



Operational Part of the Integrated Multifunctional Management Plan for the Focus Area no.2

Ivano-Frankivsk (Ukraine)



Executive Committee of Ivano-Frankivsk City Council

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Background

OP (operational plan) is a basis for multi-use management in urban forests. OP includes elements of the tactical and operational plan. The framework for it is a strategic plan for integrated multi-use forest management for the whole area of urban forests of certain urban centres. The perimeter of OP is a rounded area within a wider area of the urban forests. OP is the basis for the implementation of the activities and measures in urban forest for providing desired ecosystem services. Additional detailed operational plans (projects, sketches) for carrying out the activities and measures defined in OP can be elaborated.

Writing style, maps, appendix

The OP is a tool for communication with various stakeholders, therefore a relatively short and understanding text in all sections of the plan is desired. The main text should contain crucial information and decisions about integrated management in urban forests in the next planning period; simple tables and understandable maps are desired. All additional information (text, tables, maps) relevant for the understanding of the main text of OP should be included in the appendix.

Participation of stakeholders

In the planning process, the participation of stakeholders is foreseen. Participation is an important part of the planning process, even more important than writing the text only. Therefore, a big effort should be made to include stakeholders in the planning process.

Availability of data, legal conditions

A plan is going to be used in various conditions with different availability of data related to the forests and the management in your study area. The main effort focuses on planning and decisions on management in the next period and not on collecting the data.

Planning system

The content of OP is in accordance with the strategic plan and legal documents relevant to the individual study area.

1. INTRODUCTION

1.1 Purpose and objective of the OP

- Objective of the OP: To restore the "modern image" of urban forests (UF) and to ensure that the urban forest area becomes a place for socialization, recreation, recreation, education, quality experience of natural heritage and green tourism for various target groups.

- The purpose of the OP

OP is the document that will serve to decision makers and operative staff in the line of forestry and spatial planning as a detailed plan for a specific focus area and derives from the superior Strategic plan.

- The reference to the strategic part of the integrated multifunctional management plan IMMP is correlated with the purpose of the Strategic part of the Integrated Multifunctional Management Plan (IMMP), which is to identify requirements for urban and peri-urban forests (UPF) in Ivano-Frankivsk, potential conflicts between different forest users. management objectives in the UPF and setting priorities among the objectives of management and maintenance of ecosystem services (ES). The strategic part also defines the guidelines that are the basis for defining operational objectives and measures. In addition, IMMP meets strategic priorities: nature conservation in the strategic area; ensuring the safety and coexistence of all users and ensuring the multifunctional use of the territory.

1.2 The composition of the plan, obligations and validity of the OP

- Fundamentals of OP

The following legal documents that were the basis for the planning process:

- Constitution of Ukraine,
- Forest Code of Ukraine
- Land Code of Ukraine
- Relevant laws of Ukraine
- Regulations on state protection of forests
- About the nature reserve fund of Ukraine
- Relevant forestry regulations and guidelines
- Local and regional orders

- Attitudes towards forestry and other planning bases

OP is the basis for the preparation of spatial plans for the UPF area, which will be used by SE "Ivano-Frankivsk State Forestry".

- Obligation

- o OP is mandatory for SE "Ivano-Frankivsk State Forestry", the Executive Committee of Ivano-Frankivsk City Council.

- o The OP is a mandatory basis for managing the Ivano-Frankivsk city community, planning the use of funds and obtaining international or national projects that meet the content of the OP.

- o The OP derives from the strategic part of IMMP and is the basis for the participation of the Ivano-Frankivsk State Regional Administration in the preparation of Forest Use Plans. Thus, the OP directly and indirectly affects the work of forestry management, which is usually responsible for forest planning, management and monitoring.

o Guidelines set by the OP are not mandatory for forestry business; however, the OP is a tool for communicating with private owners on forest management and a basis for projects/agreements. Some restrictions on forest management may stem from the importance of the forest for public functions or/ of the legislation, if the UPF area has been declared by the state or municipality as a forest category with a specific value / behavior.

- Preparation of the plan The Executive Committee of the Ivano-Frankivsk City Council and the State Enterprise “Ivano-Frankivsk State Forestry” are responsible for the preparation of the plan with the active participation of councilors from the villages of Kolodiivka and Dobrovliany. The main content is prepared by the Executive Committee of Ivano-Frankivsk City Council (coordinated by the project team) on the basis of data obtained from forest managers and village representatives. Communication between the forestry and the city council is extremely important during the preparation of the OP.

