KAMPINOSKIE BAGNA

6000 ha
wetlands

145 ha
of purchased land

Kampinos Wetlands

A project that protects swamps in the Kampinos Forest (Poland)

2013-2019

40
hydrotechnical objects

60 ha
meadows mown

The project has been awared:

Polska Nagroda Innowacyjności 2015

WHAT'S THIS ALL ABOUT?

The project „Kampinos Wetlands" is a response to the progressive lowering of the water surface levels in wetland areas of the Kampinos National Park. From the 1840s to the 1970s, drainage works were carried out and the channel network has completely transformed the water conditions in the forest: the groundwater level has fallen by about half a meter in the last 60 years. Water from the spring backwaters, instead of stagnating in swamps, flows out quickly from the forest. There are changes in the vegetation. Plants and animals associated with wetland habitats disappear from the area. To halt or reduce these processes, the Kampinos National Park together with partner organizations has implemented a nature conservation project. Thanks to the recently completed project actions, the swamps will have a chance to regenerate.

LAND PURCHASE

The project was implemented entirely on the national park's grounds. For this purpose, we purchased 167 wetland parcels from private owners, with a total area of nearly 145 ha. The purchased land parcels are clustered, which allows more effective management of water levels for nature conservation.

Water shortages have a negative impact on swamp forests, as well as living conditions of plants and animals associated with these habitats.

▲ moose

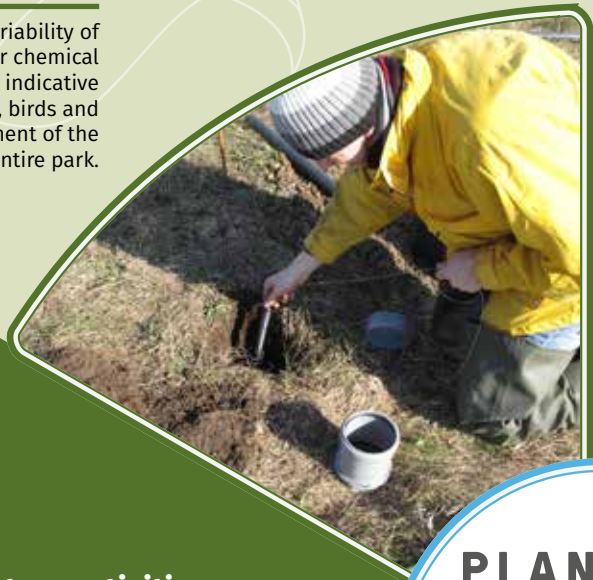
▲ large white-faced darter

▲ crane

PLANNING, MONITORING, DATA COLLECTION

NATURE MONITORING

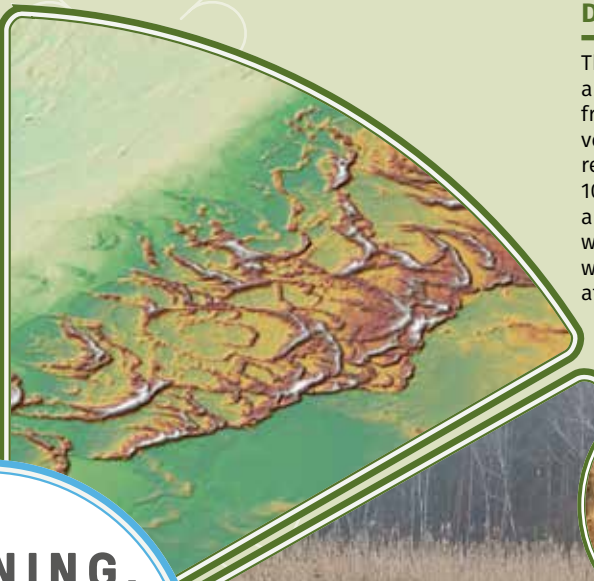
In the project areas, we monitored the variability of groundwater and surface water levels and their chemical composition, as well as organisms: vegetation, indicative species of mosses, water invertebrates, birds and butterflies. We have also made an assessment of the ecological status of waters in the entire park.



Preparatory activities, before the beginning of construction works, lasted 3.5 years - more than half the duration of the project.

DIGITAL ELEVATION MODEL (DEM)

The terrain high-resolution map was created as a result of laser-scanning of the Earth's surface from an airplane (so-called Lidar). This is a very accurate method. The map has a spatial resolution of 0.5 m and height accuracy of up to 10 cm. Thanks to DEM, we could carefully design appropriate hydrotechnical devices, decide where to locate them and estimate how much water will be retained and where it will flow after the construction.

