TEKA. COMMISSION OF MOTORIZATION AND ENERGETICS IN AGRICULTURE – 2016, Vol. 16, No.3, 101-108

Modern state of natural landscape complexes of Zaporizhzhya area

Valerij Lysenko, Yulia Chebanova

Tavria State Agrotechnological University
Ukraine, Zaporizhia obl, Melitopol, ave. B.Khmelnitsky 18, 72310,
e-mail: chebanov-ab@yandex.ru

Received September 01.2016: accepted September 05.2016

Summary. Formation of modern landscapes of Zaporizhzhya region occurred in the Holocene period. During the Holocene wet phase changing climate fairly arid, warm - rather cold, but the average climatic indicators were close to modern. These conditions contributed to the formation of steppe zonal type of landscape. However, due to prolonged exposure to diverse steppe landscapes economic impacts associated with mismanagement of their natural potential and increasing human pressure on the natural environment has been transformed natural landscapes and change their properties. The result of this action was that the area landscapes drastically reduced. Zaporizhzhya region was the most economically mastered in all regions of Ukraine.

To further study the issues to optimize environmental management of the region, the article reproduced a modern structure of landscapes area. The area characterized Zaporizhzhya region lowland class and type steppe landscapes. Three subtypes of landscapes: the north, middle and dry steppe. Each subtype is divided into land. Within North steppe subtype isolated Dniester-Dnieper and the Left-Bank Dnepr-Azov province. Medium steppe subtype is represented by the Black Sea margin, and dry steppe - Black sea-Azov. The most popular items on the optimization of environmental management are landscaped areas and areas of morphological units within them. That level reflects the nature of the landscape area inside the area landscape differentiation. Within the Zaporizhzhya region allocated 7 landscaped areas: highland Azov, highland-Dnieper south slope, Kinsko-Yalinska low-lying, low-lying Azov, the Dnieper-Molochansk low-lying, Western Azov-slope highland and lowland Prisivasko-Priazov.

Key words: landscape structure, economic use of natural landscapes, Zaporizhzhya area, steppe, landscape areas, soil, optimization of nature use.

INTRODUCTION

Exposure of structure and landscape features of territory, power for a substance connections between nearby landscapes, configuration and properties of landscape borders the decision of the applied problems predefined by a necessity, in particular optimizations of nature use of concrete territory.

THE ANALYSIS OF RECENT RESEARCHES AND PUBLICATIONS

The modern landscapes of the Zaporizhzhya area were formed in a holocene period [1,2], about 16 thousand years ago. In this time middle climatic indexes were set at level near to modern. Such terms assisted forming of steppe zonal type of landscape. At the same time internal zonal differentiation of correlation of heat and moisture from a north southward assisted forming on the south of zone of stripe of wormwood-cereal dry steppes with darkly-chestnut soils, middle stripe of fescue-feather-grass steppes with black earth south and north stripe of herb fescue-feather-grass steppes with black earth ordinary.

However, the protracted economic use of natural landscapes and increase of anthropogenic pressure on a natural environment resulted in the multi-level changes of properties of natural landscape complexes mainly toward their worsening and certain complications of territorial landscape structure of the Zaporizhzhya area. As a result landscapes of steppes, and especially landscape complexes of Dry Steppe on the now are most changed for the Zaporizhzhya area as a result of the protracted operating on them of the heterogeneous economic influences related to the inefficient use them self-potential. Transformation of natural landscapes and change of their properties became the result of scalene anthropogenic activity. In the present limits of the Zaporizhzhya area the unchanged or unregenerate landscapes actually did not remain - in a greater or less measure they tested direct or mediated anthropogenic influence. Here upon in the administrative limits of the Zaporizhzhya area natural landscape complexes with the conditionally natural state were saved only on separate, mainly small areas useless for the agricultural, industrial or recreational use - steppe steep slopes of river valleys and beams, litoral stripe of sea of Azov, in podah [3].

OBJECTIVES

An aim of work is determination of modern structure and landscape features of territory of the Zaporizhzhya area for optimization of nature use.

THE MAIN RESULTS OF THE RESEARCH

The landscape structure of the Zaporizhzhya area is presented by unity of territorial formations of flat class of landscapes. The landscape structural division of territory predetermines a selection in her limits of row of landscape complexes of dry land. This division intersperses with numerous off-shore (streamside, seashore) and equatorial by the landscape complexes of sea of Azov with his estuaries and bays, Kahovka storage pool, other storage pools, ponds and river river-beds. All of them combine the system of connections

and relations, form single "landscape space" [4]. His variety and features are caused by different descriptions and types of co-operation of basic productive landscape factors - geological basis, relief, climate, soils, water, vegetation and living organisms.

The system of natural landscape complexes was here upon formed with unique and unique in space landscape picture. His basis is presented by the framework lines of relief (Priazovska sublimity, black sea Region and Priazovska lowlands), river river-beds (Dnepr, Milk, Berda and other), coastline of sea of Azov and Kahovka storage pool. Landscape configuration is complicated by the features of natural and climatic terms of territory, that entailed distribution within the limits of the investigated territory of steppe landscapes with subzonal northsteppe, mediumsteppe and by drysteppe complexes.