- Validity Time frame of IMMP- 10 years (2021 - 2031). The plan will be reviewed and updated as needed every 2 years. The Executive Committee of the Ivano-Frankivsk City Council and the Ivano-Frankivsk Forestry State Enterprise are responsible for reviewing the plan.

- Implementation and operational planning of the OP is the basis for the implementation of the activities of the city council on the territory of the UPF. It includes instructions, planned activities and tools. The OP cannot contain all the details for implementation; therefore, the measures defined in the OP can be elaborated during the OP period through operational projects (even after the end of the URBforDAN project).

- OP region

The strategic area in Ivano-Frankivsk has a surface of 1182 ha and includes part of Kolodiivka Village and Dobrovliany Village. The area is managed by the Executive Committee of Ivano-Frankivsk City Council. Afforested areas - 10%.

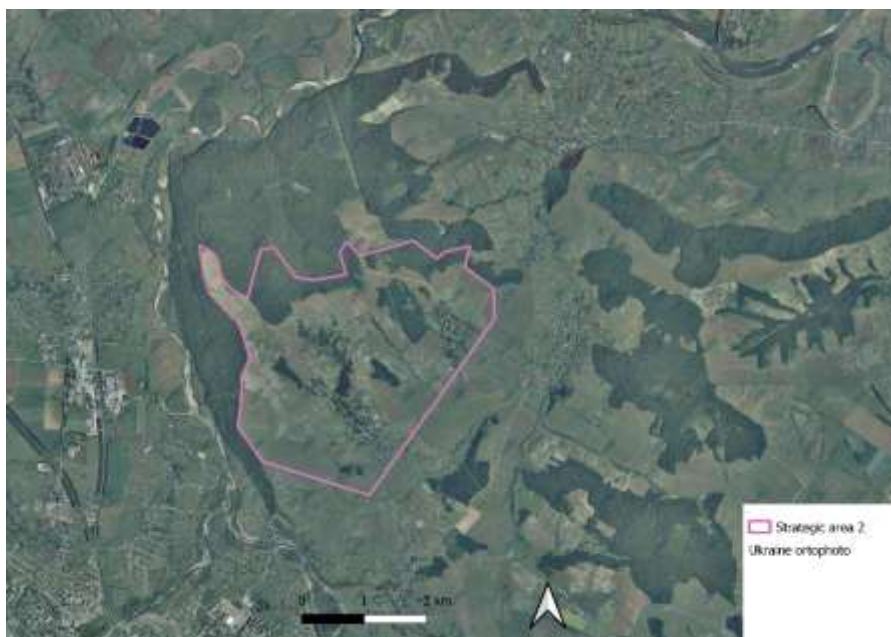


Figure 1 - Orthophoto and shape of the border of the strategic area



Figure 2 – Map with shape of the border of the strategic area

The **village of Kolodiyivka** was founded in 1466, the former name of the village is Fedkovo. The population is 571 people, the area is 8.93 km², the population density is 63.94 people / km².

The village of Kolodiyivka is 7 km away northeast of Ivano-Frankivsk. It is located between the village of Pidluzhzhia in the southeast and the village of Dobrovliany in the northeast. To the south-west of the village are the Vovchynets Hill and the village of Vovchynets itself.

Most of the village is located on a natural plateau, which stretches from the village of Pidluzhzhia to the northwest. The outskirts of the village are characterized by frequent fungal beams and rocky ravines. There used to be a forest on the territory of Kolodiyivka. The first settlers were forced to uproot trees, which caused the village to grow slowly. Thus, Kolodiyivka is divided into three parts, each of which has its own historical and cultural development.

The **village of Dobrovliany** was first mentioned in historical sources in 1378. Its first inhabitants, who settled in the oak (“dub” in Ukrainian) forest, were called dubrivliany, and this name was transferred to the village. Population is 208 people.

Focus Area no. 2 is managed by the Ivano-Frankivsk city community and covers an area of about 1180 hectares. The forested areas of the focal area no.3 in the land use of Ivano-Frankivsk Forestry, for which it is possible to assess ecosystem services and use as recreational facilities, are shown in Figure 3.

