

<b>Name of the place:</b>			
<b>High biodiversity – Juchowo forest</b>			
<b>Basic information</b>			
Cadastral zone	Borne Sulinowo commune, West Pomeranian Voivodeship, Poland		
Land register reference	321504_5.0099.15/4		
Owner	Stanisław Karłowski Foundation		
Contact	info@juchowo.org		
Latitude GPS	53.4037729N, 16.2927092E		
Area	8,02 ha		
Altitude	140 m above sea level		
<b>Description of wider relations</b>			
Growing culture	Alder carr and beech-oak forest.		
The nature of the land	Forest, partly waterlogged wooded terrain close to a road to Zameście Village.		
Current use	Private, not managed forest	Comm.:	
Water or water source	On the east side of this terrain there is a water canal which connects the Ciemino swamp and the Ciemino Lake (south side of this terrain) with the Radacz Lake and the Juchowo Lake.		
Territorial relations	Private property of the Stanisław Karłowski Foundation		
Forest management plan (FMP)	Yes	Valid through	n/a
Age: in %	European black alder ( <i>Alnus glutinosa</i> )	25 – 50 years old	x
	beech ( <i>Fagus</i> ), oak ( <i>Quercus</i> )	50 and more	

## **Biota – forest cover and its inhabitants**

<b>Vegetation as from resources</b>			state
Phytocenology	18% - Alder carr 82% - fresh forest		
Original natural vegetation	Beech – oak forest waterlogged alder forest		
Potential natural vegetation	oak ( <i>Quercus</i> ), beech ( <i>Fagus</i> ), willow ( <i>Salix</i> )		
Forest stand: in %	Tree layer:	oak ( <i>Quercus</i> ), pine ( <i>Pinus sylvestris</i> ), beech ( <i>Fagus</i> ),	

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		spruce ( <i>Picea</i> ), common aspen ( <i>Populus tremula</i> ), alder ( <i>Alnus</i> ), birch ( <i>Betula</i> ), willow ( <i>Salix</i> ), wild cherry ( <i>Padus avium</i> )	
	Shrub layer:	beech ( <i>Fagus</i> ), oak ( <i>Quercus</i> ), rowan ( <i>Sorbus aucuparia</i> ), spruce ( <i>Picea</i> ), hazel ( <i>Corylus</i> ), bird cherry ( <i>Padus</i> )	
	Herb layer (description):	sedges ( <i>Carex</i> ), common skullcap ( <i>Scutellaria galericulata</i> ), poisonberry ( <i>Solanum dulcamara</i> ), marsh fern ( <i>Thelypteris palustris</i> ), milk-parsley ( <i>Peucedanum palustre</i> ), tufted loosestrife ( <i>Lysimachia thyrsoflora</i> ), yellow loosestrife ( <i>Lysimachia vulgaris</i> )	
<b>Fauna – remarkable, known-but-not-seen</b>			state
Vertebrates	common frogs ( <i>Rana temporaria</i> ), red squirrels ( <i>Sciurus vulgaris</i> ), wild boars ( <i>Sus scrofa</i> ), several species of woodpeckers, common blackbird ( <i>Turdus merula</i> ), white wagtail ( <i>Motacilla alba</i> ), red deer ( <i>Cervus elaphus</i> ), roe deer ( <i>Capreolus capreolus</i> )		
Insects	ticks ( <i>Ixodida</i> ), ants ( <i>Formicidae</i> ), dor beetle ( <i>Geotrupes stercorarius</i> )		
	Snails ( <i>Gastropoda</i> )		