More detailed analysis of landscape structure showed that hierarchically the landscape complexes of north-western part of the Zaporizhzhya area belong to the Dniester-Dnepr northsteppe edge, Left-Bank Dnepr-Azov of northsteppe edge (north and east parts of territory), black sea Region secondarysteppe edge (western, central and south-east parts of territory), Black Sea and Azov drysteppe edge (extreme south of territory of the Zaporizhzhya area). In their limits, corresponding to them is distinguished on properties landscape areas and concrete natural landscape complexes (fig. 1).

As basic indicators of naturalness of northsteppe landscape complexes fescue-feather-grass and fescue-feather steppes come forward on black earth ordinary, for secondarysteppe landscapes is a fescue-feather xeropolum on black earth south, and for soutusteppe is the wormwood-cereal rarefied vegetation on darkly-chestnut soils. But actually this vegetation was saved only on uncomfortable for till earth (on about 5% from the general area of area). Id est actually all upland earth is thrown open.

Typical north subzone steppes remained on narrow countries between, halophytic of their variation - on the south and south-west slopes of erosive network, petrofitnye - on outcrops or in the places of the near bedding of crystalline breeds. In northsteppe subzone here and there on the slopes of beams and river valleys there are the gully and atwalls forests that in other subzone of steppe grow only on their bottoms [5].

In mediumsteppe subzone from the greater deficit of moisture, less productivity of vegetable cover and more intensive mineralization of vegetable remain less powerful little humus south black earth was formed, with high potential fertility. A landscape structure is comparatively homogeneous. Her regional abolitions are related to apt-sublime and by low-laying area landscapes, them river-valley and beam girder gully dissection, by the certain change of bioclimatic terms westerly east.

Dry steppe below in all in a hypsometric relation. Characterized by considerable droughtyness, by domination of wormwood-cereal vegetation on darkly-chestnut and chestnut soils. Combination of separate critical climatic factors, exit, on a seashore assists forming of pied landscape structure.

More shallow division of natural landscapes gives an opportunity to define landscape edges, areas, districts and morphological structure of every landscape, that consists of localities, natural boundaries and facies. Their selection is related to heterogeneity of relief of earth surface, different degree of the ground moistening, different amount of the got sunny heat, different vegetable groupments. Most highly sought from positions of optimization of rational nature use are landscape areas and morphological units of level of localities in their limits - watershed, upland, atwatershed slopes, apt-terraced, streamside. Exactly the level of landscape area represents character of inside the area landscape differentiation taking into account of that is needed at the ground of regional charts of optimization of nature use [6,7].

Hypsometric the greatest landscapes within the limits of the Zaporizhzhya area are presented Priazov Upland by a landscape area. She repeats the outlines of the Priazov performance of the Ukrainian crystalline shield the configuration. Near bedding of crystalline breeds of the Priazov array of the Ukrainian crystalline shield, frequent exits of granites and granitoids on a daily surface, the beam for gullies complexes deeply cut in crystalline foundation assisted most maintenance of natural landscapes due to more subzero anthropogenic loading on them [5].

The axial width of the landscape area 30 km high, the surrounding landscape highland also be considered, especially its southern and southeastern slopes. Due to the high hypsometric position and slope areas dominated erosion systems are well developed and belong to the cool slopes. The northern and northwestern slopes are more gentle, but also active erosion.

The feature of the landscape is close and frequent occurrence of Precambrian crystalline rocks exits to the surface in the form of residuals. In addition, there are more atmospheric moistening of the larger altitudes higher thermal resources. The result is the formation and development residual outcrops-watershed, watershed wavy, ravine, gully, atvalley, river-floodplain and terraced areas.

Remnant-watershed areas occupy a small area and is the best preserved in their natural state districts. This is due to close and frequent occurrence of granite outcrops at surface. Soils formed at outcrops base material (gravel, fine gravel) and a low loess loam. The soil is represented mostly varying degrees washed varieties ordinary and southern black soil on loess rocks [8,9]. At the bottom beams onwashed common types black earth and meadow soils [10,11].

Natural meadow and steppe vegetation found on steep slopes in the form of herbaceous plant communities petrophytes, motley-cereal options northern steppes. On the rocky outcrops are trees and shrubs grouping of apple, pear, hawthorn, elm and others. Common here are also the crown of oak-forested ravine complexes. At the bottom of valleys and gullies have spread thinlylegged-bent bows, and the black soil, granites atcalving - forb-grass steppe [5]. In the surrounding localities local natural steppe vegetation is modified as a result of grazing.

