Agenda item 5.1
For information

Council

CNL(19)28

Annual Progress Report
on Actions Taken Under the Implementation Plan for the Calendar Year 2018

EU – Germany

CNL(19)28

Annual Progress Report on Actions taken under the Implementation Plan for the Calendar Year 2018

The primary purposes of the Annual Progress Reports are to provide details of:

- any changes to the management regime for salmon and consequent changes to the Implementation Plan;
- actions that have been taken under the Implementation Plan in the previous year;
- significant changes to the status of stocks, and a report on catches; and
- actions taken in accordance with the provisions of the Convention

These reports will be reviewed by the Council. Please complete this form and return it to the Secretariat **no later than 28 March 2019**.

Party:	**European Union**
Jurisdiction/Region:	**Germany**

1: Changes to the Implementation Plan

1.1 Describe any proposed revisions to the Implementation Plan
(*Where changes are proposed, the revised Implementation Plans should be submitted to the Secretariat by 1 December).*

No changes

1.2 Describe any major new initiatives or achievements for salmon conservation and management that you wish to highlight.

Rhine

Due to new developments and findings the "Master Plan Migratory Fish Rhine" of 2009 (ICPR report no. 179) has been updated. Complementary measures such as the evaluation and control of fishways, of measures against illegal fishery, and of stocking strategies as well as increasing reference to other fish species than salmon and sea trout have been added. Also, the 200 ha of juvenile salmon habitats identified in the Swiss Aare catchment and the High Rhine tributaries downstream the mouth of R. Aare extending the known salmon and juvenile fish habitat in the Rhine catchment to 1200 ha have been taken into account. A new chapter on the state of knowledge and protection techniques for downstream fish migration has equally been added.
A chapter on the balance presents the implementation of the most important measures and recommendations so far listed in the Master Plan 2009.
The overarching objective of the Master Plan Migratory Fish is still to achieve self-sustaining and stable populations of migratory fish in the Rhine catchment.

Further information on future challenges for migratory fish in the Rhine are available in the concerned ICPR report no. 247 and the corresponding fact sheet.

2: Stock status and catches.

2.1 Provide a description of any new factors which may significantly affect the abundance of salmon stocks and, if there has been any significant change in stock status since the development of the Implementation Plan, provide a brief (200 word max) summary of these changes.

Rhine

The registered numbers of returning adult salmon was very low compared to the previous years. In total 223 (preliminary results) salmon were registered in the Rhine catchment in 2018 compared with 541 in the previous year. The low number of returning salmon is attributable to the severe low water situation in the Rhine lasting from early summer until autumn 2018, which has probably hindered upstream migration of salmon into the tributaries. The number of registered adult salmon returning from the sea and observations of natural reproduction of salmon in the Rhine tributaries are documented (see graph and statistics attached). In 2018 1.727.742 young salmon have been introduced in suitable tributaries by stocking measures. An important milestone for the ecological restoration of the Rhine is the partial opening of the Haringvliet dam in one of the estuaries of the Rhine near Rotterdam in the Netherlands. Since autumn 2018, the network between the Rhine and the North Sea and therefore the migration route in this area is improved because the sluice gates on the Haringvliet dam will be regularly left open even at high tide. When the fourth fish pass at Gerstheim in the Upper Rhine comes fully in operation in June 2019, a further section of the main stream of the Rhine will be accessible for migratory fish.

Elbe

In 2018, the general conditions for the salmon migration have been extraordinarily unfavourable in the upper Elbe. The drought, which had persisted for months, resulted in extremely low water levels in both the Elbe and its tributaries. High air temperatures also caused water temperatures well above the long-term reference values until mid-November. In a comparison of all years since the first return of adult salmon in 1998, 2018 was the year with the lowest water discharges in the salmon spawning rivers during the salmon run in October and November. As a result, only a few adult salmon have been detected in the upper Elbe tributaries of Saxony. In the lower Elbe, 2018 is considered as an extraordinarily bad salmon year due to the extreme drought, as well. In the tributaries of the middle Elbe, the extreme drought did not have quite as negative consequences for the salmon run as in the upper and lower Elbe. Average numbers of returning salmon were reported in the project rivers in Brandenburg and Saxony-Anhalt

Weser

Also in the Weser and its tributaries, hardly any salmon were recorded in 2018.

