



Verursacher-Auswirkungs-Kombinationen im deutschen Teil der Flussgebietseinheit Elbe

Referenzdokument zur WISE-
Berichterstattung (Kategorie II)

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Die unten stehenden Auflistungen zeigen die im deutschen Teil des Flusseinzugsgebietes Elbe relevanten Verursacher und Auswirkungen auf. In den nachfolgenden Kreuztabellen sind Angaben zu den spezifischen Verursacher/Auswirkungskombinationen der jeweiligen Wasserkörperkategorie gemacht, die für die Verfehlung der Umweltziele (Tab. 1.1-1.4) und Inanspruchnahme von Ausnahmen (Tab. 2.1-3) verantwortlich sind. Da Wasserkörper mehr als eine Verursacher/Auswirkungskombination aufweisen können, wird durch die Aufsummierung der Zahlenangaben nicht die Anzahl an Wasserkörpern, die die Umweltziele verfehlen angegeben.

Verursacher in der FGG Elbe:

- Agriculture
- Energy - hydropower
- Energy - non-hydropower
- Fisheries and aquaculture
- Flood protection
- Forestry
- Industry
- Tourism and recreation
- Transport
- Urban development
- Unknown - other

Auswirkungen in der FGG Elbe:

- Abstraction exceeds available GW resource (lowering water table)
- Acidification
- Altered habitats due to hydrological changes
- Altered habitats due to morphological changes (includes connectivity)
- Chemical pollution
- Elevated temperatures
- Nutrient pollution
- Organic pollution
- Other significant impact type
- Saline pollution/intrusion
- Unknown impact type



Tab. 1.1: Verursacher-Auswirkungs-Kombinationen für WK im nicht guten ökologischen Zustand/Potenzial (Anzahl OWK der Kategorie „Fließgewässer“)

IMPACT \ DRIVER	DRIVER												
	Agriculture	Climate change	Energy - hydropower	Energy - non-hydropower	Fisheries and aquaculture	Flood protection	Forestry	Industry	Tourism and recreation	Transport	Urban development	Unknown - other	
Abstraction exceeds available groundwater resource (lowering water table)													
Acidification				4									23
Alterations in flow directions resulting in saltwater intrusion													
Altered habitats due to hydrological changes	160		18		9	2		11		3	15		44
Altered habitats due to morphological changes (includes connectivity)	1439		123		41	1523		16	39	69	264		668
Chemical pollution	109			30				66			12		108
Damage to groundwater-dependent terrestrial ecosystems for chemical / quantitative reasons													
Diminution of quality of associated surface waters for chemical / quantitative reasons													
Elevated temperatures	8			5		15					2		18
Litter (an impact under the MSFD)													
Microbiological pollution													
No significant impact													
Not applicable (Territorial Waters)													
Nutrient pollution	1944						63	12		289	1360		90
Organic pollution	185							7			224		349
Other significant impact type								12					3
Saline pollution/intrusion								11					26
Unknown impact type													



Tab. 1.2: Verursacher-Auswirkungs-Kombinationen für WK im nicht guten ökologischen Zustand/ Potenzial (Anzahl OWK der Kategorie „See“)

IMPACT \ DRIVER	DRIVER												
	Agriculture	Climate change	Energy - hydropower	Energy - non-hydropower	Fisheries and aquaculture	Flood protection	Forestry	Industry	Tourism and recreation	Transport	Urban development	Unknown - other	
Abstraction exceeds available groundwater resource (lowering water table)													
Acidification													
Alterations in flow directions resulting in saltwater intrusion													
Altered habitats due to hydrological changes													21
Altered habitats due to morphological changes (includes connectivity)					1	1			12	1	1		21
Chemical pollution	2			6				1					3
Damage to groundwater-dependent terrestrial ecosystems for chemical / quantitative reasons													
Diminution of quality of associated surface waters for chemical / quantitative reasons													
Elevated temperatures													
Litter (an impact under the MSFD)													
Microbiological pollution													
No significant impact													
Not applicable (Territorial Waters)													
Nutrient pollution	204						4		1		106		13
Organic pollution													1
Other significant impact type									1				1
Saline pollution/intrusion													
Unknown impact type													5