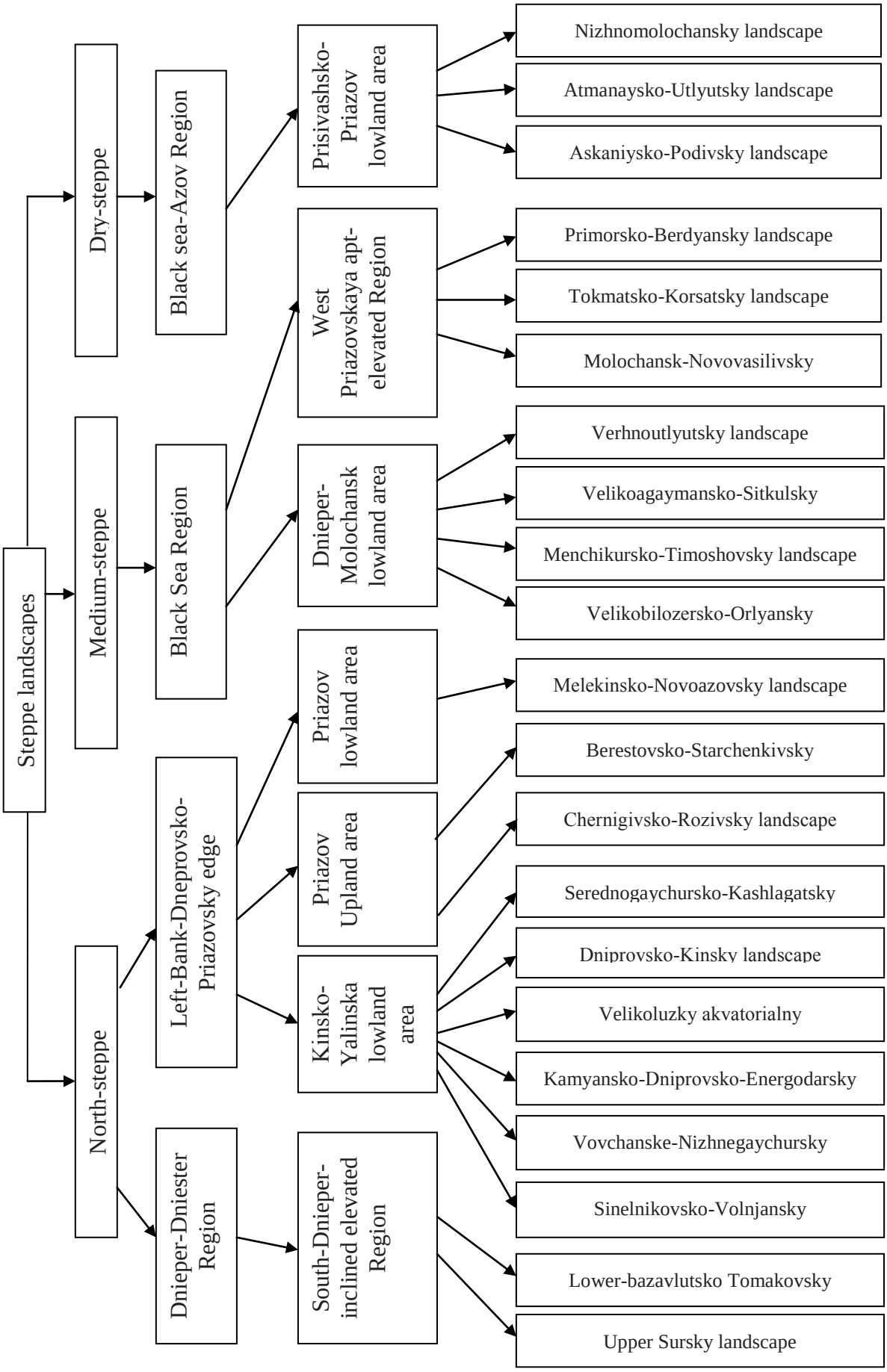

Fig 1. Structure of natural landscapes of the Zaporizhzhya area (it is made an author after [12])

The highest survival phytocenoses Priazov highland landscape in the region is represented places of granites (Belmak Tomb, Tomb Blue Tomb Korsak) and Reserve "Stone Tombs".

Watershed undulating terrain is most common in the Priazov Upland (before 50-60% of the area). Wavy lines gives them inherited inequality loess cover the crystalline basement and intensive processes of linear and planar erosion. Flat land actually available, most surfaces – gently sloping. Common upper erosion Network (basin and ravines), where most originate Priazov rivers (Molochna, Byrd, Kalchik, Kalmius Obitichna and, Lozuvatka) and the Dnipro basin rivers (Kinska, Wolf, Haychur etc.). Natural wheatgrass-campfire-grass vegetation is kept small because of the continuous plowing.

Ravine-beam areas occupy 40% of the hill. On the southern and southeastern slopes of the hill downcutting erosion depth is 80 m and the rapidity of the slopes - to 90º [10]. The northern and north-western slopes dissected smaller but higher intensity ravines. On the slopes of ravines and gorges dominated varying degrees of black soil washed away, and their bottoms - onwashed and meadow species. Natural meadow and steppe vegetation gentle slopes agrocenoses cultural change. On steep slopes dominated by xerophytic herbaceous and shrub communities, oak crown of gullies forests and shelterbelts. For bottoms of gullies common meadow-steppe vegetation, which is used as hayfields and pastures.