2.2 Provide the following information on catches: *(nominal catch equals reported quantity of salmon caught and retained in tonnes 'round fresh weight' (i.e. weight of whole, ungutted, unfrozen fish) or 'round fresh weight equivalent').*

	In-river	Estuarine	Coastal	Total

(a) provisional nominal catch (which may be subject to revision) for 2018 (tonnes)	0,1 t catch by recreational fisheries in Lower Saxony			
(b) confirmed nominal catch of salmon for 2017 (tonnes)	0,15 t catch by recreational fisheries in Lower Saxony			
(c) estimated unreported catch for 2018 (tonnes)				
(d) number and percentage of salmon caught and released in recreational fisheries in 2018.	Fisheries on salmon is prohibited in the entire Rhine catchment. In the other river catchments no catch and release is practiced			

3: Implementation Plan Actions.

3.1 Provide an update on progress against actions relating to the Management of Salmon Fisheries (Section 2.8 of the Implementation Plan).
Note: *The reports under 'Progress on Action to Date' should provide a brief overview with a quantitative measure of progress made. While referring to additional material (e.g. via links to websites) may assist those seeking more detailed information, this will not be evaluated by the Review Group.*

Action F1:	Description of Action (*as submitted in the IP*)	The ICPR has drafted recommendations aimed at improving legal compliance and thus reducing by-catches and illegal catches of salmon by professional and recreational fishing (see "Master Plan Migratory Fish Rhine").
	Expected Outcome (*as submitted in the IP*)	Diminish the pressure due to fishery.
	Progress on Action to Date *(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)*	In 2018 experts within the ICPR exchanged information on the regulations and their enforcement in the Rhine bordering countries related to commercial and recreational fisheries near barrages (including fish passes). In some countries a ban on fishing near barrages applies whereas in others a ban on fisheries in fish passes applies. Dutch professional fishermen may not fish for silver eels and crabs on the sea side within 500 m of the Haringvliet dam. In the freshwater area of the Haringvliet there are no commercial fishing activities up to a distance of 20 km from the dam. The recommendations aimed at improving legal compliance and reducing by-catches and illegal catches are again part of the new updated Master Plan Migratory Fish Rhine. The updated Master Plan Migratory Fish also describes the national implementation of the recommendations aimed at reducing bycatches and illegal catches included in the first MP Migratory Fish. The ICPR FISH Expert

		Group will continue to urge on the implementation of these recommendations.
	Current Status of Action	Ongoing
	If 'Completed', has the Action achieved its objective?	
Action F2:	Description of Action (*as submitted in the IP*)	Developing of a self-sustaining salmon population in the Agger river without stocking.
	Expected Outcome (*as submitted in the IP*)	Verification if the salmon population in this river is restored successfully.
	Progress on Action to Date *(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)*	In a subsystem of the Agger river stocking has been gradually reduced since 2013. Since 2015 stocking was reduced to zero throughout the Agger-System. A three-year monitoring of downstream-migrating smolts started in 2017.
	Current Status of Action	Ongoing
	If 'Completed', has the Action achieved its objective?	

3.2 Provide an update on progress against actions relating to Habitat Protection and Restoration (Section 3.4 of the Implementation Plan). ***Note:*** *The reports under 'Progress on Action to Date' should provide a brief overview with a quantitative measure of progress made. While referring to additional material (e.g. via links to websites) may assist those seeking more detailed information, this will not be evaluated by the Review Group.*		
Action H1:	Description of Action (*as submitted in the IP*)	The German Federal Ministry of Transport, Building and Urban Development launched the program "*Durchgängigkeit Bundeswasserstraßen*" (Patency Federal Waterways) in 2012. Its objective is to preserve and restore the ecological passability at about 250 barrages in German federal waterways to improve fish migration. Many of the proposed measures in the catchments of Rhine, Ems, Weser and Elbe are located in the migration routes to current or potential salmon reintroduction rivers. Hence these activities have a high priority for reintroduction of salmon in Germany.
	Expected Outcome (*as submitted in the IP*)	Increased accessibility of spawning and juvenile habitats.
	Progress on Action to Date *(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)*	In 2018, the 46 measures, which had been prioritized for the second implementation phase (starting from end 2015), were still in the planning phase. Additionally, eight measures started, as part of new weir restoration and replacement projects. Unfortunately, for some measures the planning process has been temporarily delayed due to a lack of human resources at the Water and Shipping Administration. However, in fall 2018 the German Parliament approved a total of 25 additional positions for engineers. These positions are meant for the reestablishment of the River Connectivity for

