

INLAND WATERWAY PROJECTS AND THEIR COMPLIANCE WITH EU NATURA 2000 AND WFD REQUIREMENTS

ENVIRONMENTAL AGENCY AUSTRIA, 9 JUNE 2021
(ZINKE, KUDRNOVSKY, TRAUNER)

TASK AND OFFER OF EAA

Recent request from the Austrian Ministry BMK, Sections on Transport and on Environment:

- the **Environment Agency Austria** provide support and guidance to the FAIRway II project;
- Aim: planned monitoring programme become **compliant with the EU nature and water directives**.
- Offered to viadonau as well as to other Project Partners in HR and RS and SH Forum members
- Several meetings with viadonau
- Participation as *Observer* at the Stakeholder Forum

First finding: The new Monitoring will much improve the database about Danube nature and the fairway.

HABITAT DIRECTIVE - PRINCIPLES

- The main specific requirements of the Habitats Directive are grouped under the two subsequent chapters. The first is entitled '**Conservation of natural habitats and habitats of species**' and comprises Articles 3 to 11. The second is entitled '**Protection of Species**' and comprises Articles 12 to 16.
- The '**Conservation of natural habitats and habitats of species**' chapter addresses the **establishment and conservation of sites** designated for habitat **types and species** of Community interest listed in **Annexes I and II** to the Directive.
- The chapter of the Habitats Directive entitled '**Protection of Species**' covers Articles 12 to 16 and deals with **strictly protected animal and plant species** listed in **Annex IV** of the Directive.

HABITAT DIRECTIVE – HABITATS IN HR-RS SECTION

HABITAT CODE	HABITAT PRIORITY	DESCRIPTION
3130		Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea
3150		Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
3270		Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation
6240	*	Sub-Pannonic steppic grasslands
6250	*	Pannonic loess steppic grasslands
6440		Alluvial meadows of river valleys of the Cnidion dubii
91E0	*	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)
91F0		Riparian mixed forests of <i>Quercus robur</i>, <i>Ulmus laevis</i> and <i>Ulmus minor</i>, <i>Fraxinus excelsior</i> or <i>Fraxinus angustifolia</i>, along the great rivers (Ulmenion minoris)

Habitats listed in Standard Data Forms (SDF) of Natura 2000 sites: HR1000016 Podunavlje i donje Podravlje, HR2000372 Dunav - Vukovar, HR2000394 Kopački rit, HR2001309 Dunav S od Kopačkog rita

bold – habitats dependent on water and river and fluvial landscape dynamics

* - Priority natural habitat - natural habitat types in danger of disappearance of which the Community has particular responsibility in view of the proportion of their natural range

HABITAT DIRECTIVE – SPECIES IN ANNEX II THAT REQUIRE PROTECTED AREAS

SPECIES GROUP	Annex II
Amphibians	2
Fish	10
Invertebrates	10
Mammals	6
Plants	1
Reptiles	1

Data quality of species (HD, BD) in Natura 2000 sites

data quality	% of the species entries in SDF
Data deficient	50,0
Good	8,0
Moderate	24,7
Poor	17,3

Species groups listed in Standard Data Forms (SDF) of Natura 2000 sites: HR1000016 Podunavlje i donje Podravlje, HR2000372 Dunav - Vukovar, HR2000394 Kopački rit, HR2001309 Dunav S od Kopačkog rita

mostly Annex II species dependent on water and river and fluvial landscape dynamics

HABITAT DIRECTIVE – SPECIES ANNEX IV OUTSIDE OF PROTECTED AREAS REQUIRING PROTECTION MEASURES (NO IMPACT ALLOWED)

SPECIES GROUP	SPECIES CODE	SPECIES NAME	Annex II	Annex IV
Amphibians	1188	Bombina bombina	Y	Y
Fish	2555	Gymnocephalus baloni	Y	Y
Invertebrates	1037	Ophiogomphus cecilia	Y	Y
Invertebrates	1042	Leucorrhinia pectoralis	Y	Y
Invertebrates	1060	Lycaena dispar	Y	Y
Invertebrates	1082	Graphoderus bilineatus	Y	Y
Invertebrates	1086	Cucujus cinnaberinus	Y	Y
Invertebrates	1088	Cerambyx cerdo	Y	Y

Annex IV species listed in Standard Data Forms (SDF) of Natura 2000 sites: HR1000016 Podunavlje i donje Podravlje, HR2000372 Dunav - Vukovar, HR2000394 Kopački rit, HR2001309 Dunav S od Kopačkog rita

HABITAT DIRECTIVE – SPECIES ANNEX IV CONT.