Whenvalley common ground in areas of transition ravine-beam grid in the river. A characteristic feature is their across the slope striations: the slope distinguishes three bands - the upper, middle and lower. The top is the top of the hill below the edge and a high degree of washing, the actual lack of soil, sparse vegetation. Average - with rocky outcrops and erosion furrows, covered with thickets of blackthorn, hawthorn and grassy petrophytes. Soils strongly washed away. The lower part - accumulative mainly with alluvial soils, more moisture and forb vegetation. Whenvalley areas used in low-quality pastures.

River-terraced terrain found along the river channel in a narrow (300 m) bands of the first and second terraces. Characterized highly productive soils with a predominance of zonal types. Actually the terrace is used in intensive agriculture, and their slopes - for grazing.

Floodplain areas virtually absent, as deeply incised river valleys and narrow. Many flooded areas flooded as a result of creating a network of ponds and reservoirs as water reservoirs for fish breeding. Where high flood areas preserved, they are used as high-performance pastures, and low - as grasslands.

Intensive changing landscapes Azov highland landscape area are the result of processes of linear and planar flush, human impacts (regulation of flow, plowing coast slopes and rivers).

South-Dnieper-inclined elevated a landscape area is located in right-bank part of administrative territory of the Zaporizhzhya area. Flat localities of increase watersheds, hilly and wave, are widespread in these limits, to the slope erosive and rocky, beam for gullies and valley-beam, floodplain-terraced, streamside.

The flat-undulating terrain of high watersheds occupy small areas interfluves Tomakivka and rivers Dnieper. They are autonomous and background, describing the entire region as a whole landscape unity. Integrity emphasizes only type of combination tracts - actually watershed, talus-slope and hollow. With all other landscaped areas, they represent the greatest value to agricultural production.

Due to the dense surface dismemberment most common slope areas. In the valley of the Dnieper River and its tributaries form the terrain slope strip width from a few dozen to several hundred meters. Their combined within erosion slope on the ravine on the sedimentary and erosion and denudation with rocky outcrops of rocks shield.

Slope hilly and undulating terrain watershed a raised, flat surface wavy landscape area excised numerous short beams, deep (80 m) embedded in the hollows and the surface of the Precambrian basement. The crystalline basement rocks Dnieper granitoid complexes lie close to the surface and they determine the relief features of the area. Watershed slopes and gullies often split ravines. More than 65% of take-beam ravine eroded areas of black earth and whenvalley ravine-beam areas with heavily eroded soils. Density ravine-beam network reaches 1 km / km^2 and the river in view of the river to 10 km in length - 0.15-0.2 km / km^2. [13-15] The general slope - the south-east to the Dnieper. Celerity ravine slopes and ravines in areas ranging from 5 to 15º or more, which makes medium and high degree washered soil. The most eroded slopes adjacent to the Dnieper River.

Slope limited areas suitable for business due to the high probability of manifestation of erosion and deflations processes. So intense land use within them (arable) is irrational.

Rocky common areas within or near exits occurrence of crystalline rock shield - on the slopes, in the bottoms of erosion forms. They are not suitable for agriculture in general.

Floodplain-terraced areas occupy a small area south of the city. Zaporizhzhya, in the valley of the Dnieper River. It developed areas three to five levels of terraces, often poorly expressed and undivided [10,11]. Terraces with predominantly black soil plowed with sandy - crops planted pine. Natural vegetation is preserved in a transformed on slopes terraced ledges.

Floodplain areas consist of tracts of high and low floodplains, heads of large beams. High floodplain such segments are flat areas with sandy and loamy alluvial meadow soils blackearth like high fertility. They are used for growing vegetables and forage crops. Low floodplain presented with a combination of a narrow strip of grassland and meadow marshes, which are used as hayfields.

The soil landscape area represented ordinary black loess medium to heavy loam and clay character and, in places close occurrence of crystalline rocks - gravely. Within watershed areas and common not wash and slightly eroded black. The humus content in them ranges from 1.5 to 2.5%. They are poor in nutrients, in

particular nitrogen and phosphorus. In retreating watershed, riverine and beam at 1-4º slopes rapidity, and on steep slopes (5-15º more) severely eroded common medium and soil, their share reaches 30% of the total area of land. On steep slopes erosion processes are of high intensity. Within flood plain areas distributed mainly meadow loamy soils. On the slopes terraced areas, the black loam, sandy and loamy.

Vegetation remained weak due to the high proportion of arable land (at various times up to 80% of the land), pastures and pastures (up to 8% of land). Cover natural plants remained at about 2% of the modifications grazing - 8%. He is represented by formations of herb-fescue-grass steppe with base in herbage dense turf cereals - feather grass, fescue.

Kinsko-Yalinska a low-laying area landscape area is located on left-bankness of Dnepr, in north and north-eastern parts of administrative area. Her feature is confinement to the transitional stripe from Dnepr-Donetsk dimples to the Priazov performance of the Ukrainian crystalline shield. A quaternary cover is formed under act of the melted waters of the Dnepr glacier. Characteristic presence of layers of foods of weathering of the ancient breeds taken away by superficial water-courses from Priazov and Donetsk sublimities. A distinguishing feature from other landscape areas is monotony of landscape complexes in her limits.