		migrating aquatic animals. As soon as these vacancies are filled, a faster progress is expected. The successfully executed construction work of one fish pass (Müritz-Elde Waterway) has been followed by an on-site monitoring set up. The plan approval procedures of five measures made good process, whereof two have been successfully fulfilled (one at the Mosel and one at the Upper Havel Waterway). The construction of the two new fishways will start in 2019. Within the last year, the preliminary and strategic planning phase has been continued for more than 20 measures. For an additional measure, this planning phase has been initiated (Lower Havel Waterway) and two measures have proceeded to the phase of the plan approval procedure (preparation). The initial phase of data collection has been completed for the predominant number of scheduled measures. At the Mosel (barrage Koblenz/Mosel) a continuous monitoring of migrating species is conducted by the Federal Institute of Hydrology. Information about the results will be published at www.bafg.de/durchgaengigkeit.
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	
Action H2:	Description of Action (*as submitted in the IP*)	Restoration of up- and downstream river continuity and development of the quantitative and qualitative aspects of spawning and juvenile habitats in the entire Rhine catchment. The specific measures planned for anadromous migratory fish in the different sections of the Rhine are listed in the "Master Plan Migratory Fish Rhine".
	Expected Outcome (*as submitted in the IP*)	Increased quality and quantity of spawning and juvenile habitats and decreased mortality due to barrages and hydropower plants.
	Progress on Action to Date *(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)*	Partial opening of the Haringvliet dam in the Netherlands started in November 2018. The fish pass and the respective video monitoring station at the barrage in Iffezheim in the Upper Rhine were optimized in autumn 2018. A new fish pass at the barrage in Gerstheim (including a video monitoring station) will be opened in spring 2019. The mandate of the ICPR project group PG ORS (Oberrhein/Rhin-Supérieur) which aims at supporting the implementation planning of an efficient fish pass system at the three barrages in Rhinau, Marckolsheim and Vogelgrün in the Upper Rhine was extended until summer 2020. The group contributed to the elaboration of two technically and fish-ecologically feasible solutions for a fish pass at the barrage in

		Vogelgrün and for the entrances of fish passes at the above mentioned three barrages.
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	
Action H3:	Description of Action (*as submitted in the IP*)	Reestablishing continuity of the Elbe river and its primary tributaries from estuary to the springs. The action includes 34 weirs in Brandenburg, 6 in Hamburg, 3 in Mecklenburg-Western Pomerania, potentially 1 in Lower Saxony, 9 in Saxony-Anhalt, 1 in Schleswig-Holstein, 23 in Thuringia, 54 in Saxony and 3 under responsibility of the Federal Government.
	Expected Outcome (*as submitted in the IP*)	Improved access to spawning grounds and decreased mortality due to barrages and hydropower plants.
	Progress on Action to Date *(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)*	In 2018, the planning and implementation of measures for improving river connectivity moved forward in the Elbe catchment area. An exact overview of measures can be provided at the end of the second Water Framework management cycle in 2021.
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	

3.3 Provide an update on progress against actions relating to Aquaculture, Introductions and Transfers and Transgenics (Section 4.8 of the Implementation Plan). ***Note:*** *The reports under 'Progress on Action to Date' should provide a brief overview with a quantitative measure of progress made. While referring to additional material (e.g. via links to websites) may assist those seeking more detailed information, this will not be evaluated by the Review Group.*		
Action A1:	Description of Action (*as submitted in the IP*)	Stocking material is completely attained from material gained from returning spawners, from reconditioned kelts and captive breeding in North Rhine Westphalia Rhine tributaries.
	Expected Outcome (*as submitted in the IP*)	No further use of ova from foreign origin. Establish a separate locally adapted indigenous salmon population in North Rhine Westphalia Rhine tributaries.
	Progress on Action to Date *(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)*	In 2018 the ova production of the captive breeding of the gene bank facility at LANUV NRW met the demand, so complete import independence is achieved by 2019. "Wild Salmon Center Rhine-Sieg" (hatchery) operated very successfully in 2018, producing stocking material, using partially ova from returning spawners and from the last batch of partially imported ova.
	Current Status of Action	Completed
	If Completed, has the Action achieved its objective?	Yes
Action A2:	Description of Action (*as submitted in the IP*)	Experts annually exchange information within the ICPR expert group FISH about the possibilities of genetic monitoring of salmon in the Rhine catchment. The