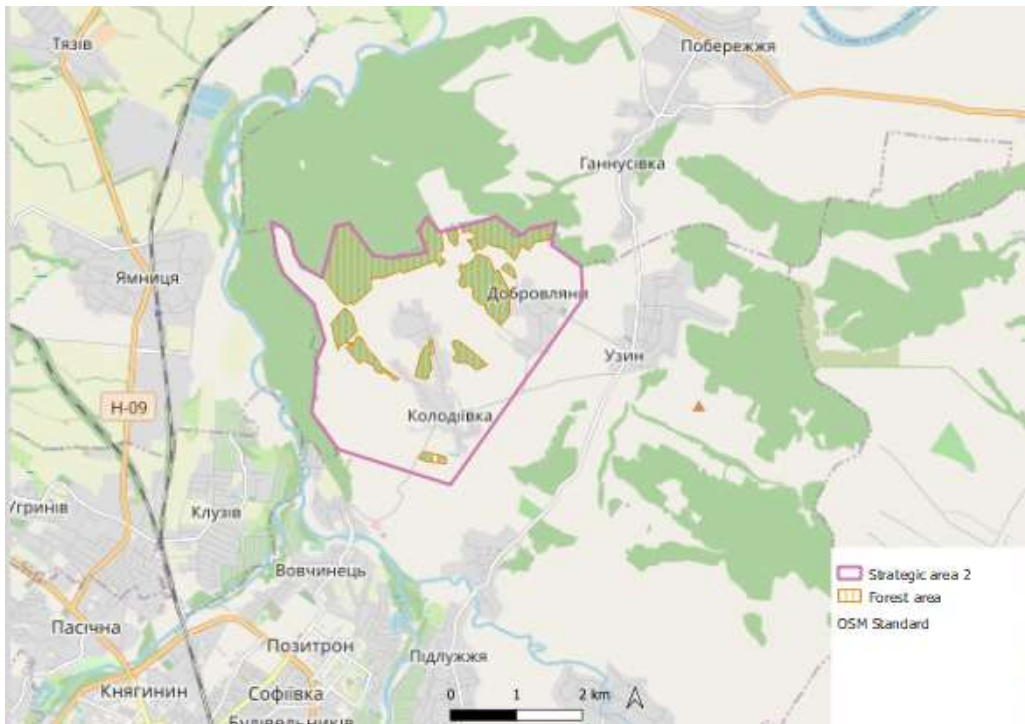


Figure 3. Forests of the focus area no.2

According to the Public Cadastral Map of Ukraine, a significant part of the forest territory (983 ha) near the focus area belongs to the nature reserve fund of Ukraine. "Kozakova dolyna" - a landscape reserve of national importance in Ukraine occupies an area of 953 hectares, located in Tysmenytsia district of Ivano-Frankivsk region, its northern and western borders are limited to the river Bystrytsa, eastern and southern borders are mainly agricultural lands, land users of SE "Ivano-Frankivsk forestry". The complex natural monument of local significance "Vovchynets Hill " occupies 30 hectares, located southeast of the village. Vovchynets Hill occupies an area of 20 hectares between the Kozakova Dolyna Nature Reserve and the Vovchynets Hill Nature Monument. The main land user is the Ivano-Frankivsk Forestry State Enterprise. Recreational operation of these NRF facilities is in violation of the Law of Ukraine "On Environmental Protection", the Law of Ukraine "On Fauna", the Law of Ukraine "On Flora", the Law of Ukraine "On the Red Book of Ukraine".

The main part of the lands of the focus territoryno.2 is in private or municipal ownership with the purpose: 01.01 - For conducting commodity agricultural production; 01.02 - For farming; 01.03 - For personal farming; 01.11 - For the provision of services in agriculture for the provision of services in agriculture; 16.00 - Reserve lands (land plots of each category of lands that are not provided for ownership or use to citizens or legal entities) for other agricultural purposes.

2 IMPORTANCE OF URBAN FORESTS AND MAIN MANAGEMENT OBJECTIVES

2.1 Purpose of UPF

• **Ecosystem services / forest functions / importance of IMMP**

List of ecosystem services provided or likely to be supplied by the focal area:

Provision ES

- ✓ Products and supplies for pets
- ✓ Non-food raw materials.
- ✓ Medicinal raw materials.
- ✓ Other forms of extraction of biological material from natural and artificial ecosystems
- ✓ Fresh water
- ✓ Genetic resources

Regulating ES

- ✓ Regulation of climatic conditions
- ✓ Self-regulation of local natural ecosystems
- ✓ Soil regulation
- ✓ Pollination of plants
- ✓ Natural protection against pests
- ✓ Protection against natural disasters, mitigation of adverse climatic conditions

Cultural ES

- ✓ Recreation and spiritual enrichment services
- ✓ Cognitive services (scientific, educational, upbringing)
- ✓ Conditions for the formation of cultural identity of ethnic and social groups