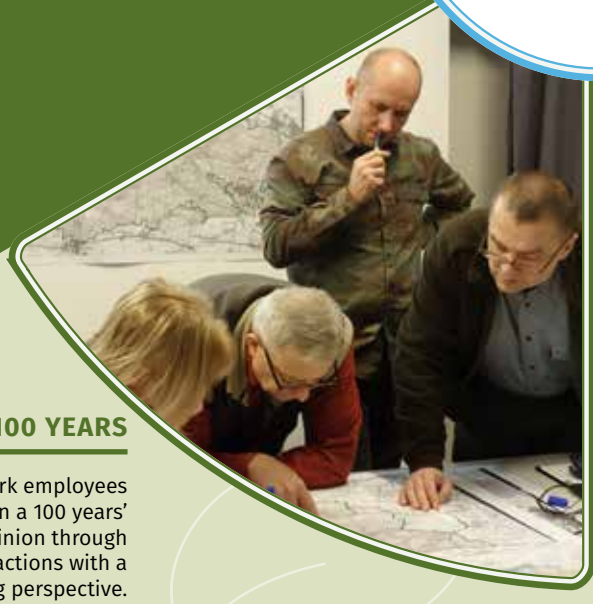


BEAVER IN THE KAMPINOS FOREST

The management strategy of the beaver population in the Kampinos National Park includes information on the number and location of beaver families. We believe that determining the role these rodents have for the water management in Kampinos Forest, as well as solving challenges related to beaver-induced flooding of people's land are crucial for wetland conservation planning.

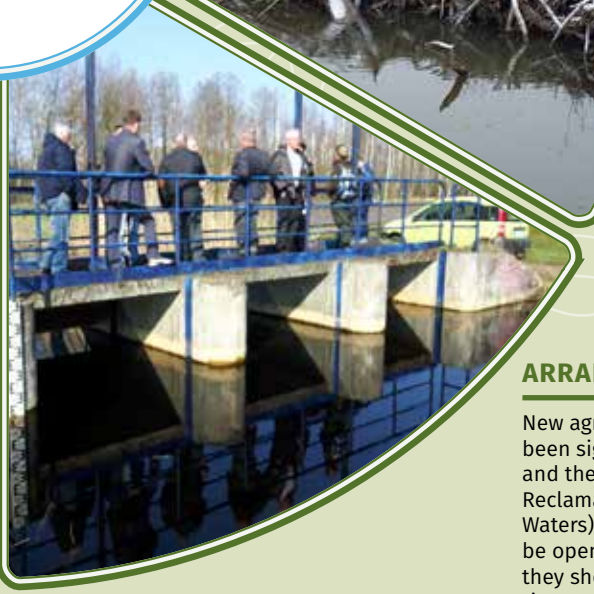
KAMPINOS FOREST IN 100 YEARS

Together with experienced researchers and park employees we reflected on what will the forest look like in a 100 years' time. Gathering of expert knowledge and opinion through this brainstorm, allowed us to look at our actions with a forward-looking perspective.



ARRANGEMENTS REGARDING WEIRS

New agreements regulating the use of weirs have been signed by the national park, local authorities and the Provincial Management Board of Land Reclamation and Water Facilities (now: Polish Waters). The agreements specify when weirs should be open to allow the outflow of water, and when they should be closed to permit water levels to rise.



WE TALKED ABOUT THE PROJECT

WITH ECOLOGISTS

WITH KAMPINOS' COMMUNITIES

in the Forest

at local festivals

visiting other wetland protection projects

at schools

at conferences

in the villages

There are more than 2 thousand people living in the Park. From the very beginning we knew that the dialog with citizens about our activities is one of the most important parts of the project

Mirosław Markowski, Director of the Kampinos National Park

Renovation of the dike in Sadowa has been an urgent issue for many years. Interestingly, it finally happened thanks to wetland protection and now we are less worried about our houses being flooded

Jarosław Franiewski, living in Izabelin-Dziekanówek

The citizens should be aware of what is being planned in their neighborhood. That is why we try to dispel doubts on an ongoing basis, reaching people in different ways and on various occasions

Paulina Dzierża, REC Poland foundation

During the development of the project, our municipality urged for the purchase of wetlands from the citizens. Some farmers waited 20 years for it. I am glad that it finally worked out and, along with the citizens, I am counting on further good cooperation.

Piotr Szymański, Mayor of the Brochów municipality

At first, local people were skeptical towards the project, but after the meeting and the field visit, the majority changed their minds and became more supportive. It is necessary to meet and explain to people what is going on in the park.

Andrzej Paprota, member on the local municipal council

HOW WE MADE THE WETLANDS RETAIN WATER

The project activities aim primarily at slowing down the outflow of water and keeping it in wetlands during periods of drought, through construction of various types of small hydraulic structures. Usually, the constructed objects partly dam-up the ditches, so the water won't outflow into larger channels. Each of these objects was designed to raise the water level up to 40 cm. The water, however, shall stay in wetlands, not causing inconveniences to local communities and landowners. Based on research conducted in the Park we knew that the most effective way to protect local wetlands is by reducing the water outflow through small ditches, so we did not alter the functioning of the main water channels. Moreover, the constructed objects have no effect on the, so-called, high water.