SPECIES GROUP	SPECIES CODE	SPECIES NAME	Annex II	Annex IV
Mammals	1304	Rhinolophus ferrumequinum	Y	Y
Mammals	1307	Myotis blythii	Y	Y
Mammals	1310	Miniopterus schreibersii	Y	Y
Mammals	1323	Myotis bechsteinii	Y	Y
Mammals	1324	Myotis myotis	Y	Y
Mammals	1355	Lutra lutra	Y	Y
Plants	1428	Marsilea quadrifolia	Y	Y
Reptiles	1220	Emys orbicularis	Y	Y

Annex IV species listed in Standard Data Forms (SDF) of Natura 2000 sites: HR1000016 Podunavlje i donje Podravlje, HR2000372 Dunav - Vukovar, HR2000394 Kopački rit, HR2001309 Dunav S od Kopačkog rita

HABITAT DIRECTIVE – CONSERVATION STATUS ARTICLE 17 REPORT 2013-18 OF CROATIA

biogeographic region	habitat code	conclusion range	conclusion area	conclusion structure	conclusion future	conclusion assessment	conclusion assessment trend
CON	3130	FV	FV	XX	FV	FV	S
CON	3150	FV	FV	FV	FV	FV	S
CON	3270	FV	U1	XX	U1	U1	Unk
CON	6240	U1	U2	XX	U2	U2	Unk
CON	6250	U1	U2	U2	U2	U2	D
CON	6440	XX	U2	U1	U2	U2	Unk
CON	91E0	FV	FV	FV	FV	FV	S
CON	91F0	FV	FV	U1	U2	U2	D

HABITAT DIRECTIVE – CONSERVATION STATUS

ARTICLE 17 REPORT 2013-18

biogeographic region	species code	species name	conclusion range	conclusion population	conclusion habitat	conclusion future	conclusion assessment	conclusion assessment trend
continental	1130	Aspius aspius	FV	FV	FV	FV	FV	S
continental	1145	Misgurnus fossilis	XX	XX	U1	XX	U1	Unk
continental	1157	Gymnocephalus schraetzer	FV	XX	FV	FV	FV	S
continental	1159	Zingel zingel	FV	XX	FV	FV	FV	S
continental	2484	Eudontomyzon mariae	XX	XX	XX	XX	XX	
continental	2522	Pelecus cultratus	XX	XX	XX	XX	XX	
continental	2555	Gymnocephalus baloni	FV	XX	FV	FV	FV	S
continental	5329	Romanogobio vladykovi	FV	XX	FV	FV	FV	S
continental	5339	Rhodeus amarus	FV	FV	FV	FV	FV	S
continental	5345	Rutilus virgo	FV	FV	FV	XX	FV	S

Conservation Status: FV - Favourable, U1 - Unfavourable-Inadequate, U2 - Unfavourable-Bad, XX – Unknown

Trend: S – Stable, D – Deteriorating, I – Improving, Unk - Unknown

HABITAT DIRECTIVE – NATURA 2000 SITES



Brussels, 21.11.2018
C(2018) 7621 final

Commission notice

"Managing Natura 2000 sites
The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC"

[https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1548663172672&uri=CELEX:52019XC0125\(07\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1548663172672&uri=CELEX:52019XC0125(07))



Managing Natura 2000 sites

The provisions of Article 6 of the
'Habitats' Directive 92/43/EEC

Plans or Projects **potentially harming** Natura 2000 sites can be permitted only, if **significant impacts can be excluded.**

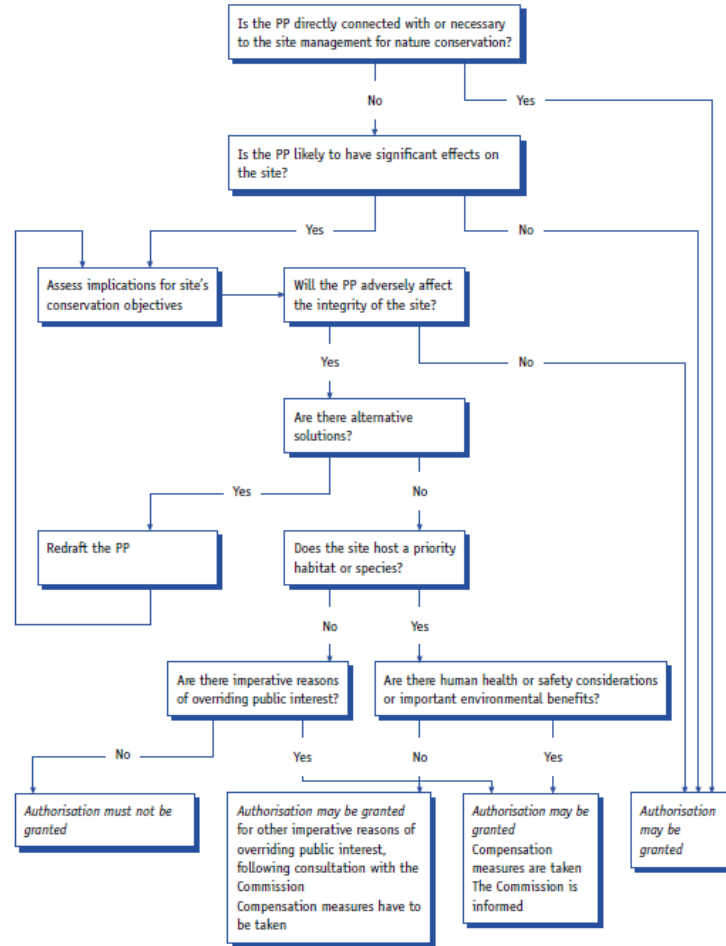
Otherwise a **strict derogation** regime has to be implemented.



