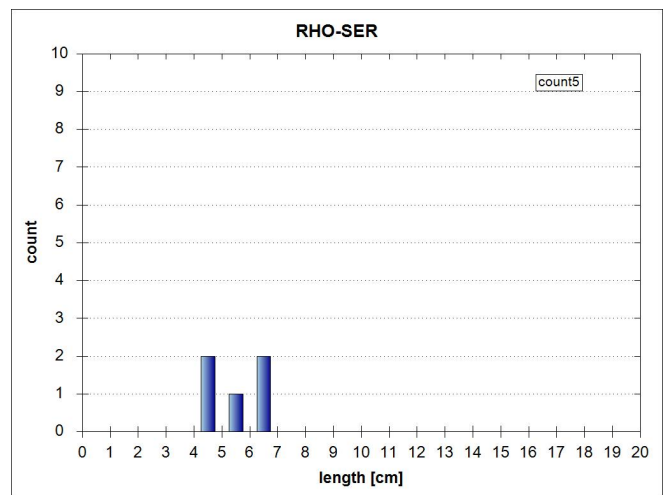


White bream (*Blicca bjoerkna*), 3

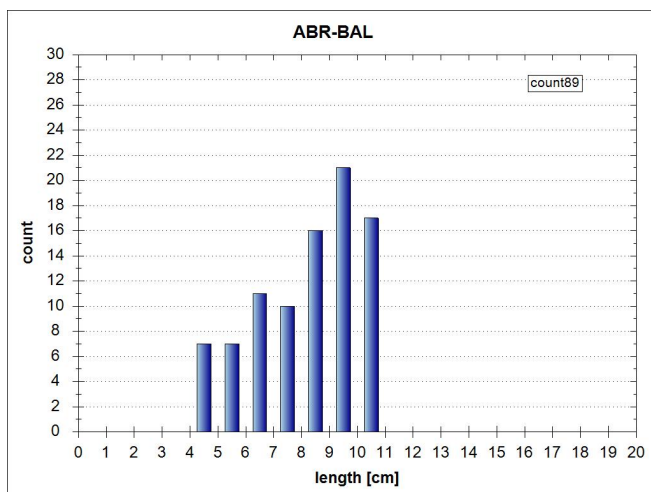
Pic. 5: Length-frequency diagram of dominant species (n>3), Sep. 2013



