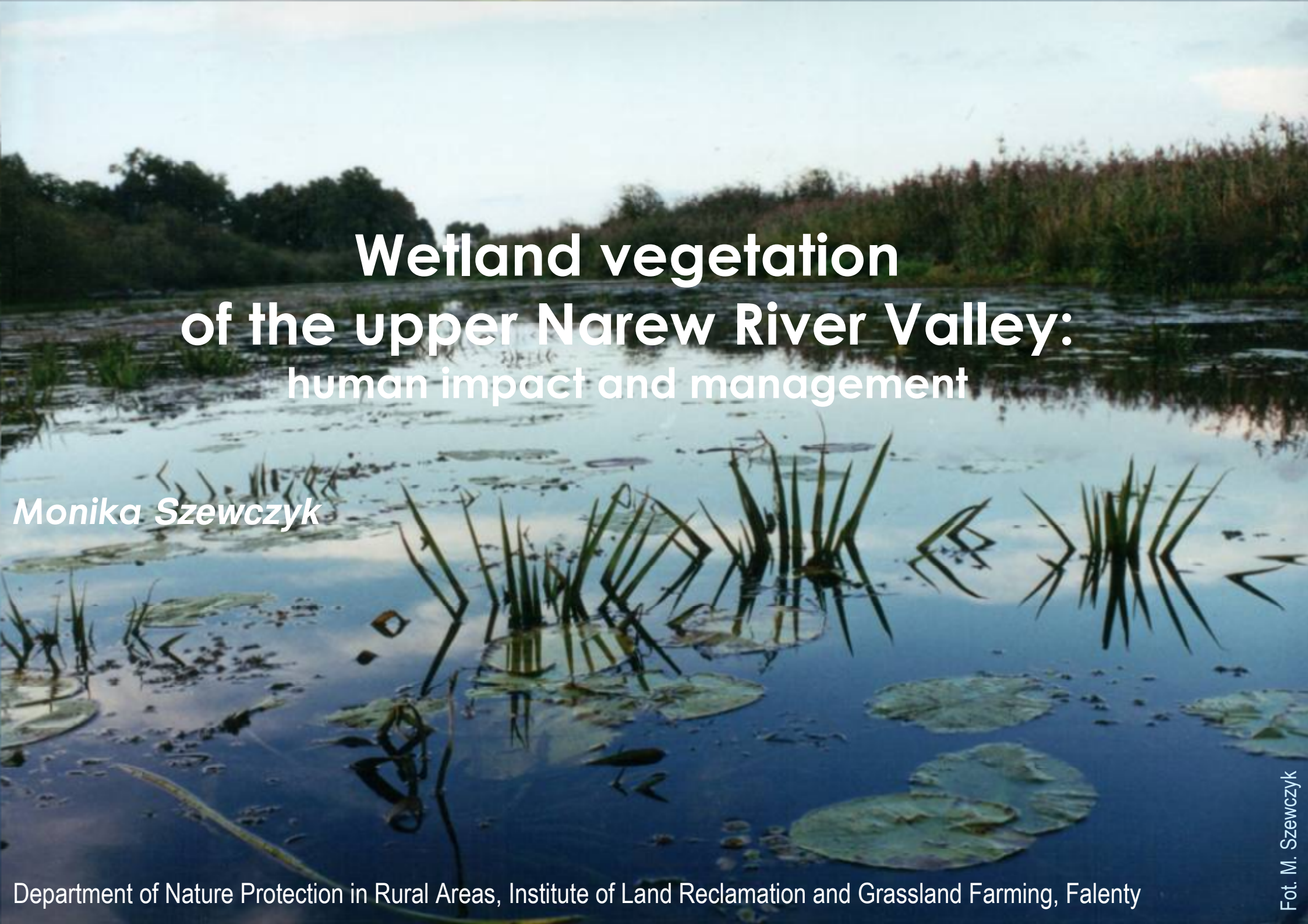


A photograph of a wetland landscape. In the foreground, there is a body of water with several lily pads and tall, thin reeds growing out of it. The water reflects the sky and the surrounding vegetation. In the background, there is a dense line of trees and shrubs under a cloudy sky.