		different initiatives in the Rhine catchment now aim at harmonizing their genetic monitoring.
	Expected Outcome (*as submitted in the IP*)	Genetic monitoring will allow assessing 1. the efficiency of o stocking measures performed; o different strains that are stocked; o different stocking strategies (age, parents used, the origin of broodstock etc.) 2. the relative importance for stocking of the different streams of the Rhine catchment.
	Progress on Action to Date *(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)*	In the winter season 2018/2019 parent salmon in all hatcheries except one were sampled genetically according to a uniform protocol. For the next season the sampling of all parent salmon in all hatcheries is planned. In Switzerland and France smolts have been genetically sampled in 2018, the results will be available in 2019 and will be considered for the planning of next stocking measures. In Germany the sampling of smolts is planned 2019.
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	

4: Additional information required under the Convention
4.1 Details of any laws, regulations and programmes that have been adopted or repealed since the last notification.
4.2 Details of any new commitments concerning the adoption or maintenance in force for specified periods of time of conservation, restoration and other management measures.
4.3 Details of any new actions to prohibit fishing for salmon beyond 12 nautical miles.
4.4 Details of any new actions to invite the attention of States not Party to the Convention to matters relating to the activities of its vessels which could adversely affect salmon stocks subject to the Convention.
4.5 Details of any actions taken to implement regulatory measures under Article 13 of the Convention including imposition of adequate penalties for violations.

Annex 1:

Identification of adult salmons in the Rhine system since 1990

Salmons of at least 50 cm (first catches) are considered to be adult

Year	Switzerland	France			*Baden-Württemberg*								*Hesse and Rhineland-Palatinate*										*North Rhine Westphalia*					Netherlands			Rhine	Rhine	Rhine	Rhine	Rhine	**Rhine**	Year
	High Rhine	Rhine*, Ill	Strasbourg	Gambsheim	Elz + Dreisam	Old Elz	Kinzig	Rench	Iffezheim	Sandbach	Murg	Alb	Others**	Main	Wisper	Nette	Lahn	Saynbach	Wied	Moselle	Ahr	Sieg	Rhine	Sieg	Wupper	Ruhr	Lippe	Ijssel	Waal	Lek	High Rhine	Upper Rhine	Middle Rhine	Lower Rhine	Delta Rhine	**total**	
1990																				1				1							0	0	0	1	0	**1**	**1990**
1991																								2							0	0	0	2	0	**2**	**1991**
1992																				1				10							0	0	1	10	0	**11**	**1992**
1993																				0			2	16							0	0	0	18	0	**18**	**1993**
1994																				0				9					16	7	0	0	0	9	23	**32**	**1994**
1995									9											1			1	6					7	4	0	9	1	7	11	**28**	**1995**
1996									23				1				0	4		1			1	15					2	15	0	24	5	16	17	**62**	**1996**
1997									5								1	8		3				13				2	5	8	0	5	12	13	15	**45**	**1997**
1998									7								0	1		4	0	2		42	7		1	0	2	3	0	7	5	52	5	**69**	**1998**
1999									3								8	21		7	12	7		53	15		1	0	13	85	0	3	48	76	98	**225**	**1999**
2000								1	75								5	35		14	2	8		335	21		1	3	28	195	0	76	56	365	226	**723**	**2000**
2001		2							59							1	4	12		4	10	0		84	12			1	23	109	0	61	31	96	133	**321**	**2001**
2002								1	94						3	0	3	20	1	11	8	9		213	17	3		3	28	72	0	95	46	242	103	**486**	**2002**
2003									90		1		2		2	0	15	37		3	2	8		160	20	1	2	3	43	50	0	93	59	191	96	**439**	**2003**
2004							1		72						0	2	8	17		4	11	5		93	37			4	30	29	0	73	42	135	63	**313**	**2004**
2005									49						0	2	0	6		1	5	10		195	39			6	38	14	0	49	14	244	58	**365**	**2005**
2006				18			1	1	47		2		1		4	1	5	13		4	0	11	1	287	43			7	27	17	0	70	27	342	51	**490**	**2006**
2007				27					62		3		1		4	1	12	26		2	1	24		463	69			4	79	27	0	93	46	556	110	**805**	**2007**
2008		1		70					86			2	2		1	1	8	21		10	3	9	4	339	32	1		4	43	36	0	161	44	385	83	**673**	**2008**
2009		3		46	1		0	0	52		3	1	2	0	7	3	28	21		6	3	2	0	282	30	0	0	4	60	18	0	108	68	314	82	**572**	**2009**
2010		8		26	1		2	0	18		0	0	2	0	3	3	10	10		0	1	5	0	385	8	0	0	4	47	25	0	57	27	398	76	**558**	**2010**
2011		3		47	2		12	0	50		2	1	2	1	0	0	9	1		0	0	2	1	196	6	0	0	5	44	8	0	120	10	205	57	**392**	**2011**
2012	2	3		53	1		6	1	22		4	0	2	0	0	0	3	8		6	1	3	2	127	5	0	0	11	48	40	2	92	18	137	99	**348**	**2012**
2013	0	0		23	0		5	0	4		2	1	1	0	1	1	0	5		4	4	0	1	154	14	0	0	6	43	37	0	36	15	169	86	**306**	**2013**
2014	0	0		60	0		8	0	87		0	1	3	0	2	2	1	4		7	2	3	2	206	5	1	1		21		0	159	18	218	21	**416**	**2014**
2015	0	4		152	1		8	1	228		0	2	4	1	2	1	0	1		17	1	1	3	258	7	0	0	0	10		0	401	22	269	10	**702**	**2015**
2016	0	5	5	69	1		7	0	145		4	0	2	3	1	1	3	0	1	9	0	2	1	142	9	0	0		4		0	241	15	154	4	**414**	**2016**
2017	0	14	27	105	1	1	4	0	171	1	0	0	4	0	4	1	1	0	0	8	0	2	3	160	23	0	1	0	10		0	328	14	189	10	**541**	**2017**
2018	0	3	8	49	1	0	6	0	110	0	0	0	0	0	0	0	0	0	0	5	0	1	0	19	21	0	0	?	?	?	0	177	5	41	0	**223**	**2018**
total	*2*	*46*	*46*	*745*	*5*	*1*	*66*	*5*	*1568*	*1*	*21*	*8*	*28*	*5*	*34*	*26*	*124*	*271*	*2*	*132*	*66*	*114*	*22*	*4265*	*446*	*6*	*7*	*67*	*671*	*788*	*2*	*2538*	*645*	*4854*	*1537*	*9586*	*Total*