Supporting ES

- ✓ The influence of the environment on the formation of living organisms
- ✓ Influence of living organisms on the formation of the environment

• **Target groups / users**

The city of Ivano-Frankivsk identified 5 stakeholder groups among the users of the focus area №2:

- Local residents of two villages: Kolodiivka and Dobrovliany
- Motorbikers
- Cyclists - extreme (mountain biking)
- Runners
- Collectors of non-timber forest resources

The target groups were also identified through a study of visits and use of areas at sites located in the peri-urban area of Ivano-Frankivsk through the use of mobile webcams (see Annex 1 to the strategic part of the IMMP - a report on the study of visits and use of areas on facilities located in the peri-urban area of Ivano-Frankivsk)

• **Key conflicts**

Based on the workshops with UPF users in Ivano-Frankivsk, the following key existing conflicts were identified:

- Conflicts between users and drivers of cars (for example, cars, motocross, ATVs, etc.);
- Conflicts between users and cyclists riding mountain bikes - mainly related to safety issues due to speed, aggressive riding style, etc.;
- Conflicts related to bad behavior of individual users of all groups (garbage, noise, etc.).

3 FOREST CONDITION AND FOREST USE

3.1 State of forests and forest management

- The strategic area in Ivano-Frankivsk has a surface of 1182 ha and includes part of Kolodiivka Village and Dobrovliany Village. The area is managed by the Executive Committee of Ivano-Frankivsk City Council. Afforested areas - 10%.

- Ownership of forests According to the Public Cadastral Map of Ukraine, a significant part of the territory (983 ha) belongs to the nature reserve fund of Ukraine. "Kozakova dolyna" - a landscape reserve of national importance in Ukraine occupies an area of 53 hectares, located in Tysmenytsia district of Ivano-Frankivsk region, its northern and western borders are limited to the river Bystritsa, eastern and southern borders are mainly agricultural lands, land users of SE "Ivano-Frankivsk forestry". The complex natural monument of local significance "Vovchynets Hill" occupies 30 hectares, located southeast of the village. Vovchynets, land user Vovchynets village council. Vovchynets Hill occupies an area of 20 hectares between the Kozakova Dolyna Nature Reserve and the Vovchynets Hill Nature Monument. The main land user is the Ivano-Frankivsk Forestry State Enterprise. Recreational operation of these NRF facilities is in violation of the Law of Ukraine "On Environmental Protection", the Law of Ukraine "On Fauna", the Law of Ukraine "On Flora" and the Law of Ukraine "On the Red Book of Ukraine".

The main part of the lands of the focal territory №2 is in private or communal ownership with the purpose: 01.01 - For conducting commodity agricultural production; 01.02 - For farming; 01.03 - For personal farming; 01.11 - For the provision of services in agriculture for the provision of services in agriculture; 16.00 - Reserve lands (land plots of each category of lands that are not provided for ownership or use to citizens or legal entities) for other agricultural purposes.

- Forests, site conditions, forest types, plantation types

Forests of SE "Ivano-Frankivsk Forestry" mainly perform protective, ecological and recreational functions and have a certain operational value. With an average annual increase of 1.8 m³ per 1 ha of forested area, the amount of forest use in the entire area is 34-35 thousand m³, which is about 40 percent of the annual increase. Peri-urban forest occupies 75.5% of the total area of Vovchynets Hill (15.1 hectares).

The average age of forest plantations in the forestry is 59 years, the average stock of wood per 1 ha of forested area is 197 m³, the average annual increase is -3.8 m³ / ha, the average completeness is 0.72, and the average quality is 1.8.

The estimated felling of the main use is 20 thousand m³, including hairpins - 5.47 thousand m³, hardwood - 10.5 thousand m³, softwood 4.03 - thousand m³.

- Forest operations Forest in the area of concentration is used mainly for recreation of users. Forest operations include tree planting, reforestation, forest health restoration measures, erosion control; measures to reduce fire hazard.

- Timber production Not used, not allowed on the reserve

- Forest accessibility There are forest roads and economic trails that are in poor condition. They have not been improved for more than 10 years.

- Impacts, problems Damage from human activities, destruction of limestone rocks, corrosion from rain.

3.2 Visits to UPF and infrastructure

- Forest visits

There are no statistics on the number of visitors to the district.