Wetland vegetation of the upper Narew River Valley: human impact and management

Monika Szewczyk

Narew River Valley

- ✓ length 484 km (448 km in Poland)
- ✓ catchment basin - 75.1 thousand km² (53.8 thousand in Poland)
- ✓ springs in the Białowieża Primeval Forest
- ✓ confluence with the Vistula river near Warsaw



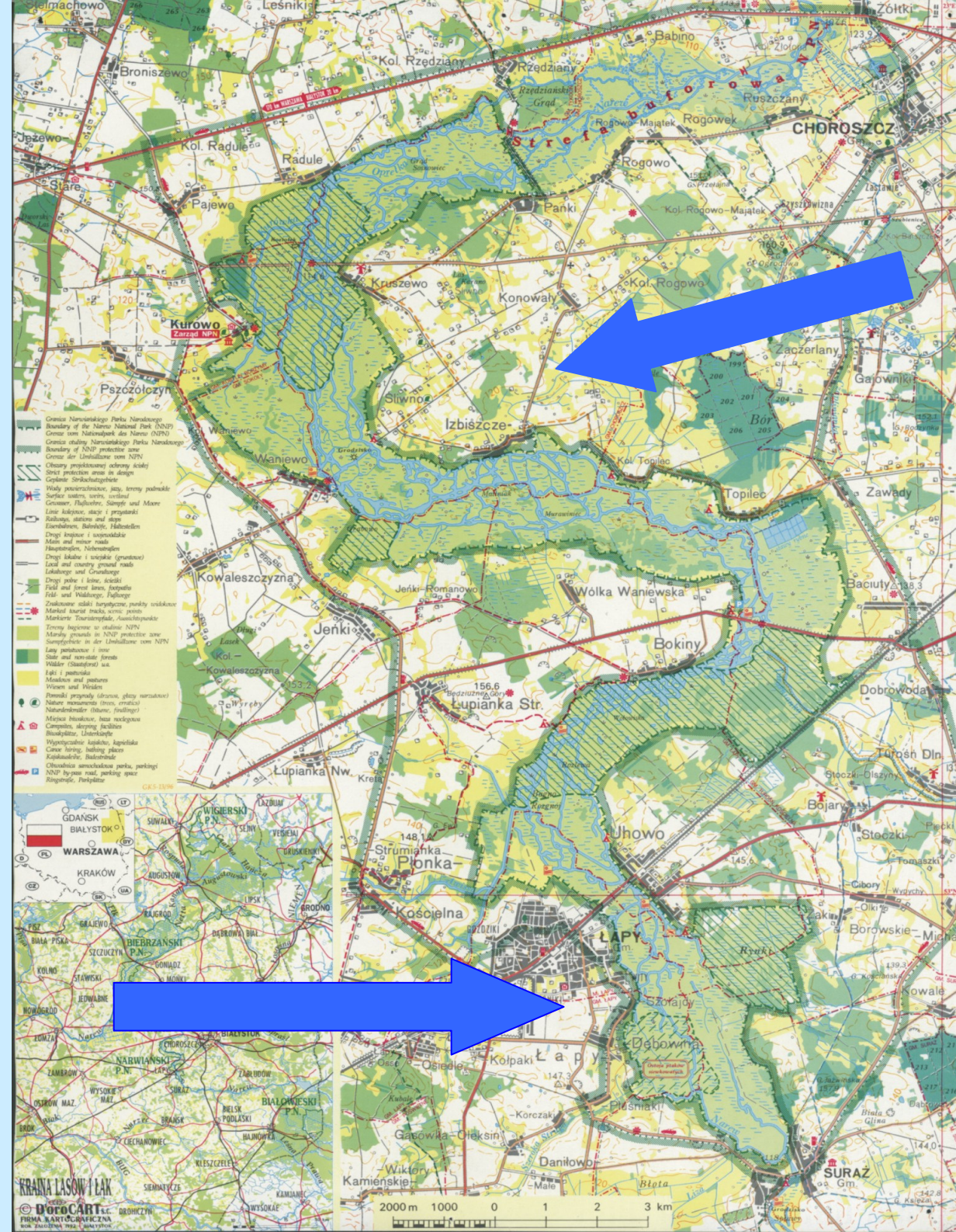
Narew National Park

- ✓ established in 1996
- ✓ area: 7350 ha
- ✓ length of valley: 35 km
- ✓ 41 plant communities
- ✓ bird area of European importance, registered as IBAE Poland 098
- ✓ proposed to be included on the list of RAMSAR sites
- ✓ proposed to be included together with the Biebrza National Park on the World Heritage List of UNESCO



Narew National Park

- Northern part
peat accumulation, several
equally important riverbeds,
low accessibility
- Southern part
no peat accumulation,
one major riverbed, better
accessibility



human impact

- ✓ canalisation of about 50-km section of the river below the National Park
- ✓ canalisation the river in northern part of the National Park
- ✓ construction and filling of the dam reservoir Siemianówka in 1993