Data according to local working groups.
The tributaries of the Rhine indicated include the entire connected subsystem (e.g. Wupper and Dhünn).
* FR: Rhine upstream of Gambsheim
**DE-HE + DE-RP: "Others" includes reports from the Rhine and other tributaries (e.g. Wieslauter, Weschnitz)
Data not yet validated or available
one additional salmon registered later on 5/11/2018

Annex 2: Proof of reproduction of salmon returned to the Rhine system

Proof of reproduction of salmon returned to the Rhine system

Country	System	Project water - Selection of the most important tributaries (* no stocking)	First salmon stocking	Year of spawning proof (reproduction during the preceding autumn/winter)																								
				1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
D	Wupper-Dhünn	Wupper	1993	/	/	/	/	/	/	/	/	0	/	/	/	/	/	(X)	/	/	/	/	/		/	/	/	/
		Dhünn		/	/	/	/	/	/	/	/	0	/	/	X	X	/	/	/	/	/	/	/		/	/	/	/
		Eifgenbach		/	/	/	/	/	/	/	/	/	/	/	/	0	/	/	/	/	/	/	/		/	/	/	/
D	Sieg	Sieg NRW	Salmon stocking measures in the Sieg river system since 1998, since 1998 in addition to classical umber and barbel regions also in selected smaller and medium sized brooks	X	/	/	/	/	/	/	X	0	XX	/	/	/	/	/	/	/	/	XX	/	XX	0	0	0	/
		Agger (lower 30 km)		X	/	/	/	/	/	/	0	0	XXX	XXX	XXX	XX	XXXX	XXXX	XXXX	/	/	XXX	XXX	XXX	XXX	XXX	XX	XX
		Naafbach		/	/	/	/	/	/	/	XX	0	/	XXX	XXX	XXX	XXXX	XXXX	XXXX	/	/	XXX	XXX	XXX	XXXX	XXX	XXX	0
		Pleisbach		/	/	/	/	/	/	/	0	/	/	0	/	/	X	/	X	/	/	/	/		/	/	/	/
		Hanfbach		/	/	/	/	/	/	/	/	0	/	0	X	/	/	/	/	/	/	/	/		/	/	/	/
		Bröl		X	/	/	X	/	/	/	0	0	XX	XX	0	XX	XXX	/	XXX	/	/	/	XX	XXX	XXX	XX	XXX	/
		Homburger Bröl		/	/	/	/	/	/	/	0	0	/	XX	XXX	XX	X	/	/	/	/	/	/	0	XX	XX	0	/
		Waldbröl		/	/	/	/	/	/	/	0	0	/	0	0	XXX	XXX	/	0	/	/	/	/	XXX	0	0	0	/
		Derenbach		/	/	/	/	/	/	/	/	/	/	/	/	0	/	/	/	/	/	/	/		/	/	/	/
		Steinchesbach		/	/	/	/	/	/	/	/	/	/	/	/	0	/	/	/	/	/	/	/		/	/	/	/
		Krabach		/	/	/	/	/	/	/	/	/	/	/	X	/	/	/	/	/	/	/	/		/	/	/	/
		Gierzhagener Bach		/	/	/	/	/	/	/	/	0	/	/	/	/	X	/	/	/	/	/	/		/	/	/	/
		Irsenbach		/	/	/	/	/	/	/	/	0	/	/	/	/	/	/	/	/	/	/	/		/	/	/	/
		Sülz		/	/	/	/	/	/	/	0	0	/	/	/	XX	/	/	/	/	/	XXX	/	XXX	XXXX	XXX	XXX	XXX
		Schlingenbach		/	/	/	/	/	/	/	/	0	/	/	/	/	X	XXXX	XXX	/	/	XXX	0	0	0	0	0	/
		middle Sieg RLP	1994	/	/	/	/	/	/	/	X	0	0	0	X	X	X	XXXX	X	0	?	?	?	?	0	0	X	XX
		Nister system	1991	/	/	/	/	/	XX	0	X	X	X	X	X	XXX	XX	XXXX	X	X	X	X	X	X	X	X	X	XX
		Wisserbach	1991	/	/	/	/	/	/	XXX	XX	XX	0	X	XX	XXX	XX	XXXX	0	X	0	0	0	0	XX	0	0	0
		Elbbach	1995	/	/	/	/	/	/	/	/	0	X	0	/	/	XX	XX	0	0	0	/	/	/	/	/	/	/
		Heller-Daade	1998	/	/	/	/	/	/	/	/	0	0	/	/	/	X	X	x	0	0	0	0	0	0	0	X	0
		Asdorf	1997	/	/	/	/	/	/	/	/	0	0	/	/	/	/	/	/	0	/	/	/	0	0	0	0	0
D	Ahr	Ahr	1995	/	/	/	/	/	/	X	0	0	X	X	0	0	0	?	0	XX	XX	0	XX	XX	XXX	X	XXX	X
D	Nette	Nette *	-	/	/	/	/	/	/	/	X	0	XX	X	X	X	0	X	0	X	0	X	0	XX	XX	0	XX	0
D	Saynbach	Saynbach	1994	/	/	/	/	/	/	XX	XX	XX	XXX	XXXX	XXXX	XX	XXXX	XXXX	XX	XX	XXX	X	X	XX	XX	XX	X	0