The provisions of the EU Directives have been **transposed** into Croatian legislation by **ENIA (Ecological Network Impact Assessment).**

Flow chart of the Article 6(3) and (4) procedure (from MN2000) in relation to the stages of the guidance

CONSIDERATION OF A PLAN OR PROJECT (PP) AFFECTING A NATURA 2000 SITE



European Union IPA Programme for Croatia

Guidance



Impact
Significance
Cumulative Effects
Alternative Solutions
Conservation Objectives
Overriding public interest

...
Twinning Light with the *HR State Institute for Nature Protection*:

“Strengthening the expert knowledge and technical capacity of all relevant institutions for Ecological Network Impact Assessment (CRO ENIA)” June –

Guidance (2012) on construction, maintenance and upgrading of infrastructure of inland waterways

for

- competent authorities,
- developers of IWT infrastructure
- N2000 experts involved into planning, design, implementation or approval of IWT plans and projects
- etc.

building upon the PLATINA Manual



Guidance document on

Inland waterway transport and Natura 2000

*Sustainable inland waterway
development and management in the
context of the EU Birds and Habitats
Directives*

Environment

lesamt^U

HABITAT DIRECTIVE – ARTICLE 6 OF THE HABITATS DIRECTIVE 92/43/EEC ABOUT NEW INTERVENTIONS

- Is the ‘plan or **project directly connected** with or necessary to the management of the site’?
- Is plan or **project ‘likely to have a significant effect’** on a site, ‘**either individually or in combination** with other plans or projects’?
- Is there an ‘**appropriate assessment of its implications** for the site in view of the **site’s conservation objectives**’?
- Considering **suitable mitigation measures** to avoid or reduce the impacts
- Examining **alternative solutions**
- Criteria for **designing compensatory measures**

IMPLEMENTATION OF WFD: STATUS ASSESSMENT

- Ensure *Good Status*; and prevent deterioration
 - **Ecological Status:** Biological Quality Elements (BQE)
 - Macrozoobenthos, Phytobenthos, Phytoplankton, Macrophytes, Fish
 - Supporting Elements: Hydromorphology, physico-chemical parameters
- Select at least two or more BQE that are most indicative of the local pressures (existing/future)
- **Chemical Status**
 - Ecological + Chemical = Water body Status

	Steps	MZB	PHB	PHP	MAC	FIS
1	Delineate SWB					
2	Define typology					
3	Risk assessment for SWB					
4	Compliant sampling method					
5	Compliant lab method					
6	Gather data on biology in a consolidated database					
7	Establish a pressure-response relationship					
8	Define criteria for type-specific reference (benchmark) conditions					
9	Set class boundaries (EQR)					
10	Compile all methods to a binding national guidance (= basis for the monitoring)					

**ASSESS ECOLOGICAL
STATUS**

THE HR WATER BODIES FROM THE WFD PERSPECTIVE

- According to the WISE database the Danube water bodies were classified with:
 - HRCDI0001-001: **BAD** status HRCRI0001-002: **POOR** status
 - According to WISE and 2nd RBMP: **GOOD** chemical status
- ICPDR, 2015 DRBMP: **MODERATE** status
- But: **Phytobenthos** and **benthic invertebrate** data from 2015 indicates **GOOD** ecological status; **Fish** data don't seem to be available.
- According to JDS3: hydromorphological status **GOOD - MODERATE**
- What kind of data is available today from national monitoring?