1970s

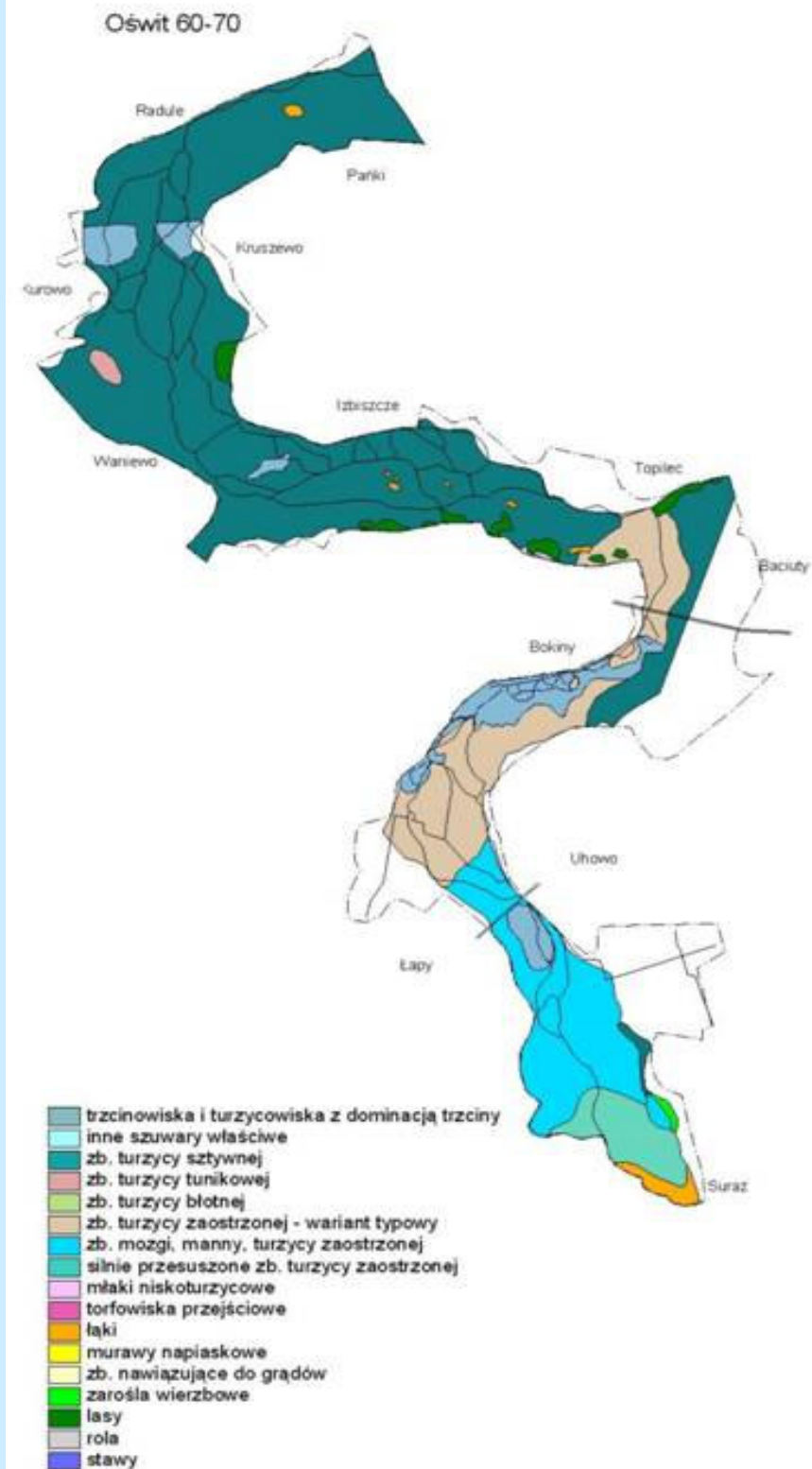


2003