		Brexbach	1994	/	/	/	/	/	/	XXXX	XX	X	X	0	0	0	0	XXX	XX	XX	0	0	0	0	0	0	0	0
D	Moselle	Elzbach	2005	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	XX	XX	XX	X
		Kyll	1996	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		Prüm system	1996	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Lux/D		Sauer	1992	/	/	/	/	/	/	/	/	/	0	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		Our	1992	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
D	Lahn	Mühlbach	1994	/	/	/	/	/	/	(X)	0	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		Weil	1995	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0	/	/	/	0
		Dill	1995	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
D	Nahe	Nahe	2004 / 2013	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0	0	0	/	0
		Guldenbach	2013	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0	0	0	X	0
D	Wisper	Wisper	1999	/	/	/	/	/	/	/	/	0	XX	XX	0	0	XX	XXXX	0	X	XX	0	0	XX	0	XXX	0	0
D	Main	Schwarzbach	2009	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0	0	0	0	0	0	0	X	0	X	0
		Kinzig system (Hesse)	2001	/	/	/	/	/	/	/	/	/	/	/	/	0	/	/	/	/	/	/	?	0	/	/	/	/
D	Alb	Alb	2001	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	X	X	X	X	X	X	/	/
D	Speyerbach	Speyerbach/Rehbach	2013	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	X	XX	X
D/F	(Wies)Lauter	(Wies)Lauter	1991	/	/	/	/	/	/	/	/	/	/	/	/	/	/	X	X	X	X	X	X	X	X	X	X	XX
D	Murg	Murg	2001	/	/	/	/	/	/	/	/	/	/	/	X	X	X	/	/	/	X	X	X	X	X	/	/	/
F / D	Rhine	Rhine downstream Iffezh	-	/	/	/	/	/	/	/	/	/	/	X	/	/	/	/	/	/	/	/	/	/	/	/	/	/
D	Rench	Rench	2001	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
F	Ill	Ill	1995	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	X	X	X	0	0	/	X	X	0
		Bruche	1991	/	X	X	X	X	(X)	X	X	X	X	X	X	X	X	X	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
		Giessen	1992	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0	0	/	0	/	X	0	0
		Lièpvrette	1995	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0	0	/	/	/	/	0	0
		Fecht	1991	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	X	X	X	0	X	X	X	0	0
		Weiss	1991	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0	0	/	0	0	/	0	0
		Doller	1993	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
D	Kinzig	Kinzig (Baden-Württ.)	2001	/	/	/	/	/	/	/	/	/	/	X	/	/	/	/	/	X	X	X	/	X	X	X	X	X
D	Elz-Dreisam	Elz	2005	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	X	/	/
		Dreisam	2008	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
D	Rheinaue	Rheinauegewässer	-	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	X	/	/	X
F/D	Rhein	Restrhein (Altrhein)	1991	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
CH	Wiese	Wiese	1984	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
CH	Birs	Birs	1995	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
CH	Ergolz	Ergolz	1995	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
				1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018