Visitor structure:

- residents of the surrounding villages of Kolodiivka and Dobrovliany (settlements near forests)

- cyclists and motorbikers
- families

Conflicts over UPF visits mainly arise between downhill cyclists, extreme car racers and people living near the forest. Extremes frighten people and make them feel dangerous while driving. People living near the forest mentioned that cars and motorcyclists were making noise; they pollute the air and behave improperly.

- Infrastructure already available
 - o accessibility

There is no quality access to the territory. You can get there by car, motorcycle or bicycle.

- o length of routes

The largest cycling route depicted is almost 25 km long and can be one of the tourist attractions due to significant viewpoints, historical and cultural values (there are some interesting legends and stories that may be of interest to potential tourists) . The shorter route was marked within the URBforDAN project (see Figure 4).



Figure 4 - Bicycle route

- o bicycle ranges

Downhill cyclists have arranged 5 special paths in the forest.

- o a place for a hearth

There are no specially designed places for fires in this area. Visitors build fires in unsuitable places.

- o place of inspection

Several panoramic spaces are located in the square, but now not equipped.

- o benches

There are no benches on the territory

- o springs / water

There is one spring on the territory of the reserve, but it is not suitable for drinking because it is heavily polluted.

3.3 Important objects in UPF

- Kozakova Dolyna Nature Conservation is a landscape reserve of national importance in Ukraine.

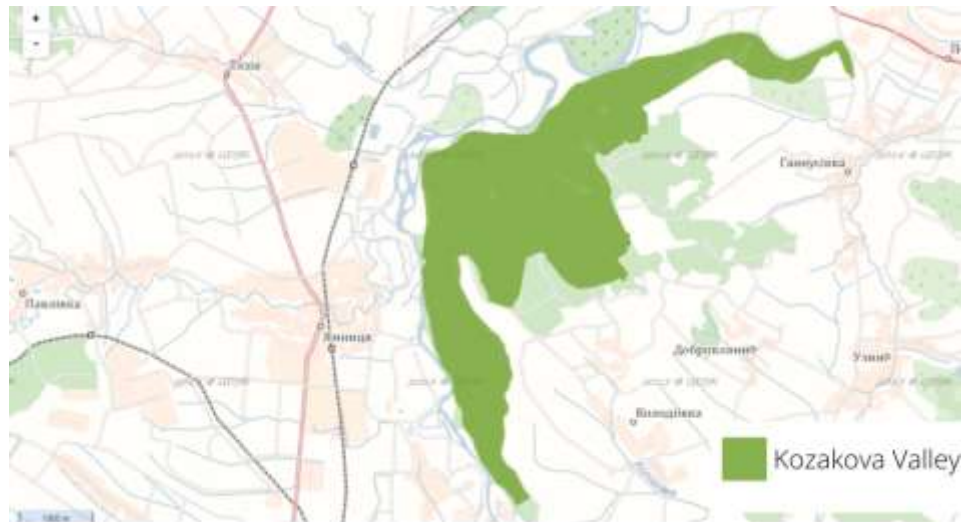


Figure 5 - Kozakova Dolyna Nature Conservation

- Cultural heritage

The Kozakova Dolyna Landscape Reserve of National Importance in Ukraine and rural settlements have historical and cultural value.

3.4 Assessment of the use, change and impact of factors

- Damage, risks

The main damage to forests is caused by climate change and user impact.

Potential threats to forests include construction, concerts, car races and other activities that destroy nature and involve large numbers of people at one time.

- Forest use issues

- Lack of equipped places for rest
- Lack of proper road infrastructure
- Accumulation of solid waste, low level of information about important events
- Arrival by car
- Broken tree branches
- Construction, bad road
- Difficulties with travel
- Visitors often travel by car - in warm weather it causes dust to rise, making it impossible to breathe properly.
- Indifference of people to the environment
- Irresponsible attitude of visitors to natural resources
- Lack of well-equipped areas, areas for comfortable rest, toilets, shops, cafes, children's areas, sports grounds
- Lack of bicycle and pedestrian paths, lighting, playgrounds
- Road erosion
- Degradation of the territory, inefficient use of the potential of the territory
- Lack of paths, places for rest (benches, pavilions), observation areas
- Does not have proper road infrastructure
- Lack of recreational infrastructure; the territory should be zoned for recreation, scientific and economic activities, zoning of the territory, convenient pedestrian and bicycle infrastructure.