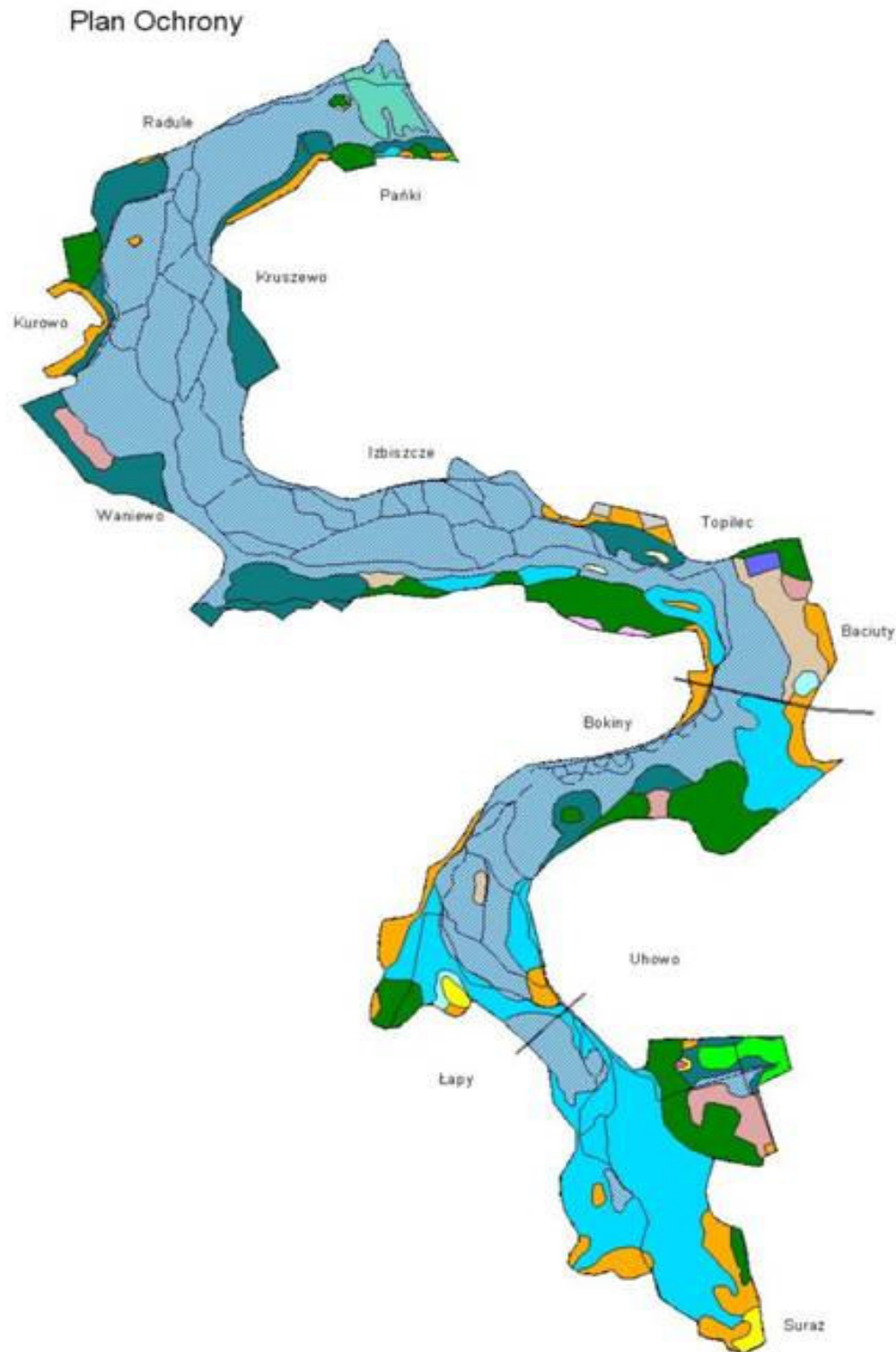
Vegetation of Narew National Park in 70s