quality proof / individuals detected / samples taken from individual locations	X
qualitative evidence / returnees released upstream of obstacle	(X)
little success of reproduction (1 to ≤ 5 parr/100 m2)	XX
considerable success of reproduction (> 5 - 50 parr/100 m2)	XXX
extremely high rate of success of reproduction (> 50 parr/100 m2)	XXXX
Investigations carried through, no cases detected	0
no investigation	/
Evidence uncertain	?

Spawning grounds (largely) accessible
Spawning grounds partially accessible/accessible to a limited extent
Spawning habitats not accessible/accessible in exceptional

Annex 3: Stocking measures with migratory salmonids in the Rhine system 2017

Stocking measures with big salmonids in the Rhine system 2018					
Country/Water body	Stocking				
	Kind and stage	Number	Origin	Marking	smolt equivalent
Switzerland					
Wiese	Lb+ La	9800	Fischzucht Petite Camargue	genetics	
Rhein		0	Fischzucht Petite Camargue	genetics	
Riehenteich		0	Fischzucht Petite Camargue	genetics	
Birs		0	Fischzucht Petite Camargue	genetics	
Arisdörferbach	Lb+ La	4000	Fischzucht Petite Camargue	genetics	
Hintere Frenke	La	5000	Fischzucht Petite Camargue	genetics	
Ergolz	Lb+La	6400	Fischzucht Petite Camargue	genetics	
Fluebach Harbotswil		0	Fischzucht Petite Camargue	genetics	
Magdenerbach	Lb	5000	Fischzucht Petite Camargue	genetics	
Möhlinbach	Lb	8000	Fischzucht Petite Camargue	genetics	
Etzgerbach	Lb	5000	Fischzucht Petite Camargue	genetics	
Rhein	Lb	1000	Fischzucht Petite Camargue	genetics	
Alter Rhein	Lb	2500	Fischzucht Petite Camargue	genetics	
Bachtalbach	Lb	1000	Fischzucht Petite Camargue	genetics	
Sickerwasserkanal Klingnau	Lb	1000	Fischzucht Petite Camargue	genetics	
Surb	Lb	1000	Fischzucht Petite Camargue	genetics	
Bünz	Lb	1000	Fischzucht Petite Camargue	genetics	
Sum		**50.700**			
France					
Rhine (Alt-/Restrhein)	L0	52500	Rhein		2625
	L0	101025	Allier		5051
	La	25800	Rhein		2580
	La	46102	Allier		4610
Doller	La	15.019	Rhein		1502
	La	10.394	Allier		1039
Thur	La	7.535	Rhein		754
	La	7.535	Allier		754
Lauch	La	1.600	Rhein		160
	La	1.097	Allier		110
Fecht and tributaries	La	1.488	Rhein wild_F1		149
	La	22.776	Rhein		2278
	La	3.175	Allier		318
	L0	22.321	Rhein		1116
Ill		/			/
Giessen and tributaries	La	25.066	Rhein		2507
Bruche	La	10.551	Rhein wild_F1		1055
	La	26.193	Rhein		2619
	L0	35.700	Rhein		1785
Mosel	Le	1.200	Rhein		18
	L0	4.400	Rhein		220
Blies	La	500	Rhein		50
Saar (Moselle system)	La	520	Rhein		52
Zorn	La	4.465	Rhein		447
Sum		**426.962**			**31.797**
Germany, Baden-Württemberg					
Alb	Lp	8.800	Allier	genetics	1.467
Murg	Lp	43.670	Allier	genetics	7.278
Murg	Lp	16.000	KFS Rhein	genetics	2.667
Oos, Oosbach	Lp	4.100	Allier	genetics	683
Rench	Le	5000	EFH Rhein	genetics	100
Rench	La	15.820	Allier	genetics	396
Kinzig with tributaries Erlenbach, Gutach, Wolf, Schiltach	La	43.678	Allier	genetics	1.212
	La	30.590	EFH Rhein	genetics	1.164
	Lp	30.285	Allier	genetics	5.048
	L2	500	EFH Rhein	genetics	125
Elz	La	20.940	Allier	genetics	1.047
Dreisam	La	8.100	Allier	genetics	405
Wiese	La	3.800	Allier	genetics	190
Wiese	Lp	12.630	Allier	genetics	2.105
Sum		**243.913**			**23.887**
Germany, Hesse					
Nidda	Mf p	50.000	wild parents Denmark	a/c for 10.000	
Lahn, Dill, Weil, Elbbach	L p	8.000	EFH HAT		**1.600**
Lahn, Dill, Weil, Elbbach					
Lahnsystem gesamt					
Kinzig (Main)	L p	1.500	EFH HAT		300
Schwarzbach (Main)	L p	13.235	EFH HAT		2.647
Weschnitz					
Wisper	L p	14.700	EFH HAT		2.940
Summe		**87.435**			**7.487**

