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ANTHROPOGENIC IMPACT ON THE FOREST RESOURCES OF MOUNTAINOUS CHECHNYA: ECOLOGICAL SIGNIFICANCE AND PROSPECTS FOR RECOVERY

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Abstract

The forest resources of the mountainous Chechnya were affected to a significant extent by anthropogenic impact. The area of degraded and heavily damaged forests is 30,000 hectares. Almost completely destroyed forest mass on the mountain range of Ban-Duk, Big damage was inflicted on forests in the basins of the rivers Argun, Hulhulau, Gums, Marta, Goyta, Roshni, Varand and many other oak and beech forests in the most accessible places. Forest resources require restoration and further optimization of their use.

Keywords: fauna, rare plants, vegetation, foothill forests, industrial forests, shrubs, mountain landscapes, types of forests.

It is known that all flora and fauna of forest mountain landscapes of the North-Eastern Caucasus is unique. This is explained as a special history of the development of vegetation and the animal world, as well as the peculiar modern climatic conditions of the territory. In the forest vegetation of mountain landscapes of Chechnya there are many rare and valuable and epidemic species. Many of which are of industrial importance, for example, beech.

In the postwar years, the forest resources of Chechnya were subjected to systemic industrial logging, which was carried out very intensively. The most valuable hardwood and coniferous species were subjected to cutting without the accompaniment of reforestation measures. Naturally, this increased the treeless space and increased the area of mountain meadows, beyond the lag vegetation.

As a result of the absence of any scientifically-substantiated program of measures for the restoration of forest areas, the area previously occupied by hard-leaved breeds is not indigenous but rather soft-wooded vegetation. Of course, at the present time there is a gradual replacement of non-indigenous

breeds by indigenous ones, but this process can take a long time in natural conditions. In mountainous landscapes, as known, the differentiation of natural and climatic conditions occurs depending on the relief and character of the space of mountain ranges.

Therefore, all measures for reforestation should be developed in accordance with specific local physico-geographical conditions and ecological parameters of a particular species of ancient vegetation [7].

Deforestation of forest tracts led to a change in the soil and ground vegetation cover. Anthropogenic impact led to the formation and wide spread of sharply-grassy ripeness and meadow-steppe groupings.

In places in the basin of the Argun River, there are meteorite-motley-grass-swine groupings. On the site of the forested forests, shrub thickets with the participation of hawthorn, thorn, dogrose, horny spines, Palas buckthorns have been preserved. It is very widely represented by a plugger near the Bragun mountain range.

Piedmont forests have been extensively exterminated by man and have survived to this time only on not high ridges and in the lower valleys of the Sunja River and its tributaries and are represented by inefficient forests. In the past, oak forests with an admixture of hornbeam were more widely distributed here.

Ten types of forest-forming species are involved in the formation of forest types in Chechnya. Each of them forms a certain number of types of forest, differing in terms of edophy and composition of plantings, but similar in dominance to the indigenous type of stand. The types of forests, depending on their distribution, topography and actual state of the woods, have a certain economic and protective significance. Proceeding from the previously stated principles of the economic grouping of forest types and the topological assessment of the actual state of plantations, all typological diversity of the republic's forests is grouped according to the purpose and the main direction of the economy into seven target groups.

The protective group of the upper boundary of the forest includes eight types formed by the birch Litvinov, pine Sosnovsky, maple highland and rhododendron Caucasian. Common to them is the location on the upper limit of forest vegetation, which determines the purpose of the appointment and direction of the economy of the constituent group of types. Preservation and enhancement of mining and water-regulating functions of forests in different types is carried out by certain methods, resulting from bioecological properties [3].

Group types are found in mountainous Chechnya. More often than not, it is fresh pine subori and birch trees. All types can form the upper boundary of the forest, some natural, others artificially lowered. Due to the similarity of the activities carried out, the types can be combined into four single-tree forestry

groups: pine subordia rowan-birch sugrudks and birch woodlands, rhododendron thickets and park high-altitude cleren trees.

All activities at the upper border should be aimed at: a) strengthening existing forest positions; b) strengthening of protective and defensive properties (stability) of plantings bordering with meadow; c) intensification of the process of natural spreading of the forest up the slope; d) strengthening the fruiting of plantations; e) enrichment of the outskirts with pioneer breeds - pine and birch - and strengthening their offensive ability; e) protection of plantations by trays rising high above the upper boundary of the forest; g) protection of individual sites, clumps, rhododendron and juniper bushes, afforestation of slopes; h) protection of slopes from the destruction of grassy vegetation, from exposure of runoff concentrations and landslide formation.

In all types of forest should be guided by natural renewal, by implementing measures to promote it. Along the entire upper boundary of the forest, it is necessary to distinguish a forbidden strip with a width of 100-200 m, where it is forbidden to graze and run cattle. Special roads - cattle runs for summer pastures and winter parking - should be allocated taking into account minimal damage to the forest and soil [2].

Successful resumption of pine was observed in open, not overgrown areas of slopes that are formed on landslide ruptures and fading screes. Here, it is recommended to sow or plant a pine tree with piles and areas with mulching gravel.

For artificial regeneration within the actual forest boundaries (or leveling them), it is necessary to apply methods taking into account the slope of the slope and the degree of stony soil.

To the measures of assistance in the context of this target group can be classified as logging, which, in addition, improves the sanitary condition and enhances the protective role of the plantation. In the process of these felling, a group of trees of the main species and pioneers of the forest (pine and birch) located on the edge or near the edge of the forest should enjoy a special patronage. Felling should be directed to improve the fruiting of these stands and increase the safety and stability against external adverse factors (wind, ice, snow).

