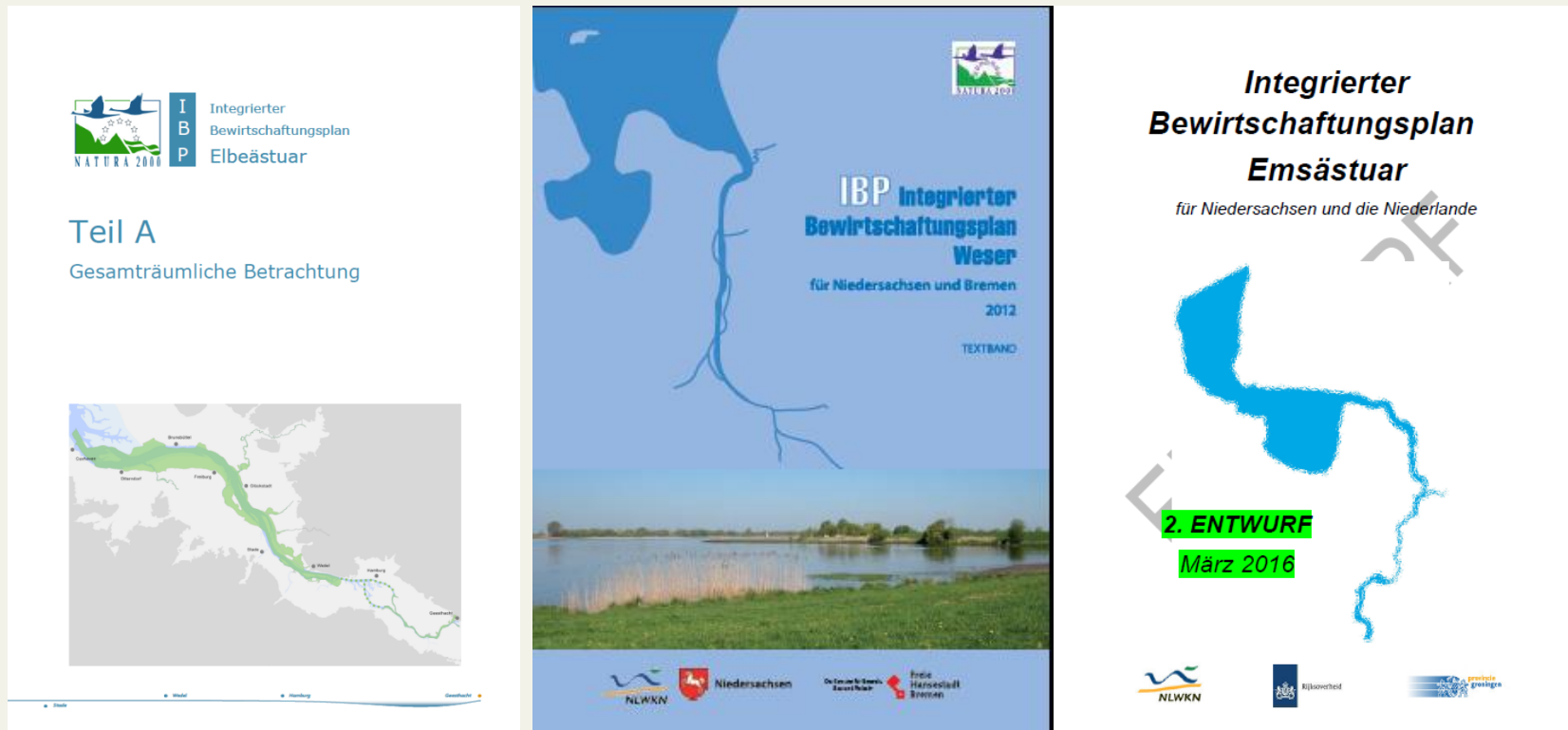


Integrated Management Plans: from “Paper Tigers” to the implementation of measures



IMPs for the estuaries of Elbe, Weser and Ems



Ecological situation of the three big German estuaries

IMP Elbe 2012, IMP Weser 2012, IMP Ems – Teil A 2014:

A: favourable status

B: middle status

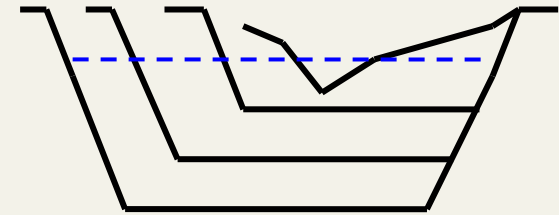
C: unfavourable status

D: does not appear

LRT / Arten – FFH-RL	Elbe HH	Elbe Nds	Elbe SH	Weser F1	Weser F2-4	Ems
Estuaries 1130	B	C	C	B	C	C
<i>Alosa fallax</i>	C	C	C	C	C	C
<i>Petromyzon marinus</i>	B	C	B	C	C	C
<i>Lampetra fluviatilis</i>	B	C	B	C	C	B
salmon	C	C	C	D	D	C

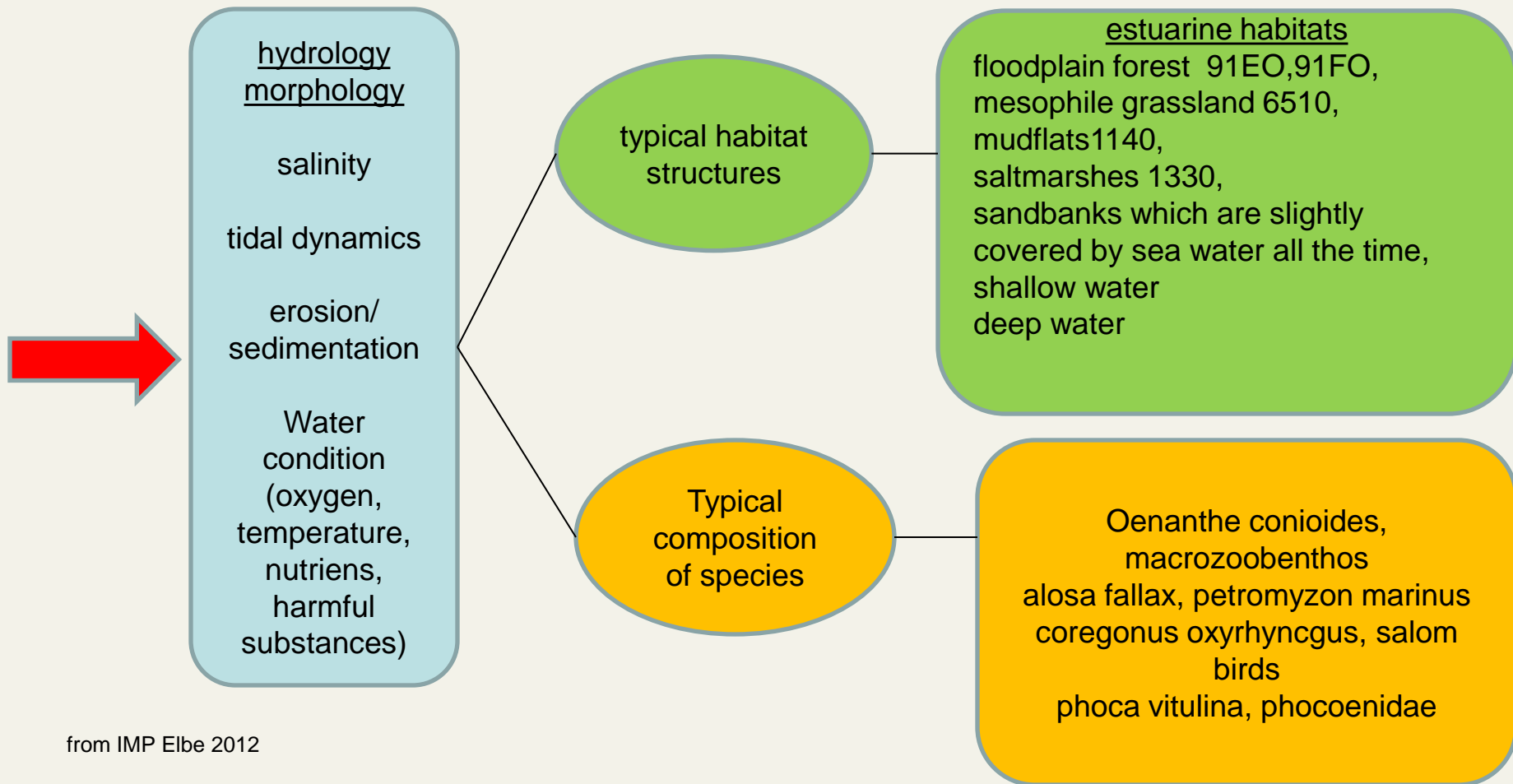
Main reasons for this situation are the changed hydro-morphological conditions due to deepening and dyking:

- extreme increase in water levels during storm floodings
- extreme increase in the tidal range in the inner part (Elbe approx 2m; Weser approx 4 m, Ems approx 1,8 m)
- extreme increase of tidal pumping in the Ems and Elbe
- dramatic loss of aquatic habitats due to silting up of side areas
- Strong increase in current velocities of the river and decrease in side areas
- dramatic loss of estuarine habitats due to reduction the floodplains
- deficits of oxygen





Key factor for the ecological status of the habitat complex 1130 estuaries are the hydro morphological conditions



from IMP Elbe 2012



Without doing nothing: Continuing deterioration of the estuaries

Präsentation of Dr. Harro Heyer (Federal Waterways Engineering and Research Institute) from 2013 (TIDE-Conference), Chart 22 and 24:

- **Weser is mainly ebb dominant** because of larger ebb slope in inner part
- **Elbe is (often) flood dominant** – larger flood slope in inner part
- **Ems is extremely flood dominant** – much larger flood slope in inner part

This result is congruent to residual transport pattern in the estuaries, the reason for maintenance dredging of fine material in upper parts.

1. With enough fine material in the estuary a flood dominant system can pump it into shallows and flats (import of material).
Hydromorphologic response: Reduced tidal volume in shallows and flats can enhance the flood dominance.
2. In a very flood dominant system with huge fine material the turbidity zone can spread over the whole section of inner estuary part.
Hydromorphologic response: formation of fluid mud layers.
3. Bed roughness is reduced by fluid mud layer leading to increased flood dominance.

These are creeping self-reinforcing processes.

Consequences for habitat degradation are possible.

Consequence WWF: there is a strong demand to stop the negative trend!

Strong changes in hydro -morphological conditions demand large restoration measures

IMP Elbe, 2012:
Contains big measures like realignments and reconnecting former tributary waters,

Today:
No targeted measures to stop the negative trend of the deterioration of the current hydro-morphological conditions are in implementation

