

FLOODPLAIN AS ONE OF THE BASIC COMPONENTS OF WETLAND

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Abstract: The article presents the situation of the wetlands in Belarus. It is highlighted the importance and role of floodplains in the stability of wetlands, as well as the factors that can influence these ones negatively. The wetlands' area has decreased by half compared to the situation in 1960. By applying the laws and the operational management plans, there have been succeeded the protection and restoration of floodplains, so in Belarus there are currently nine Ramsar sites.

Keywords: anthropogenic influence, floodplain, Republic of Belarus, wetlands

Floodplains, together with riverbeds, are unique geographic objects making up the bottom of the valley normally flooded during the wet phase of the hydrological regime. Being formed in the erosion-accumulation process of the river and adjusting the flow of high water, being "not only a sediment load of the river flow, but also a source of replenishment", floodplains are covered with their specific soil and vegetation (most floodplain soils are very fertile). They have their own floodplain landscapes, different from the zonal ones, their own biological resources and biodiversity, thus constituting an important element of nature, vulnerable to both natural, hydroclimatic changes and anthropogenic influence. At the same time the floodplain is an integral part of the river channel, an object of investigation in

floodplain studies, and those are part of geographical river channel studies. Being a derivative of the river erosion and accumulation processes, i.e. of the channel-forming activity of the river, constituting, according to N.I. Makkaveev, "a mobile formation" at the bottom of river valleys due to the erosion of floodplain banks, overgrown banks and new floodplain formations, the floodplain controls the runoff and sedimentation during floods and it is a factor influencing the channel processes due to the periodic dispersal of the flow and its washout from the floodplain into the channel, as well as to the interaction of the channel and floodplain flows etc.

Therefore, the channel and floodplain processes are usually treated as a single phenomenon. In turn, channel deformations, resulting in a change of the channel location on the valley floor (horizontal) or its bottom marks (vertical - oriented sedimentation), affect floodplain soils and vegetation, and determine the dynamics of the floodplain landscape. Thus, the location of the floodplain determines its economic significance (agricultural, recreational, as a place of mineral deposits, mainly building

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materials, as well as gravel, for laying communications, residential and urban planning etc.). Therefore, floodplains have always attracted researchers of various profiles of geographic, technical, agricultural, biological, geological and mineralogical sciences. This was combined with a multifunctional role of the floodplain - ecological, hydrological, fluvial, landscape, geological.

Strong environmental tensions may arise during mechanical changes in floodplain soils and vegetation caused by excessive grazing due to a sharp decline in the duration and frequency of floods in the downstream area or, conversely, due to an increase in the duration and frequency of floods in the upper reach of the waterworks, due to lower groundwater level in non-proper drainage etc. In all these cases, the fertile flood plain phytocenoses disappear being substituted by weeds.

Extreme ecological stresses on floodplains are caused by drastic changes of the floodplain landscape, usually resulting in irreversible loss of land, landscape and resources on the floodplain, and often in the adjacent area. These include a complete or partial washout of floodplain soils, occurring after the plowing of the floodland carried out in unfavourable hydrological conditions.

It should be noted that not every human intervention in floodplain landscape leads to increased environmental stress, sometimes vice versa. So, it hardly makes any sense to talk about deteriorating environmental situation in the floodplains, where urban development is under way, although in this case natural floodplain landscapes are completely destroyed. The successful integration of urban areas into the previously existing floodplain landscape and the use of lakes and creeks for recreation significantly refine the area, thereby improving the overall environmental condition of the urban settlement.

Possessing significant resources of the wetlands, the Republic of Belarus plays an important role in their conservation at European level. In the early 1960s, wetlands

occupied 2939 thousand hectares, or 14.2 % of the country's territory. As a result of large-scale land reclamation work, in the 1950-1990s over 51 % of swamps were drained. To date, about 1434 thousand hectares of wetlands, or 6.9 % of the territory, remain in their natural state, but on many of them the hydrological regime has been partially disrupted.

In Belarus, nine Ramsar sites are protected today: Berezinsky Biosphere Reserve, the largest swamps in Europe, Sporovskoye and Zvanets, typical for Belarusian Poozerye large swamps Yelnya and Osveiskoye, a cluster of swamps in the Polesye lowland, the swamps Olmanskiye, as well as a number of swamps, forests and meadows in the valley of the river Pripyat – Srednyaya Pripyat, Kotra and Prostyr.

The purpose of Belarus' participation in the Convention was, above all, the preservation of wetlands, where a lot of rare birds nest, many of them being endangered species, not only in Europe but also worldwide.

To maintain a good ecological state of wetlands of international significance, and to organize their sustainable use the government of the Republic of Belarus carries out comprehensive monitoring of environmental systems, creates operating management bodies, develops efficient management plans. The laws "On Environmental Protection", "On Specially Protected Natural Areas", Water Code of the Republic of Belarus, the Law of the Republic of Belarus "On land reclamation" and other regulations governing the protection and sustainable use of wetlands have been adopted.

Rezumat:

LUNCA, O COMPONENTĂ DE BAZĂ A ZONELOR UMEDE

Articolul prezintă situația zonelor umede din Republica Belarus. Este subliniată importanța și rolul luncilor inundabile în

stabilitatea zonelor umede, precum și factorii care le pot influența negativ. Suprafața zonelor umede a scăzut la jumătate comparativ cu situația existentă în 1960. Prin aplicarea de legi și planuri operaționale de management, s-a reușit protejarea și restaurarea văilor inundabile, în Republica Belarus existând în prezent 9 situri Ramsar.

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