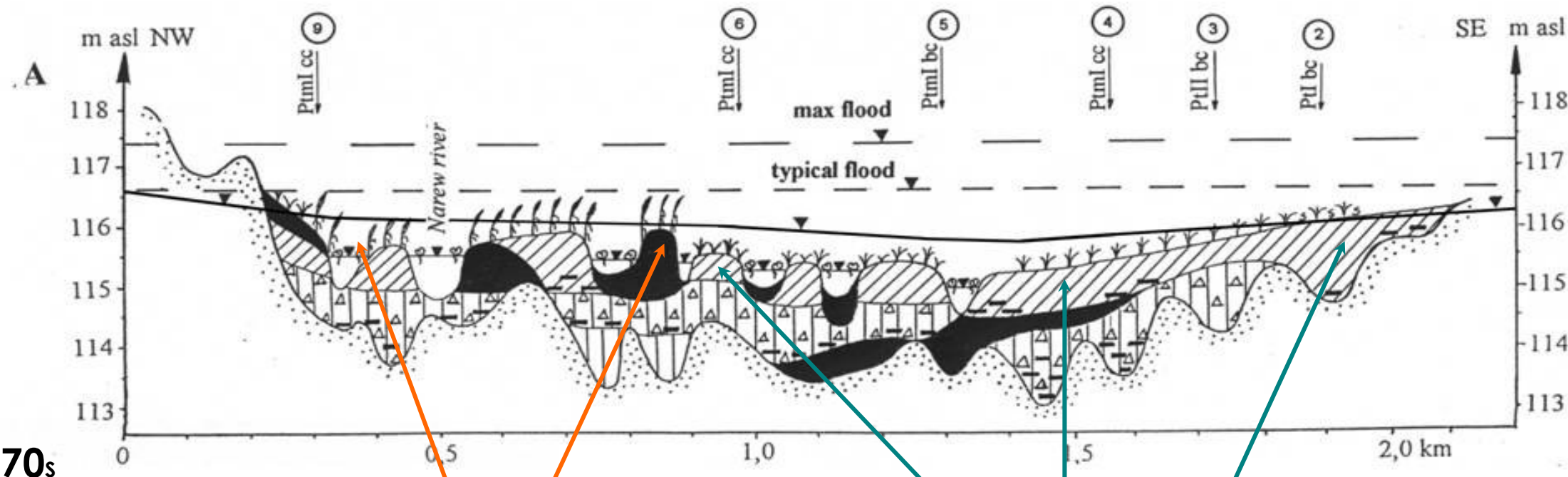
- permanent wetland condition
- mowing and grazing on the whole area
- domination of tall sedge communities (*Caricetum elatae*) in the northern part
- domination of tall sedge community (*Caricetum gracilis*) in the southern part
- tall helophyte communities (*Phragmition*) mainly in the closest vicinity of the river
- locally sedge-moss communities at the valley margins