Hypsometric she is subjacent the already considered landscape areas. The flat-watershed are widespread in her limits, valley-beam, beam for gullies, to the slope, apt-terraced and streamside localities.

Watershed-plain areas occupy the largest area (55% of) [13]. They are characterized by flat-sloping terrain with developed medium and ordinary black soil humus, formed under wheatgrass-campfire-grass and forb vegetation steppe north. They are intensively used in agricultural production and is almost completely under cultivation (90%) than the upper erosion network.

Floodplain-terraced terrain features for the terrain, soil and vegetation similar to watershed-flat except for water-ice deposits terraced foundations, higher humus and better soil moisture terraced. They are used extensively in agriculture.

Valley-beam areas occupy 20% of the territory. Distributed mainly a surface erosion, linear - only convex steep gullies manifestation of short unbranched ravines. The slopes of river valleys and gullies wide, flat, impetuosity to 6º. Most of the surface is used for intensive agricultural production.

Ravine-beam most common areas between the rivers Dnieper, Samara, Wolf and adjacent to the Dnieper and Kahovka reservoir slopes. Despite the fact that within the mentioned areas dominated washed ordinary black humus and thin, most of them plowed under crops. In areas close to the occurrence of crystalline rocks humus soils very washed away, and sometimes absent altogether. Saved vegetation represented wheatgrass-campfire-grass and forb vegetation. On the granite outcrops vegetation composition close to natural and submitted psammophytic and petrophytic species.

Slope areas Priazov highland landscape area are closer to the Dnieper River and near the Priazov Upland. In the Dnieper lane they found a large amount due to occurrence of near crystalline rocks. Soils on the slopes of the poor and often absent, vegetation close to the natural - xerophytic, petrophytic, efemeroidna, shrub. The farm is mainly used for grazing.

Among the floodplain, terraced upland areas common terrace on the Dnieper (width 5.10 km) Wolf, Haychura (2-5 km wide). They hilly terrain the western submitted sandy hills, basin, oxbow lakes and wetlands. Soils – black earth like on carbonate substrate. Forest vegetation and sandy steppe sparse. About 25% upland terraces under cultivation, about the same as used in hay and pasture.

Floodplain areas differ most humidification, spreading sod-gley and meadow black soil, often saline soils. Meadows at present used as natural grasslands in the most humid places - like grasslands.

Priazov low-laying area landscape area is located on the extreme southeast of the administrative Zaporizhzhya area and occupies her insignificant part. Melekinsko-Novoazoysky is presented by a landscape district. Before 10 kilometre is stretched out by a stripe along the sea of Azov, beginning from left-bankness of Beard and to the administrative border with the Donetsk area.

Hypsometric territory below than the already described landscape areas. The characteristic sign of her landscapes is flatness of territory, that is conditioned by distribution of formation basis from neogene limestones, with declivous regional bias southward, toward the sea of Azov. Erosive dismemberment weak, watersheds have flat surfaces.

Seaside location field landscape diversifies landscape areas within it. In the watershed, erosion-beam, atvalley-slope, river-terraced and flooded areas are developed ancient marine terraces and abrasion-ravine-talus areas of steep coastal slopes.

Watershed areas occupied most of the area, are flat or undulating areas. Ordinary black humus soils here have a high potential fertility. However, agricultural activities within them are not developed because these lands is a large military training ground.

Erosion-beam areas (20-30% of the area) conjugated with at watershed, but the absolute mark them lower. Here there are outcrops "rocky limestone floor" mainly pontian tier. Limestone outcrops forming the middle lane slope geocomplex and often cover the lower slopes of gullies [11, 16-18] .In the tract deluvial slopes, the slopes of valleys and ravines Soil varying degrees washed in bottoms - pan soils. Overall, poor soil and vegetation greatly attenuated. These areas are the formation of a military test site used by locals as pastures.

Terraced river-developed areas in the valley Byrd. These limits soil and vegetation degraded due to intensive economic activity (on flat surfaces - arable land on the slopes of terraces - overgrazing).

Floodplain areas developed in the river Beard. The width of the floodplain to 2 km. Its large swamps and dense cover of meadow marsh vegetation have contributed to the high level of preservation of landscapes and significant maintenance of biological diversity. At present floodplain Beard is part of Priazov National Park with various environmental regimes.

Areas ancient marine terraces on landscape features close to areas watershed slopes. Submitted young the watershed area within which marine sediments overlain by loess layer.

Abrasion-ravine-talus areas of steep coastal slopes stretch narrow coastal strip along the Sea of Azov. Their formation caused by abrasion wave-cut activities and composition of rocks coast.

Dnieper-Molochansk a low-laying area landscape area is located in centrally-east part of the administrative Zaporizhzhya area, in a country between of Dnepr and Milk. The feature of landscapes are flat plains territories, without plasticity her central part, confinement to the different pools of flow (north part - the Black sea, south - Azov) and put considerable distribution of steppe beneath such lowering. In her annual limits of upland locality prevail with depressions and hearths, localities of hearth-expance of annual limits plains, there is a beam for gullies and localities of at walley slopes.