Germany, Rhineland Palatinate					
Ahr	L a	30.000	EFH HAT		5.000
Ahr	L p	10.500	EFH HAT		2.100
Lahn, Mühlbach					
Moselle, Elzbach	L p	13.500			2.700
Saynbach		0			
Saynbach					
Saynbachsystem gesamt					
Nister, Kleine Nister (Sieg)	L p	19.000	KFS Sieg		3.800
Nister, Kleine Nister (Sieg)	L p	11.000	EFH HAT		2.200
Nister (Sieg)	L a	30.000	WLZ NRW Sieg		5.000
Wisserbach (Sieg)		0			
Heller (Sieg)		0			
Sieg system total		**60.000**			**11.000**
Nahe	L p	6.700			
Guldenbach (Nahe) & Nahe	L p	16.650			
Speyerbach	L s	1.603	EFH Obenheim (F)	**PIT-Tag**	401
Speyerbach					
Wieslauter	L a	40.000	EFH Obenheim (F)		6.667
Sum		**178.953**			**27.867**
Germany, North Rhine Westphalia					
Sieg and tributaries	La	464.279	Sieg-Returners / WLZ, EFH Albaum, Ätran-Gudenau returners / EFH DCV		78.927
		464.279			78.927
Wupper and tributaries	L0	60.500	Sieg-Returners / EFH Albaum		3.025
	La	40.000	Sieg-Returners / EFH Albaum		16.500
	La	70.000	EFH HAT		10.632
	L1	70.000	Sieg-Returners / EFH Albaum		14.000
	Ls	5.000	Sieg-Returners / EFH Albaum		1.250
		245.500			45.407
Dhünn and tributaries	La	30.000	Sieg-Returners / EFH Albaum		6.594
		30.000			6.594
Sum		**739.779**			**130.928**

cwt = coded wire tags; a/c = adipose clipping; EFH = parent fish keeping; DCV = Danish Center for Vildlaks; WLZ=Wildlachszentrum
KFS = Monitoring and catching station; L e = salmon spawn; L b = Salmon fry; L0 0 unfeeded fry; La = feeded fry;
L p = Salmon parr (= one summer old, half year = 0+); L ps = Salmon pre-smolt; L s = Salmon smolt; L 1 = one year old salmon;
L 2 = two years old salmon; Mf p = Sea trout parr; k. A. = not specified by deadline