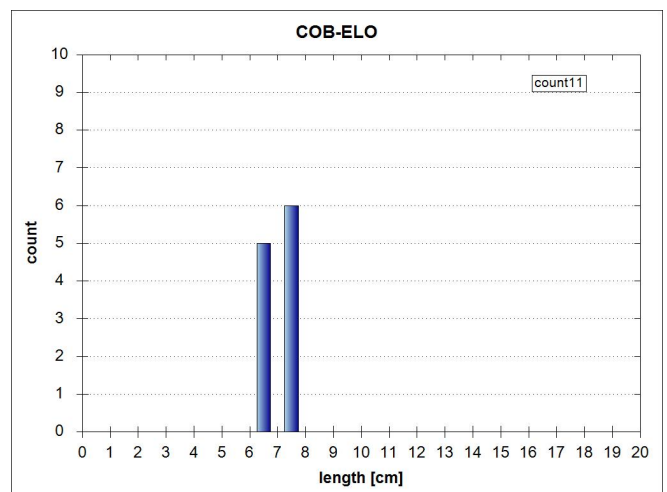
Asp (*Aspius aspius*), 2



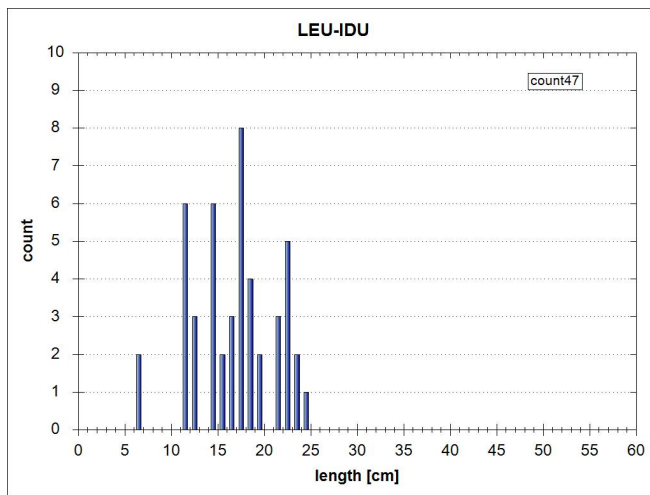
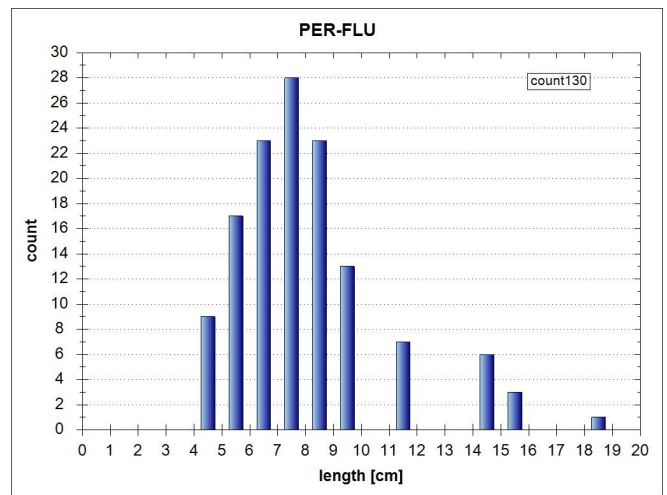
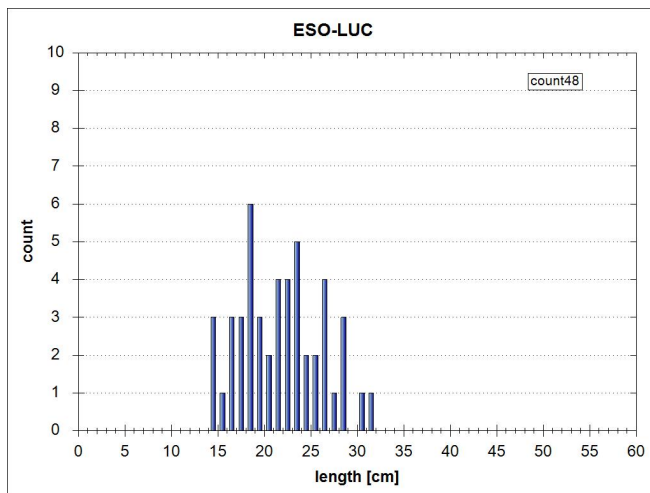
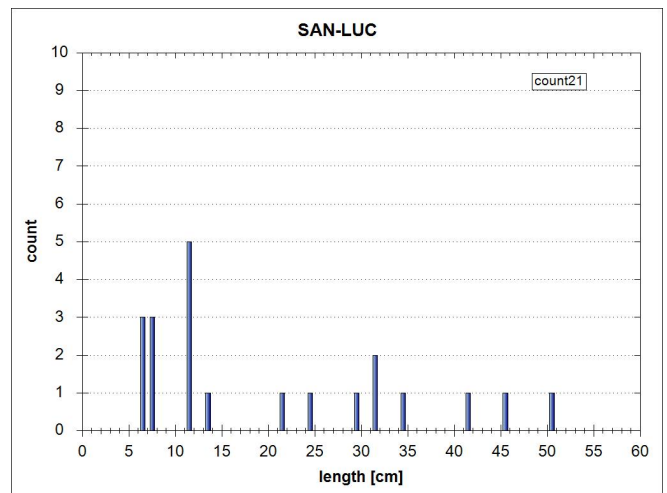
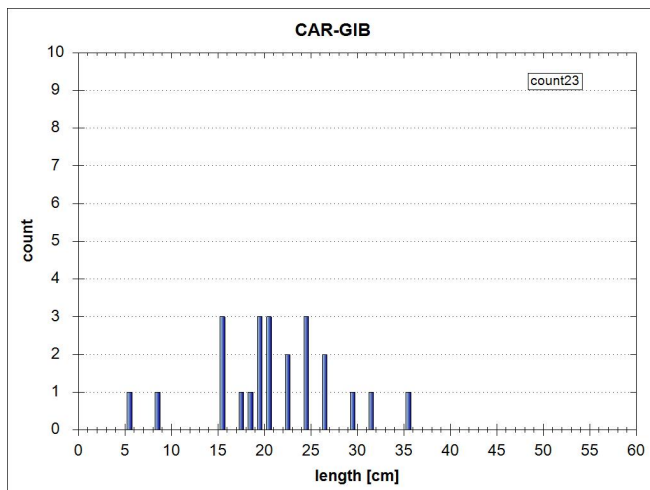
Bitterling (*Rhodeus amarus*), 2