Tab. 1.3: Verursacher-Auswirkungs-Kombinationen für WK im nicht guten ökologischen Zustand/Potenzial (Anzahl OWK der Kategorie „Übergangsgewässer“)

IMPACT \ DRIVER	DRIVER												
	Agriculture	Climate change	Energy - hydropower	Energy - non-hydropower	Fisheries and aquaculture	Flood protection	Forestry	Industry	Tourism and recreation	Transport	Urban development	Unknown - other	
Abstraction exceeds available groundwater resource (lowering water table)													
Acidification													
Alterations in flow directions resulting in saltwater intrusion													
Altered habitats due to hydrological changes										1			
Altered habitats due to morphological changes (includes connectivity)						1				1			
Chemical pollution	1							1					
Damage to groundwater-dependent terrestrial ecosystems for chemical / quantitative reasons													
Diminution of quality of associated surface waters for chemical / quantitative reasons													
Elevated temperatures													
Litter (an impact under the MSFD)													
Microbiological pollution													
No significant impact													
Not applicable (Territorial Waters)													
Nutrient pollution	1												
Organic pollution													
Other significant impact type													
Saline pollution/intrusion													
Unknown impact type													



Tab. 1.4: Verursacher-Auswirkungs-Kombinationen für WK im nicht guten ökologischen Zustand/Potenzial (Anzahl OWK der Kategorie „Küstengewässer“)

IMPACT \ DRIVER	DRIVER											
	Agriculture	Climate change	Energy - hydropower	Energy - non-hydropower	Fisheries and aquaculture	Flood protection	Forestry	Industry	Tourism and recreation	Transport	Urban development	Unknown - other
Abstraction exceeds available groundwater resource (lowering water table)												
Acidification												
Alterations in flow directions resulting in saltwater intrusion												
Altered habitats due to hydrological changes												
Altered habitats due to morphological changes (includes connectivity)												
Chemical pollution												
Damage to groundwater-dependent terrestrial ecosystems for chemical / quantitative reasons												
Diminution of quality of associated surface waters for chemical / quantitative reasons												
Elevated temperatures												
Litter (an impact under the MSFD)												
Microbiological pollution												
No significant impact												
Not applicable (Territorial Waters)												
Nutrient pollution	4											
Organic pollution												
Other significant impact type												
Saline pollution/intrusion												
Unknown impact type												



Tab. 2.1: Verursacher-Auswirkungs-Kombinationen für WK bei Inanspruchnahme von Ausnahmen (Anzahl OWK der Kategorie „Fließgewässer“)

IMPACT \ DRIVER	DRIVER												
	Agriculture	Climate change	Energy - hydropower	Energy - non-hydropower	Fisheries and aquaculture	Flood protection	Forestry	Industry	Tourism and recreation	Transport	Urban development	Unknown - other	
Abstraction exceeds available groundwater resource (lowering water table)													
Acidification				4									23
Alterations in flow directions resulting in saltwater intrusion													
Altered habitats due to hydrological changes	160		18		9			11		3	15		38
Altered habitats due to morphological changes (includes connectivity)	1439		120			1520		16	37	69	264		657
Chemical pollution	118			2749				87		12	41		245
Damage to groundwater-dependent terrestrial ecosystems for chemical / quantitative reasons													
Diminution of quality of associated surface waters for chemical / quantitative reasons													
Elevated temperatures	8					10					2		17
Litter (an impact under the MSFD)													
Microbiological pollution													
No significant impact													
Not applicable (Territorial Waters)													
Nutrient pollution	1940						61	12		289	1358		90
Organic pollution	147							7			223		344
Other significant impact type								12					3
Saline pollution/intrusion								11					26
Unknown impact type													



Tab. 2.2: Verursacher-Auswirkungs-Kombinationen für WK bei Inanspruchnahme von Ausnahmen (Anzahl OWK der Kategorie „See“)