CULVERTS WITH TIDAL FLAP VALVE

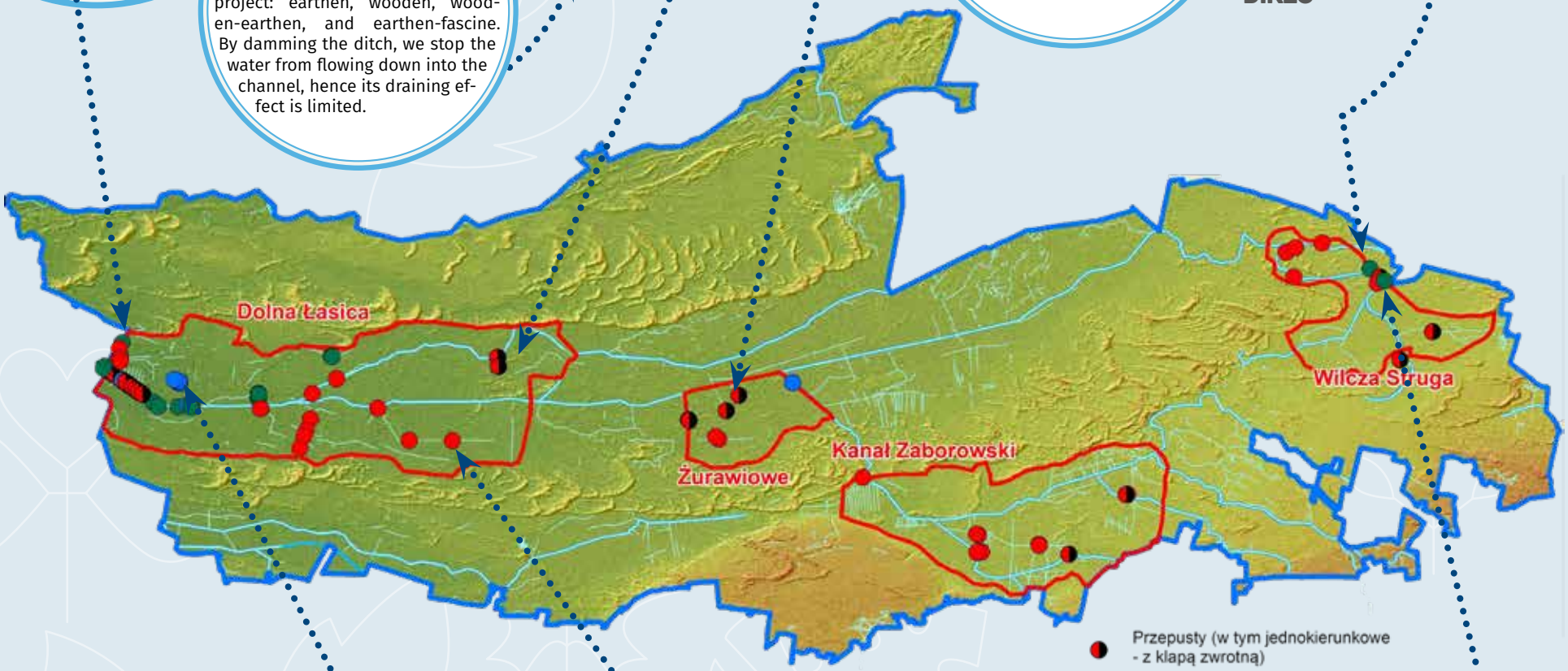
We installed tidal flap valves in culverts under the dikes that separate wetlands from villages and farmland, and where we wanted to direct the water from channels back to the swamps. The valves allow water to flow one-way only. If the water level rises, the flap opens and lets the water out, to the wetlands. When the levels drop, the flap closes, retaining the water at the swamp, keeping it from outflowing to the private lands or channels. It's an example of how a once draining network can also serve for irrigation.

DAMS

Permanent dams block the ditches, making them shallower. We have built several types of permanent dams in the project: earthen, wooden, wooden-earthen, and earthen-fascine. By damming the ditch, we stop the water from flowing down into the channel, hence its draining effect is limited.

DIKES

At the Park's boundaries, where the wetlands boarder private lands, we strengthened the dikes, so the water can be retained in wetlands, without flooding private lands. We restored the dikes that separate wetlands from private grounds – villages and arable land.



REINFORCEMENT AND CUTTINGS OF THE CHANNEL BANKS

In places where the Łasica channel heavily drained the meadows, we sealed its banks so that the water stayed in the wetlands. Where the hydrological situation allowed, we made cuttings in channel banks, to let the water overflow into the swamps during the high-water stages.

DAMMING FORDS

Fords dam up water at the intersections of ditches with dikes. Thanks to the stone structure, the water does not wash out the road running on the dike, but is rather build up, retained and the ditch's draining effect is reduced.

WATER LOCKS

Wooden water locks on ditches make it possible to adjust the damming height with a movable board slid into a frame. We built them in the areas located on private lands, so that one could open them and drain off excess water if needed and, when possible, close them to raise the water levels

National Fund for Environmental Protection and Water Management

Wojewódzki Fundusz Ochrony Środowiska i Gospodarki Wodnej w Warszawie

LIFE 12 NAT/PL/000084 Wetlands conservation and restoration in “Puszcza Kampinoska” Natura 2000 site

Kampinoski Park Narodowy

REGIONAL ENVIRONMENTAL CENTER REC Poland

Mazovia. heart of Poland

ITP

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