Vegetation of Narew National Park in 2000

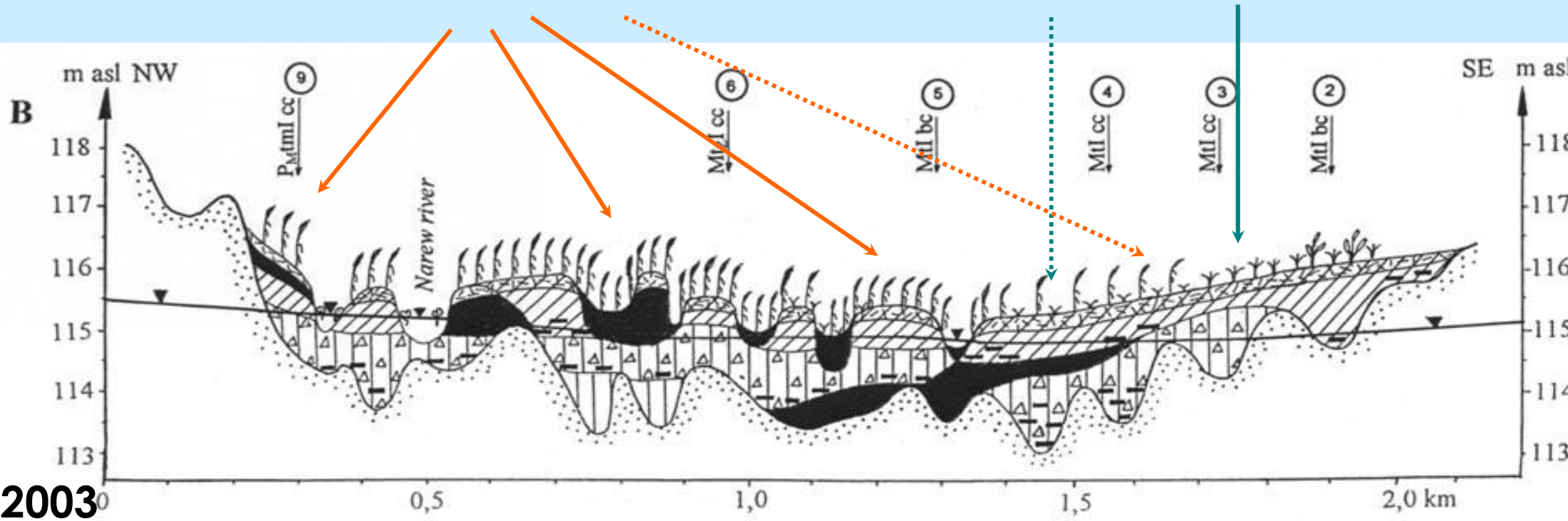
- peat decomposition process
- mowing and grazing mainly in southern part
- decrease of the area of tall sedge communities (*Caricetum elatae*, *Caricetum ppropinquatae*),
- disappearance of sedge-moss communities (*Caricetum diandrae*)
- increase of reedbeds area (*Phragmitetum communis*, *Glycerietum maximae*, *Phalaridetum arundinaceae*) and drained tall sedge communities *Caricetum gracilis*