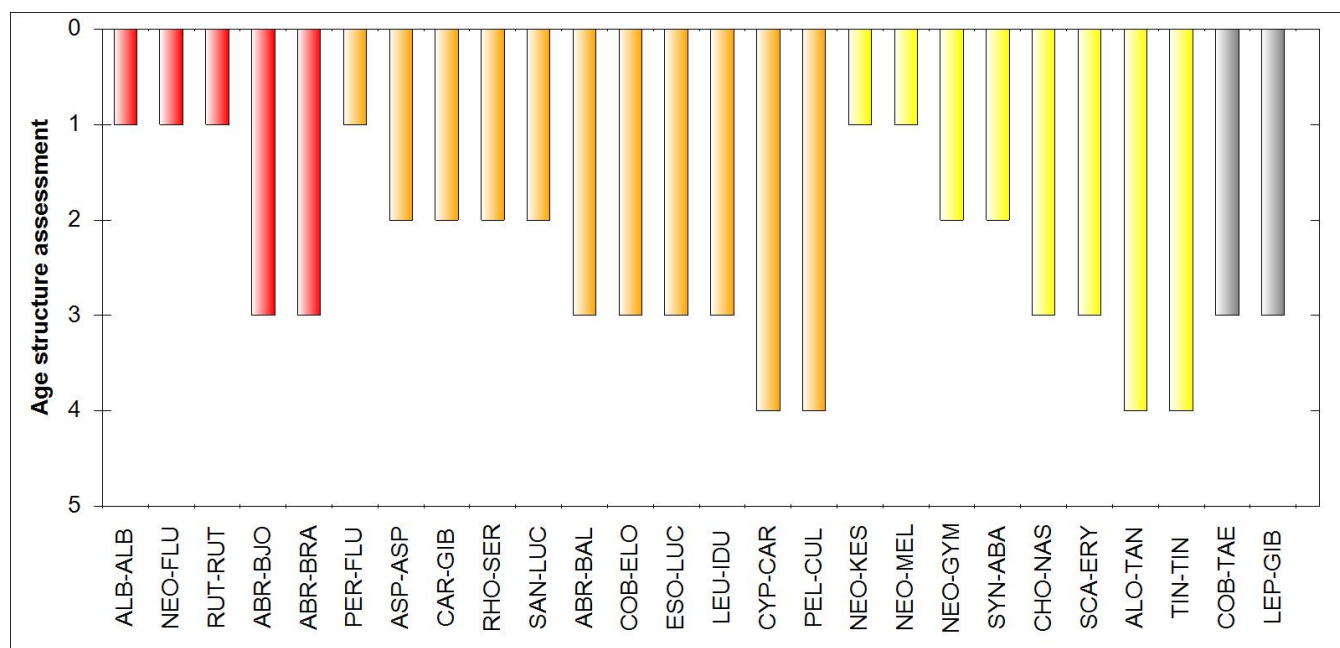
Blue bream (*Abramis ballerus*), 3



Danubian spined loach (*Cobitis elongatoides*), 3

Ide (*Leuciscus idus*), 3Perch (*Perca fluviatilis*), 1Pike (*Esox lucius*), 3Pikeperch (*Sander lucioperca*), 2Prussian carp (*Carassius gibelio*), 2

Pic. 6: Length-frequency diagram of subdominant species (n&gt;3), Sep. 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, Near Timok, RO JDS 65, 9/11/2013

Rating					
Stock data	Abundance Ind/ha	Biomass kg/ha			ko-criterion biomass
	2,715.1	40.1		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	8	6	75%	3.0	
Subdominant species	16	10	63%	2.0	
Rare species	32	8	25%	2.0	
				2.3	
<b>Ecological guilds</b>					
Flow	6	4	2	3.0	
Reproduction	7	5	2	3.0	
				3.0	
<b>Species diversity &amp; guilds overall</b>					<b>2.7</b>
<b>2. Dominance</b>	<b>Reference fish assemblage</b>	<b>actual (current)</b>	<b>Difference</b>		
<b>Fish region index</b>	6.5		0.0		<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	8	6		2.6	
Subdominant species	16	10		3.6	
					<b>2.9</b>
Fishindex Austria without active ko-criterion					<b>2.52</b>
<b>Biological quality element fish</b>		<b>FIA 4.00</b>	<b>Class 4</b>	<b>Poor</b>	

Date of Assessment:3/4/2014

Comment BAW-IGF

- no comment -

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

*Recommended improvements with priority ranking if possible;*