Interfluves upland areas with widespread black soil of the highest growth class actually completely plowed (over 96% of arable land) under cultivation of crop production. Altered soil cover intensive irrigation reclamation. Natural fescue-grass vegetation upland actually changed the whole crop.

Hearth-terrain expanse interfluves plains is a feature-Molochansk Dnieper rivers. They are distributed in the central part of the drainage and partially in the South. They consist of cases, like lengthy depressions and shallow gullies - expanses. The area is characterized by the highest degree of human change. Vegetation and cases and expanses represented meadow marsh and meadow-steppe groups that composed mainly rhizomatous grasses (wheat grass hearth, brome, aspen black spikes and early).

Ravine-beam common areas in the north and confined to the valley slopes Kahovka reservoir. Characteristic of them is the presence of neogene outcrops of limestone, sandstone, marl, sand. This first stage pontian species that overlapping red-brown clay and loess rocks. The soil is represented by ordinary black humus in loess sediments. On the bottom beam systems - alluvial meadow soils gley, marshy places. Vegetation is represented by fescue-grass formations. In the lower beams - herb-meadow vegetation and hygrophilic [10, 16-18].

Ski slopes whenvalley common in the south, in places of transition in sewage drainage area. Presented tops of catchment basins Utlyuk Large, Small Utlyuk, Taschenak and several bars. The general slope - to the south in the same direction is the development of river valleys. Differentiation of soil much because of subzonal southern black soil spots are dark chestnut soils. The vegetation is preserved in plowed slopes, but degraded due to overgrazing. The surface is almost completely plowed except for coastal protection strips and beams.

West Priazovskaya apt-elevated a landscape area is stretched out by a wide (to 40-50 kilometre) stripe, fringing Priazov sublimity westerly and south. Occupies, her south-west and south western slopes, inclusive with the middle flows of Milk and her inflows, Korsak, Lozuvatki, Obitochnaya and partly - Beard. The personal touch of territory is predominance of slope surfaces with many erosive forms as channels of superficial flow, prevailing of south black earth under a fescue-feather vegetation that was saved on the slopes of erosive network (river valleys and beams). The South steppe analogues of all localities are presented in her landscape structure – relict water sensible, water sensible wavy, beam for gullies, beam-valley, erosion and slope, river-terrace, streamside. An outlet to the sea of Azov intersperses with a landscape structure localities of marine terraces, abrasion-stick ravine and by localities of modern marine plains.

Ostantsevo-watershed areas cover about 6% of the surface area of the landscape. Characterized by close bedding of crystalline rocks and thin sedimentary cover. Granite-outs are Korsak Mogila and others. on the slopes of ridges and graves developed schebenysti-gravel washed varieties southern low humus black earth soils. In agriculture uses small, but potentially dangerous for these areas is the development of minerals - granite as a building material and ferruginous quartzite as raw materials for the steel industry.

Watershed-flowing areas located around ostantsevo-watered, fringing them outside. Occupy about 30% of the surface. Their characteristic feature is inherited from the surface of the shield undulating terrain, often with close occurrence of basement rocks (granite or limestone). It formed the upper talus slopes and erosion network.

Ravine-beam area extended to 45% of the landscape area. They represented a system of beams distributed through large hill slope length. Rivers are characterized by a rapid fall in the longitudinal profile and high erosion ability. The characteristic soils are black southern humus and salty; the bottom beam systems - meadow black soils in salty halophilic meadow vegetation. The dominant medium and severely eroded soil, and erosion bottoms networks - bathed. Upper erosion network almost entirely under cultivation, transformed with natural vegetation, which in modified grazing condition kept on steep slopes and ravines in their bottoms.

Ravine-beam complex down the hill are moving in the beam-valley. This is due to the dominance of lateral erosion at the bottom of the slope versus deep at the top. Erosion take the form of another species - their width is greater slopes - a gentle, sodded fescue-grass vegetation. Used mainly by locals as pastures.

Erosion and slope areas distributed small bands width (100-200 m) along river valleys. Characterized by erosion of many transverse grooves and short whenvalley ravines. Consequently, the near crystalline array outputs breeds often have a board, and then from it – rock floor outputs pliocene limestones. Erosional

activity is high. Black soil mainly severely eroded and washed, incompletely developed, gravely.

Terraced river-developed areas along the river Molochna, individual sections of rivers and Yushanly Kuroshany, Korsak Obytichna, Kiltychiyi, Beard. Most rivers are allocated first and second terraces, and milk - is a third-fourth and fifth-sixth above the floodplain, often undifferentiated. All land river terraces lightweight texture plowed fescue-grass and meadow plants replaced by crops.

Floodplain areas common to all rivers, but most of all they are expressed in r. Molochna [19,20]. Here floodplain width reaches 4 km (south of Staroberdyanskoho forest). Soils meadow black, brackish. Salinization chloride sulfate. Meadow steppe vegetation and sedge-grass, very altered grazing and mowing. Some surface floodplains around population centers and within them cultivated in gardens, some abandoned arable land and abandoned.