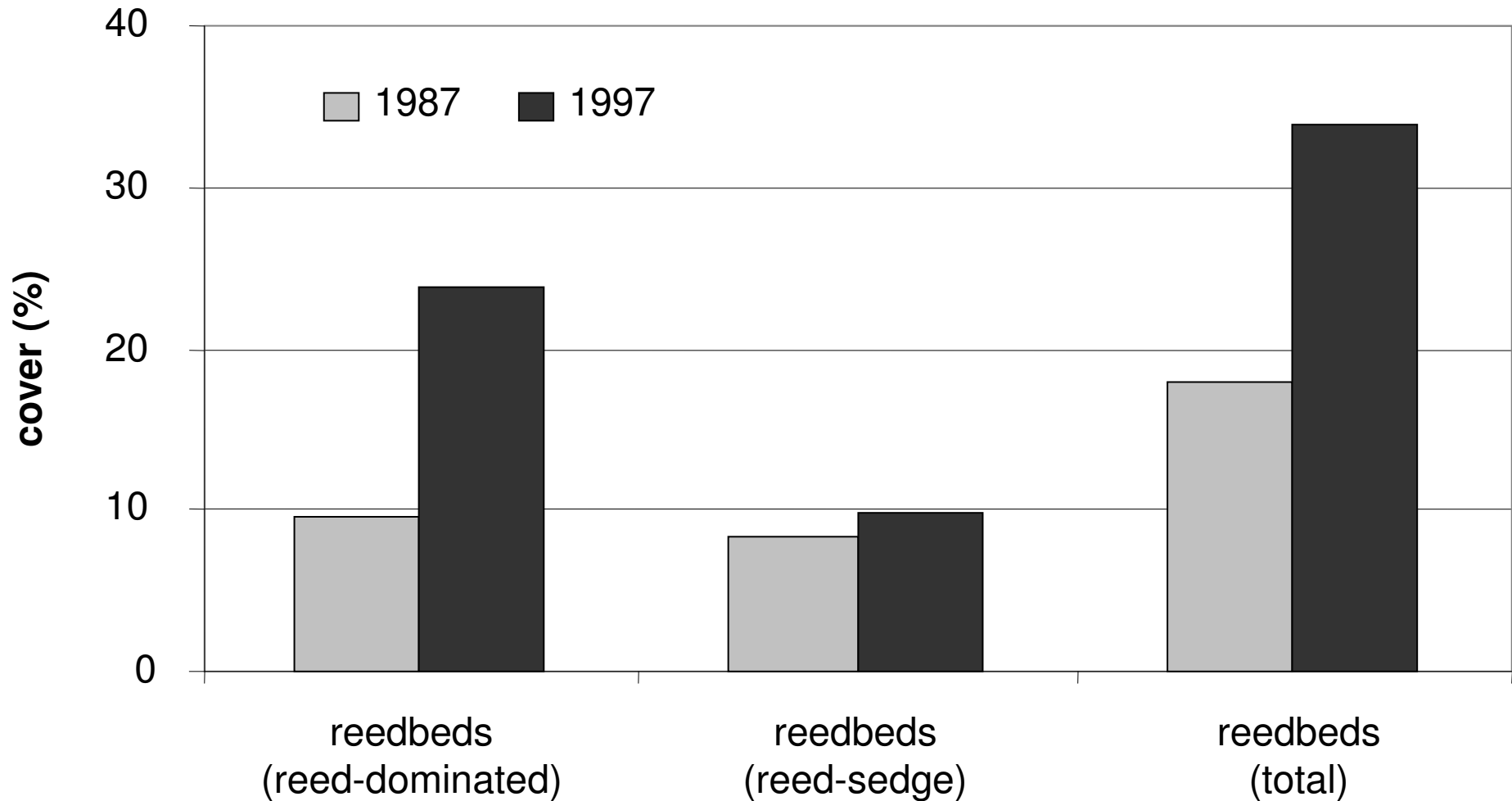
reeds

tall sedges communities



Changes of reedbeds cover on the floodplains of Narew National Park from 1987 to 1997

Próchnicki (2002)



- ✓ Changes in habitat and vegetation from 70s to 2000:
 - cessation of peat accumulation, initiation of peat decomposition, release of nitrogen compounds
 - replacement of *Magnocaricion* communities by matrix communities with dominance of *Phragmites australis*
 - occurrence of species alien to peatlands: *Cirsium arvense*, *Urtica dioica* and dicotyledonous herbs characteristic of meadow communities
- ✓ Causes of changes:
 - drainage below the Park and disturbance to water input far above the Park
 - economic transformations (mainly stopping mowing)

What we will see tomorrow...

Plan of excursion

- 1 mowing and grazing of meadows near Suraz
- 2 bridge Łapy-Uhowo – open view on the valley
- 3 Kurowo – trip by boats and walk on education path