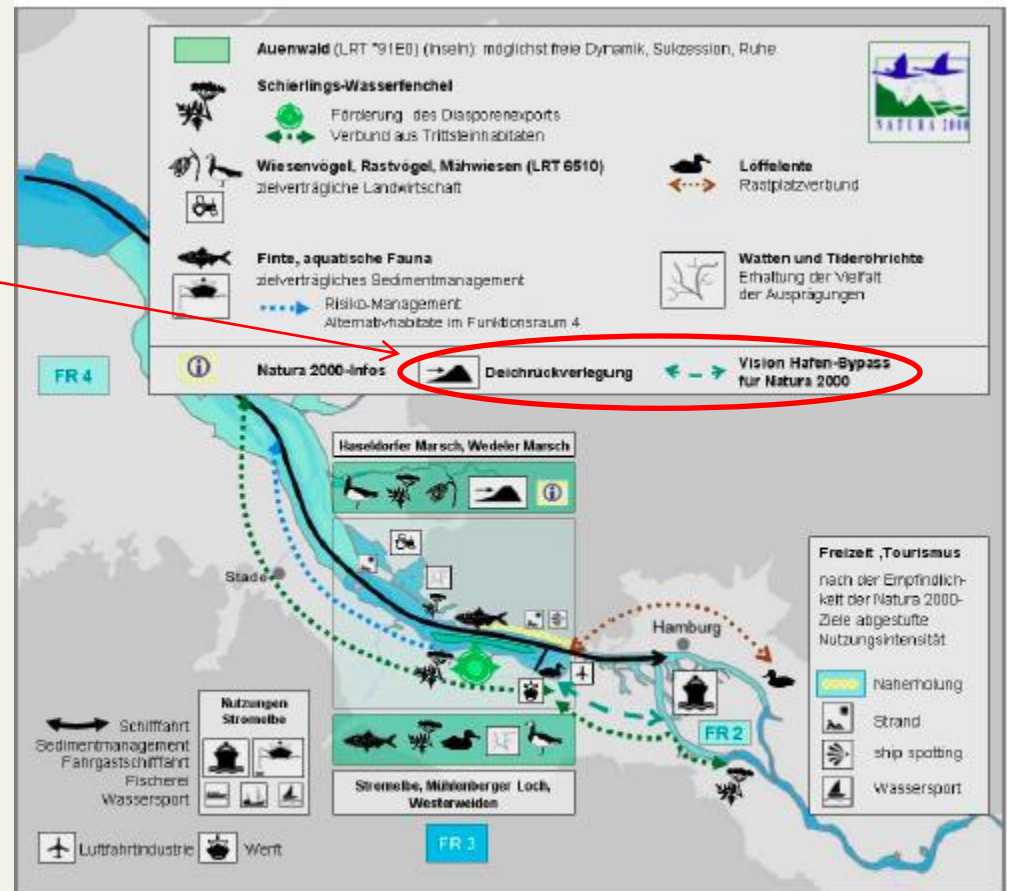


Abb. 5: Integrierter Maßnahmenkonzept für den Funktionsraum 3



Strong changes in hydro morphological conditions demand large restoration measures

IMP Weser, 201; S. 66 und S. 68

A 5.3.1 Maßnahmen mit besonderem Klärungsbedarf

Nr. in FB 1	Titel der Maßnahme	Kohärenz eignung	Funktionsräume							
			1	2	3	4	5	6	7	
E 19	Öffnung von Sommerdeichen bei gleichzeitiger Anpassung der landwirtschaftlichen Nutzung	ja	x		x	x	x			x

Zu den weiteren nicht vorrangigen Maßnahmen des Fachbeitrags 1 „Natura 2000“ gehören³⁰:

Nr. in FB 1	Titel der Maßnahme	Kohärenz eignung	Funktionsräume							
			1	2	3	4	5	6	7	
konkrete Maßnahmen										
biotopgestaltende Maßnahmen										
E 20	Rückverlegung der Hauptdeichlinie	ja	x	x	x					x
E 22	Anlage von Polderflächen im Binnenland	ja		x						
E 23	Anlage von Prielen oder Prielsystemen im Vorland zur Erhöhung der Überflutungsfrequenz	ja							x	x
E 41/ W 41	(Wieder-)Anbindung von Nebengewässern an den Hauptstrom	ja		x			x	x	x	
S 47/ E 47	Schaffung von Ausweichhabitaten für Grünlandbrüter im Binnenland	ja			x	x				

IMP Weser, 2012:
There is no strategy to improve the hydro-morphological conditions



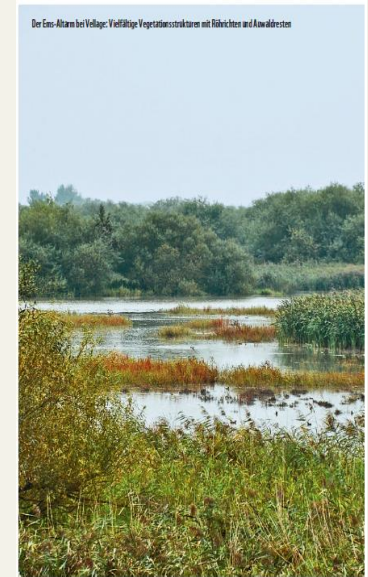
Strong changes in hydro morphological conditions demand large restoration measures

Masterplan Ems 2050:

Large measures to improve the hydro morphological situation should be implemented. Until 2018 the public budget plans 22 million euro for the implementation of the Masterplan. The whole implementation will cost several 100 Mio Euros and takes 35 year.

IMP Ems- Draft:

Should be only a background document for Masterplan Ems 2050.





BUND, NABU and WWF demands for an effective implementation of Natura 2000

- A programme for the implementation of the IMPs, which is featured with enough financial resources and a binding timetable for target achievement
- The implementation of measures which are large enough to reverse the negative trend in the development of the German estuaries
- A strict interpretation of art. 6.4 of the Habitat Directive with high demands on the justification for imperative reasons for overriding public interest and on the analysis of alternative solutions in the case of a project which will adversely affect the integrity of the Natura 2000 site.

Thank you for your attention!

