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VALLEY-RIVER LANDSCAPE-TECHNICAL SYSTEMS OF THE SOUTHERN BUH ECOCORRIDOR

MONOGRAPH

2019

UDC 911.2+556+626/627

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Valley-river landscape-technical systems of the Southern Buh eco corridor: monograph / *Sovhira S. V., Lavryk O. D., Tsymbaliuk V. V. – Palmarium Academic Publishing, 2019. –300 p.*

The monograph considers theoretical and methodological principles of river landscape-technical systems of the Southern Buh, analyzes the previous experience of their learning, as well as interconnections in paradynamic and paragenetic landscape complexes. The stages of the formation of river landscape-technical systems of the world and Ukraine in particular are singled out and described. An example of a plain river shows the structure of river landscape systems. The ways of improvement of modern landscape-technical systems are substantiated, projects of river landscape optimization have been developed and proposed on the example of separate natural areas in the valley of the Southern Buh.

For geographers, landscape researchers, environmentalists, hydrotechnical engineers and environmental protection specialists.

UDC 911.2+556+626/627

Sovhira S. V., Lavryk O. D., Tsymbaliuk V. V. ®

INTRODUCTION

Due to the considerable anthropogenic load on the river landscape, it is now difficult for geographers to identify areas of streams and floodplains that can still be considered natural. Any modern river has been transformed more or less due to its economic development. Current rivers are cascades of ponds or water reservoirs, between the upper and lower levels of which it is difficult to draw a clear boundary; former natural canals with unique meanders have been transformed into straight channels; coastal shafts have been replaced withs anti-flood dams; the bottoms of canals serve as a foundation for bridge supports, etc. The logical question arises: *can modern rivers be called "rivers"*? In the stream bed of each river, the reach alternates with the crossovers, which are now silted by sediments of ponds and water reservoirs. Each river flows in the waterway produced by the canal, but now it is a linear deepening reinforced with concrete slabs, where there is no deep erosion. In the places of the output of solid rock in the course rapids are formed, which are now either flooded with water reservoirs, or destroyed as a result of the development of canal quarries. In the hydrological regime of most rivers periods of low water, flood, freeze up, drift ice are distinguished, but spring floods practically do not occur now and water thaws hardly flood a flood plain. Each river tries to achieve its basis of erosion, which is now impossible due to the flood control of river flow. As a rule, the river does not flood the floodplain terraces, however, their large areas are under water reservoirs. River systems are separated from each other by watershed divides, however, laying of transport and water supply channels (the Great Chinese Canal, the Dnipro-Buh Canal, the Rhine-Main-Danube Canal, the Moscow Canal, the Volga-Don Canal, the Dnipro-Kryvyi Rih Canal) unites them into complex aggregates, where the environmental problems of one river basin become a threat to another. As a result, the modern river network of Ukraine has long been transformed into anthropogenic network of surface waters, and modern rivers are nothing more than a complex combination of natural river landscapes with river landscape-technical systems (RLTS).

For thousands of years, civilizations appeared, developed and died within river valleys. Activities of people led to the transformation of landscape structure of stream beds and floodplains. However, these