Areas of coastal terraces drag strip with heights of 30-40 meters along the coast of the Azov Sea. Presented lowland plains, where rock shield covered neogene marine sediments. Upland areas of southern black soil humus extensively used in intensive agricultural production. Among the watershed - band erosion downcutting that drain surface the watershed. Presented valleys of small priazov rivers and elements erosion network. The farm used mainly as pasture.

Areas of modern sea beaches and plains are accumulative spits. They are the soil is poorly developed and presented options for turf soils with varying degrees of salinity. These areas are under active development and reorganization, so do not feel the intense pressures. For the agricultural areas of modern marine plains values and do not represent in agricultural production are used. Instead, they are widely used in recreation.

Prisivashsko-Priazov low-laying area landscape area occupies extreme south and south-west part of the administrative Zaporizhzhya area. In a hypsometric relation it most subzero from surfaces with bias southward, the absolute marks of that hesitate in limits from 40-45 m in north part to 0 m on a south. A landscape structure consists of localities of annual limits West hearth the watershed, hearth expanse, erosive-beam, river-terrace, streamside, seashore mionectic the watershed, seashore coastal halogen plains, seashore abrasion and seashore erosive

By the river west-hearth upland areas common to 60% of the area. Distributed in poorly drained loess plains. A characteristic feature is their varying degrees of salted salty dark brown soils with high potential fertility, distribution and pody steppe saucers, small amplitude heights, much aridity of the climate, drought-resistant sparse sagebrush-grass vegetation. In fact, the entire territory west-hearth the watershed transformed man on agricultural fields with completely transformed vegetation.

Hearth-expanse landscaped common areas 15% of the area. Characterized by intense directional flow and course of physical processes in the soil. They are widespread surface depressions network expanse-beams, which together with a network of drain erosion area. In fact, they are all under cultivation except for some and used for growing crops.

Erosion-beam landscaped areas set smooth outlines relief, small amplitudes heights. Beams are wide and shallow, relatively short. Relief promoted their active use in agricultural production, as virtually all of them except waterlogged and saline bottoms under cultivation.

River-terraced terrain is best expressed in the lower reaches of the river valley Molochna, on the left bank of which are allocated to six undivided terraces. Some of their sites appear on the left bank district. Great Utlyuk near the village. Davydivka. They plowed under agricultural production. Terraced ancient alluvial plains with sandy-loamy common on the right bank of the Milky estuary. Most are under cultivation, and in some areas in order to consolidate the sand created a massive afforestation (Radyvonivskyy, Strongman, Shelyuhiskyy forests).

Areas take minor floodplain area and expressed best in the valley Molochna, Great and Small Utlyukiv, Taschenaka. The width of the floodplain small (100-200 m) other than milk (5 km). Flood level is not expressed. The main direction of economic use of flood areas - pasture and rates for fish breeding.

Common narrow strip (5 kilometers) along the coast of the Azov Sea and its estuaries. They are characterized by weak wood loess plains spreading chestnut saline soils. In fact, they are all under cultivation in agricultural production.

Along with the coastal localities are humble the watershed coastal abrasion halogen areas, sometimes alternating with them. They are weak tirage in relief hollow prone gullies and valleys with wide bottoms saline and talus slopes with chestnut and meadow-dry steppe chestnut saline. There Utlyutskyy along the coast estuary and the Gulf Syvashyk. Talus slopes mostly cultivated, others covered with degraded meadow-grass steppe.

Areas of coastal plains coastal halogen distributed within the coastal spits - Fedotova Peninsula Biruchiy, Siltings Stepanivka. This common shell-sand islands and pour with underdeveloped sod and brackish soil.

CONCLUSIONS

Thus, on the basis of analysis of flat class of landscapes the division of natural landscape complexes of the Zaporizhzhya area is certain inclusive to the district that is a necessity at consideration of question of further optimization of nature use.

REFERENCES

1. Sirenko N., Turlo S. 1986. The development of soil and vegetation of Ukraine in pleistocene and pliocene. - Kyiv: Scientific thought, 187. (in Russian).

2. Dmitriev N. 1957. About geological Structure in Zaporizhzhya region // Proceedings geographer. factor, and Kharkiv. state. University Press. Vol. III, 5-62. (in Russian).

3. Vorovka V., Kolomiychuk V. 2003. Problems and prospects of creation of along the shore of Azov sea ecocorridors of North Priazov // Scientists are messages of Taurian National University named after

V. Vernadsky. Series "Geography". Simferopol, 16 (55). N1. 64-68. (in Ukrainian).

4. Bajdikov I. 2011. Complex ground regional landscape to framework of econet anthropogenic the changed territories and aquatoriums. Synopsis of dis. c.geogr.s. / 11.00.01. Kyiv, 20. (in Ukrainian).

5. Petrochenko V. 2009. Landscapes of the Zaporizhzhya area : reference book for the pedagogical workers of out-of-school and general educational establishments. Zaporizhzhya: BB «ZRCTRSS» AB, 48. (in Ukrainian).