From special mining and melioration activities it is possible to recommend the regrouping of sewage, the regulation of microstocks and the control of mudflows and avalanches. In the types of the upper boundary of the forest, one should conduct constant phenological, climatic and hydrological observations; to note any changes in the life and condition of the plantations, since without this, purposeful measures to strengthen and advance the upper forest, the border to treeless areas, are impossible [6].

The protective group of rocky places and steep slopes includes five types of forest represented by pine, oak and beech stands. The direction and content of activities in the types of the group is determined by the type

appropriation to very steep rocky areas of slopes, by curtain-group placement on small-scale clusters and rocky screes, artificial depletion of habitat conditions and prevalence of derived coppice birch and oak forests in types of pine forests and shibliak thickets - in oak. More often other types meet fresh pine and oak-pine subori and dry Sudubrava. By the similarity of the activities, three homogeneous groups are distinguished here: dry rock burs and pine subori, dry Sudubrava and chestnut-shaped bibles.

All measures should provide for the preservation and enhancement of the mountain protection functions of plantations and the restoration of more productive stands. Renewal and restoration of forests is carried out in a natural way, using broad measures of assistance. The main breed in boron, submerged and very dry surogody should be considered the pine of Sosnovsky, and in dry Sudobrava, in addition, - the oak is rocky [1,5].

Existing plantations should, first of all, protect from further felling, having cattle and fires. Special groups of trees (trees) of pine are subject to special protection. They are artificially created in the production birch forests, oak forests and shiblyak thickets. In the plantations, health and sanitary felling are conducted. To strengthen the mountain protective role of plantations, any vegetation should be protected. It is recommended to create shading and protective group plantings of pine and shrubs, as well as the ability to regulate and spray surface runoff.

The forest protection group of types of forest includes plantings from alder gray and black, shrubbery and sea buckthorn. They are located either directly on the riverbeds of mountain rivers (sea-buckthorn, willow and gray alder thickets), or adjoin the channels along the slightly terraced ledges above them, flooded with each more or less significant flood. Types are not very common, they are found in the mountainous and foothill parts of the republic. All of them (except for the black-alder pile) are pioneer and with the improvement of edaphic conditions give rise to the formation of more productive types. Therefore, the measures should be directed both at increasing the forest protection role of plantations of the type, and at improving forest conditions that ensure the cultivation of more valuable and productive plantations.

The forest-protective role of plantations is entirely determined by their condition. On the one hand, they must let the birches of the flood flow themselves, regulate the direction of its discharge, avoiding the erosion and destruction of the banks, on the other hand, the riverine and channel (island) plantations must collude the solid runoff, preparing the conditions for the formation of other, more productive types forests. In both cases, the goal is most likely achieved by keeping the plantings and maintaining a good sanitary condition.

The economic-protective group of oak forests unites four types of forest. To enhance the protective properties of plantations, at least the following measures are necessary:

- a) protection and protection of plantations from unauthorized felling, having been devoured by livestock, požarov, diseases and pests;
- b) organized livestock runs, especially on slopes with easily destroying sod and humus-carbonate soils;
- c) the formation of the shrub layer and its regular rejuvenation;
- d) the organized structure of the dies with the subsequent isolation of them as a way of concentrated flow;
- e) regulation and spraying of microstock on the slopes by means of simple perforated and brushwood obstacles, which simultaneously promotes the retention of seeds, their rooting and germination;
- e) the organization of flow along roads and trails on the slopes and at the ends of the beams [4].

On stony, non-forested areas, it is necessary to apply planting and sowing in cracks of rocks, filled with destruction, under rocks and large blocks on the shaded side, thus creating foci; overgrowing and seeding. In large treeless areas where it is not possible to expect seed plaque, but seed renewal of the forest is possible, it is also advisable to create foci of seeding in favorable places, planting groups of seedlings or seedlings. Depending on the conditions of the group, one must create one per hectare or several hectares (3-5). Separate young trees and their groups, which can play a role in seeding, must be protected using improvised means, not only from damage, but also from mechanical damage by hoofs. Especially deer like to stop at individual trees, wringing branches and peaks, tearing and wriggling the bark, causing irreparable harm to these forest pioneers.

Referecens:

- [1] Bayrakov I.A. Forest ecosystems of the North-Eastern Caucasus. // Izv. supreme. training. establishments North-Caucasian region Natural sciences. Appendix № 76 Rostov-on-Don, 2005
- [2] Bayrakov I.A, Idrisova R.A. Mountain geosystems of the Chechen Republic and their natural-anthropogenic transformation. / Mathematics of the interuniversity scientific and practical conference. Devoted to the 25th anniversary of CHPPI. Grozny, 2005.
- [3] Bayrakov I.A. and others. Geography, Economics, Ecology of the Chechen Republic, Grozny 2006.
- [4] Gakaev R.A. To the question of predisposition landslides in mountain landscapes of the Chechen Republic. In the collection: Scientific works, practice, developments, innovations of 2013 Cbornik of scientific reports. Sp. Z o.o. «Diamond trading tour». Warszawa, 2013. pp. 35-38.

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- [5] Rashidov M.U., Gakaev R.A. To the issue of the relationship between society and nature in the Chechen Republic. Issues of modern science and practice. University of. in and. Vernadsky. 2007. № 3 (9). Pp. 146-149.
- [6] Elmurzaev R.S. Bank-reinforcement measures by forest-protective forest plantations and their effectiveness. In the collection: Innovative mechanisms for solving problems of scientific development. The collection of articles of the international scientific-practical conference: in 4 parts. 2016. P. 219-222.
- [7] Elmurzaev R.S. Water-protective functions of forest ecosystems of temperate latitudes. In the collection: Modern technologies: current issues, achievements and innovations, a collection of articles of the international scientific and practical conference. 2016. pp. 124-126.