IMPACT \ DRIVER	DRIVER											
	Agriculture	Climate change	Energy - hydropower	Energy - non-hydropower	Fisheries and aquaculture	Flood protection	Forestry	Industry	Tourism and recreation	Transport	Urban development	Unknown - other
Abstraction exceeds available groundwater resource (lowering water table)												
Acidification												
Alterations in flow directions resulting in saltwater intrusion												
Altered habitats due to hydrological changes												8
Altered habitats due to morphological changes (includes connectivity)					1	1			12	1	1	13
Chemical pollution	2			343				1			1	8
Damage to groundwater-dependent terrestrial ecosystems for chemical / quantitative reasons												
Diminution of quality of associated surface waters for chemical / quantitative reasons												
Elevated temperatures												
Litter (an impact under the MSFD)												
Microbiological pollution												
No significant impact												
Not applicable (Territorial Waters)												
Nutrient pollution	203						4		1		106	9
Organic pollution												1
Other significant impact type												
Saline pollution/intrusion												
Unknown impact type												5



Tab. 2.3: Verursacher-Auswirkungs-Kombinationen für WK bei Inanspruchnahme von Ausnahmen (Anzahl OWK der Kategorie „Übergangsgewässer“)

IMPACT \ DRIVER	DRIVER												
	Agriculture	Climate change	Energy - hydropower	Energy - non-hydropower	Fisheries and aquaculture	Flood protection	Forestry	Industry	Tourism and recreation	Transport	Urban development	Unknown - other	
Abstraction exceeds available groundwater resource (lowering water table)													
Acidification													
Alterations in flow directions resulting in saltwater intrusion													
Altered habitats due to hydrological changes										1			
Altered habitats due to morphological changes (includes connectivity)						1				1			
Chemical pollution	1			1				1		1			
Damage to groundwater-dependent terrestrial ecosystems for chemical / quantitative reasons													
Diminution of quality of associated surface waters for chemical / quantitative reasons													
Elevated temperatures													
Litter (an impact under the MSFD)													
Microbiological pollution													
No significant impact													
Not applicable (Territorial Waters)													
Nutrient pollution	1												
Organic pollution													
Other significant impact type													
Saline pollution/intrusion													
Unknown impact type													



Tab. 2.4: Verursacher-Auswirkungs-Kombinationen für WK bei Inanspruchnahme von Ausnahmen (Anzahl OWK der Kategorie „Küstengewässer“)

IMPACT \ DRIVER	DRIVER											
	Agriculture	Climate change	Energy - hydropower	Energy - non-hydropower	Fisheries and aquaculture	Flood protection	Forestry	Industry	Tourism and recreation	Transport	Urban development	Unknown - other
Abstraction exceeds available groundwater resource (lowering water table)												
Acidification												
Alterations in flow directions resulting in saltwater intrusion												
Altered habitats due to hydrological changes												
Altered habitats due to morphological changes (includes connectivity)												
Chemical pollution				5								
Damage to groundwater-dependent terrestrial ecosystems for chemical / quantitative reasons												
Diminution of quality of associated surface waters for chemical / quantitative reasons												
Elevated temperatures												
Litter (an impact under the MSFD)												
Microbiological pollution												
No significant impact												
Not applicable (Territorial Waters)												
Nutrient pollution	4											
Organic pollution												
Other significant impact type												
Saline pollution/intrusion												
Unknown impact type												



Tab. 3: Verursacher-Auswirkungs-Kombinationen für Wasserkörper bei Inanspruchnahme von Ausnahmen (Anzahl Grundwasserkörper)

IMPACT	DRIVER											
	Agriculture	Climate change	Energy - hydropower	Energy - non-hydropower	Fisheries and aquaculture	Flood protection	Forestry	Industry	Tourism and recreation	Transport	Urban development	Unknown - other
Abstraction exceeds available groundwater resource (lowering water table)				6								
Acidification				5								
Alterations in flow directions resulting in saltwater intrusion												
Altered habitats due to hydrological changes												
Altered habitats due to morphological changes (includes connectivity)												
Chemical pollution	52			7				19			5	2
Damage to groundwater-dependent terrestrial ecosystems for chemical / quantitative reasons												
Diminution of quality of associated surface waters for chemical / quantitative reasons												
Elevated temperatures												
Litter (an impact under the MSFD)												
Microbiological pollution												
No significant impact												
Not applicable (Territorial Waters)												
Nutrient pollution	29										3	
Organic pollution												
Other significant impact type												
Saline pollution/intrusion								2			1	
Unknown impact type												