**Forest as a cultural aspect of the landscape**

**PAST**

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<b>Culture</b>		
What has influenced the forest so far, is it somehow connected with the culture of the surrounding environment, is it part of the cultural development of the landscape?	<ul style="list-style-type: none"> <li>- Ditches, drainage, canals nearby</li> <li>- Few simple forest paths</li> <li>- There have been attempts to transform the forest into a commercial forest</li> <li>- In addition, in the 80s of the 20<sup>th</sup> century there were logging attempts</li> <li>- There was a reduction of interference to the minimum level, with the goal of supporting the original tree stand regeneration</li> </ul>	
<b>Civilization</b>		
What is the relationship between the forest and civilization now, how does the civilization reflect on its state and development?	From an economic point of view, wetland forests are worthless. Furthermore, people are reluctant to go on a stroll in this type of forest due to high humidity and density of alders growing there. However, this makes the alders a valuable habitat in terms of biodiversity.	
<b>Story</b>		
Origin of the relation	Before World War II, the Juchowo forest area belonged to Germany. Specifically, the area of Juchowo belonged to one family who managed a large landed estate, which included not only agricultural land but also forest as well. After the war, the Germans left and people from eastern Poland were resettled in the area. The grounds of the manor were taken over by the St. Karlowski Foundation, which is trying to recreate and preserve the natural conditions from before the war. Originally, the Juchowo forest was not used commercially due to its marshy nature, and was a sanctuary for wild animals.	
<b>PRESENT</b>		
Currently, the Juchowo forest belongs to the St. Karlowski Foundation, which took over the former Juchowo land estate. The Foundation is trying to restore the water conditions destroyed in the 1980s by a system of drains and canals. The owners' idea is to keep the forest waterlogged and make it, as it was before World War II, a sanctuary for wild animals.		Notes and questions
<b>Natural side of present development</b>		
	The trees are not being cut down due to the difficulty in using heavy machinery on wetlands. Biodiversity is increasing due to reduced logging and lack of interest from people in walking there.	
<b>Threats and limits</b>		

	To preserve a high biodiversity wet forest, the management of the neighbouring land is of utmost importance; in particular, there needs to be an emphasis put on water retention in the environment.	
<b>FUTURE</b>		
Juchowo Foundation plans to have a high-biodiversity forest and to restore the wetlands.		Notes and questions
<b>Natural side of present development</b>		
	No logging, biodiversity will increase	
	Animals will have the space and necessary conditions to live and breed. Fauna will become more diverse, and there will be no damage caused by the use of heavy machinery such as harvesters.	
<b>Threats and limits</b>		
	Change of land use of the neighbouring land, issues with keeping the water in the forest are possible.	
<b>Intention of the forest activities</b>		
Expectations	The forest will have a high biodiversity.	
What will my forest provide to people	The forest will become a sanctuary for wild animals and people will be able to enjoy high biodiversity.	
Plan – in 10 years	Partial cutting of large-area (to restore stands of) beeches, pines, oaks and others. Regeneration felling (to ensure adequate moisture and diffused light, and to maintain cover for the forest against extreme temperature fluctuations and wind). Late thinning (to prepare the stand for natural regeneration) and agromelioration (to improve the physical properties of the soil).	
Plan – in 50 years	No logging, wild forest, natural forest inventory, monitoring the biodiversity	
Who do we need to reach the goal?	Forestry experts, local authorities, cooperation between the local community and the Foundation	
<b>Proposals and steps</b>		
<b>What</b>	<b>Legend</b>	<b>Who</b>
Forest inventory with the support of forestry and wetland experts	Analyse what can be done to keep the water in the forest and preserve the wet alder forest.	land owner + forester

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Preparation of the forest for seedlings	Partial, large-area felling (for the renewal of tree stands) of beeches, pines, oaks and others	landowner
Cutting and planting	Regeneration felling to ensure adequate moisture and diffused light, and to maintain cover for the forest against extreme temperature fluctuations and wind.	landowner, forester
Late thinning	Prepare the stand for natural regeneration.	landowner, forester
Melioration	Minor water retention activities – removal of drainage from the neighbouring land, installation of small water dams on the nearby canal.	land owner, forester
Monitoring	Check if another intervention is needed. In addition, nesting boxes for birds will be hung.	land owner

### **Monitoring the development**

Time		
27.06.2022	Forest inventory	
2022 / 2023	Regeneration felling	
10.2023	Planting	
03.2024	Introduction of small-scale water retention	
2025	Monitoring	

### **Inspiration**

Literature		what
Heard around	<i>Juchowo Foundation</i>	
Meetings	08.2021, 10.2022	
Discussions within the project team	08.2021, 10.2021, 04.2022	