6. Geographical encyclopaedia of Ukraine.Vol. III. 1993. - Kyiv: the "Ukrainian encyclopedia" the name of M. Bashan, 480. (in Ukrainian).

7. Gutsulyak J. 2009. Classification landscape typology land for the purposes of Economy // AIC. N 5, 16-22. (in Ukrainian).

8. Soil Map of the Ukrainian SSR / ed. A. Shcherbina. 1982. – Kyiv: ICGC. (in Ukrainian).

9. Polupan M. Nightingale V., Kissel V., Velichko V. 2005. Key environmental and genetic status and soil fertility of Ukraine: Textbook. Kyiv: Circulation, 304. (in Ukrainian).

10. Marinich A., Paschenko V., Shishchenko P. 1985. Nature Ukrainian SSR. Landscapes and physical-geographical zoning. Kyiv: Naukova Dumka, 224. (in Russian).

12. Ysachenko A., Shlyapnykov A. 1989. The nature of the world: Landscapes. Moscow: Thought, 504. (in Russian).

6. Atlas of the Zaporizhzhya area. 1997. Kyiv: ICGC, 48. (in Ukrainian).

13. Popov V., Marinich A., Lanko A. 1968. Physical and geographical zoning Ukrainian USSR. Kiev: Publishing House of Kiev. University Press, 684. (in Russian).

14. Marinich O., Parkhomenko G., Petrenko O., Shishchenko P. 2003. Improved the physical and geographic zoning of Ukraine // Ukr. geographer. Zh. №1, 16-20. (in Ukrainian).

15. Marinich O., Shishchenko P. 2006. Physical Geography of Ukraine: Textbook. - Kyiv: creation "Knowledge". 511. (in Ukrainian).

16. Marinich O. 2000. Scientific bases of research landscape diversity of Ukraine // Problems of landscape diversity in Ukraine: scientific research journal. Kyiv. 11-16. (in Ukrainian).

17. Gurova D. 2002. Changes in agricultural landscapes under the influence of nature in Zaporizhzhya region (end of XVIII - XX centuries).: Author. Thesis ... candidate. Geography. Sciences: 11.00.01. NAS of Ukraine. Institute of Geography. Kyiv. 18 . (in Ukrainian).

18. Gurova D. 2001. Historical study of agricultural landscape science of nature in Zaporizhzhya Ukr. Geography. Zh. N4. 46-50. (in Ukrainian).

19. Landscapes. // Atlas Map Zaporizhzhya region. 1997. – Kyiv.: ICGC. 24. (in Ukrainian).

20. Stryzhak M. 2002. Zaporizhzhya region: atlas. Kyiv: map. 20. (in Ukrainian).

СОВРЕМЕННОЕ СОСТОЯНИЕ НАТУРАЛЬНЫХ ЛАНДШАФТНЫХ КОМПЛЕКСОВ ЗАПОРОЖСКОЙ ОБЛАСТИ

В. Лысенко, Ю. Чебанова

Аннотация. Формирование современных ландшафтов Запорожской области произошло в голоценовый период. Во время голоцена влажные климатические фазы менялись достаточно засушливыми, теплые - относительно холодными, но среднеклиматические показатели были близки к современным. Такие условия способствовали формированию степного зонального типа ландшафтов. Однако, в результате длительного воздействия на ландшафты степей разнородных хозяйственных воздействий, связанных с нерациональным использованием их природного потенциала и увеличением антропогенного давления на окружающую среду, произошла трансформация натуральных ландшафтов и изменение их свойств. Результатом такого действия стало то, что площадь природных ландшафтов катастрофически сократилась. Запорожская область оказалась наиболее освоенной в хозяйственном отношении из всех областей Украины. Для дальнейшего изучения вопросов по оптимизации природопользования территории региона, в статье воспроизведена современная структура ландшафтных комплексов области. Территория Запорожской области характеризуется равнинным классом и степным типом ландшафтов. Выделены три подтипа ландшафтов: северо, средне и сухо степные. Каждый подтип разделен на края. В пределах северо-степного подтипа выделено Днестровско-Днепровский и Левобережно-Днепровско-Приазовский края. Среднестепной подтип представлен Причерноморским краем, а сухостепной - Причерноморско-Приазовским. Наиболее востребованными с точки зрения оптимизации рационального природопользования являются ландшафтные области и морфологические единицы уровня местностей. Именно уровень ландшафтной области отражает характер внутризональной ландшафтной дифференциации. В пределах Запорожской области выделено 7 ландшафтных областей: Приазовская возвышенная, Южно-Днепровская склонно-возвышенная, Конско-Ялынская низменная, Приазовская низменная, Днепровско-Молочанская низменная, Западно-Приазовская склонно-возвышенная и Присивашско-Приазовская низменная. Ландшафтная структура каждой из областей представлена характерными особенностями местностей.

Ключевые слова: ландшафтная структура, хозяйственное использование натуральных ландшафтов, Запорожская область, степь, ландшафтные области, грунт, оптимизация природопользования.