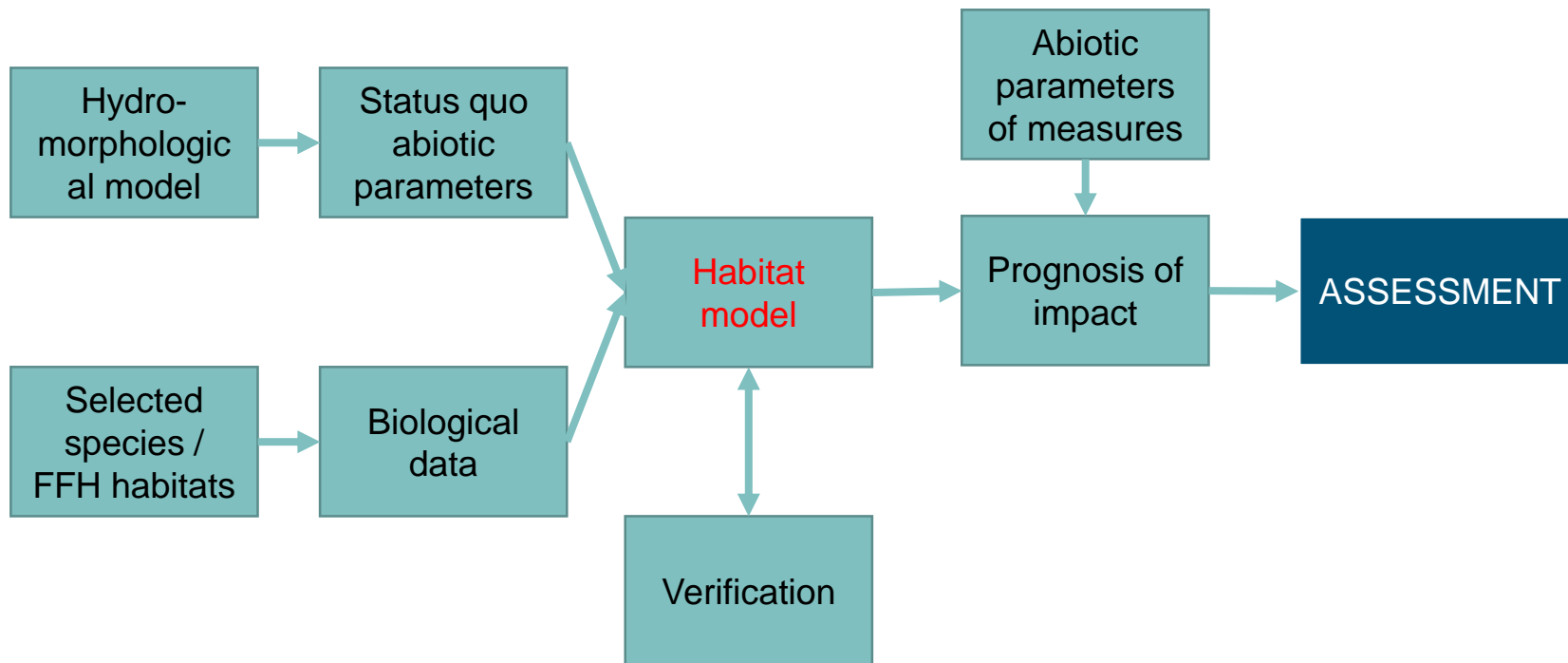
FAIRWAY MONITORING PLAN - SUB-ACTIVITY 2.3

FISH & BENTHIC INVERTEBRATES


- The monitoring plan covers a huge area, but stays vague in terms of sampling and workload needed.
- Benthic Invertebrates:
 - Methodology is not explained. MHS, dredge, airlift? How will non-wadeable sections of the river be sampled?
 - Sampling sites, sampling size, and taxonomic level are not specified.
- Fish:
 - Sampling sites and sampling size are not specified (selection and number of locations, habitat screening)
- Data will be included in a geo-information database.
 - What will be done with the data?
 - Will it be used according to national monitoring methods for **status assessment**?
 - Not clear how the collected data will contribute to the evaluation of desired fairway measures.

ASSESSMENT OF FAIRWAY MEASURES

- We recommend to assess possible fairway measures and their likely effects with habitat modelling.



RECOMMENDATIONS FOR FAIRWAY II



	Scope	To take into consideration	Data source
Habitat-mapping	<ul style="list-style-type: none"> – Identify important and vulnerable habitats – Collect abiotic parameters on site 	It is important to gather data from all habitats that could be affected by the measures.	<ul style="list-style-type: none"> – Monitoring Plan, Sub-Activity 2.2 – Are other national Monitoring Data available?
Sampling	<ul style="list-style-type: none"> – Sampling according to natl. methodology – Measure abiotic parameters at sampling sites. – Calculate habitat preferences 		<ul style="list-style-type: none"> – Sampling during Sub-Act. 2.3 – Are other national Monitoring Data available?
Habitat-modelling	Develop a model of how measures would change abiotic parameters, and calculate changes in existing suitable habitat based on habitat preferences of species. --> Ecological niche models	This modelling can focus on umbrella species.	Has to be calculated
Assessing measures	Identify measures which have the least impact.		

OTHER IMPORTANT QUESTIONS

- National methodology for sampling and assessment of habitats and species
- Budget scope (feasibility check of all planned sampling, analyses and assessment)
- Timeline for the execution of monitoring
- Review of results after first year
 - Implications for second year of monitoring
 - suitability for discussion of variants