4 RECOMMENDATIONS FOR FOREST MANAGEMENT

4.1 Subordinated recommendations

- Forest management plans

The main purpose of forest management in the focal area is environmental and recreational activities. The forest will not be used for logging, wood production for the next 10 years. In the future, according to the ultimate strategic goal of achieving sustainable development in the community, which is implemented through a combination of ecologically oriented economic activities and preserving the integrated ecosphere function of local ecosystems and biodiversity under the control of RLP. The management strategy includes intermediate strategic goals that can be achieved at the current stage of development (2-5 years), and the ultimate goal, which is achievable in the long run (10-20 years).

- Spatial plans

Strategic Plan for UPF provides the zoning of the most popular activities in the area

1. Recreation areas
2. Areas of environmental and educational activities
3. Recreation area for people with disabilities
4. Convenience zones

The main goals of the spatial development strategy are the multifunctional use of the territory, the coexistence and safety of all users, and the protection of the environment. Space must develop based on the concept of sustainable development. In turn, the area should be accessible for all categories of citizens, especially people with disabilities and the elderly, and recreational activities should be inclusive.

The strategic priorities of the spatial organization are:

1. Sustainable management of urban forests
2. Elimination of negative impact on forests
4. Development of recreational and aesthetic attractiveness of the territory
5. Eco-educational and educational activities

The main goals of the spatial development strategy are multifunctional use of the territory, coexistence and safety of all users, and nature protection. The space will develop based on these goals and human values (people-centered approach). In particular, the region should be more accessible from year to year for all, especially people with disabilities, retirees.

The strategic part of the IMMP is planned for 10 years and is based on current laws, regulations and regional / local programs. As the city's boundaries become wider as a result of decentralization reform in Ukraine, the urban forest is becoming an increasingly popular place for recreation, and its ecosystem services are playing a more important role for residents. Moreover, this means that environmental measures must be strict and systematic. The main risks are the increase in the load of visitors per unit area, the interest of developers to build houses or commercial facilities.

4.2 Fundamental / basic concepts

- Forest land, forest area Focus area № 2 is managed by the following land users: Ivano-Frankivsk City Community.

1182 ha. Afforested areas - 10%.

- Structure and composition of forests

The plan provides for intensive forest care. Care includes a set of agronomic and forest measures aimed at improving the conditions of survival and growth of forest crops. This includes improving

soil quality, removing grass and unwanted woody vegetation, and enriching the soil with nutrients. We will also try to plant a number of ornamental trees - red-leaved maples - on observation decks, as the focus area is used for recreation and close to settlements - the plan only provides for its preservation.

- Wood production technology Forestry does not harvest wood in the focus area.

- Nature protection Preservation and protection of forests is carried out through comprehensive measures aimed at protecting them from fires, illegal logging, damage and other impacts and protection from pests and diseases.

The threat of forest fires is growing due to the increasing number of visitors to relax and light fires. Therefore, for effective protection against forest fires, active preventive work is carried out among the population and youth, and in case of fire or fire-extinguishing according to the developed and approved mobilization plans for their elimination.

Systematic monitoring of forest conditions, timely detection of pests and diseases, prevention of their occurrence, their localization and elimination - provides protection of forests from pests and diseases. Biological and forest methods are used to control pests and diseases: sanitary felling, pruning care, deforestation, suspension of pheromone traps, protection and settlement of ants, construction and suspension of artificial nests.

- Areas with emphasized ES (or forest functions) in the UPF area. In addition, the project will improve 1 ES. Therefore, project activities include improving the focus area by installing equipment for 3 bicycle recreational points.

- Use of forests This peri-urban forest area can be a great place for a weekend getaway, the development of green tourism.

- Infrastructure in the forest area

Infrastructure is not currently developed in the study area. There is a public bus to the villages of Kolodiivka and Dobrovliany. Buses run from the city center (route №51).

Several panoramic spaces are located on the territory, but are not equipped now. Other important issues are the need for properly equipped parking lots, toilets, information points, better entrances, trails, route marking.

- Communication / Public Information

The Executive Committee of Ivano-Frankivsk City Council organizes a public presentation of the final IMMP project. The strategic and operational parts will be presented not only to forest managers, but also to the entire interested public - they will be invited to comment on the final draft documents and provide suggestions for their improvement. The public will be informed through: public events, posts on Facebook, publications in the media.

The Executive Committee of the Ivano-Frankivsk City Council will consider the remarks and correct the final versions of the IMMP prepared accordingly. Also, the Executive Committee of the Ivano-Frankivsk City Council will monitor changes and implementation of measures in the UPF together with the State Forestry. The Executive Committee of the Ivano-Frankivsk City Council is responsible for informing the public.

- Stakeholder cooperation

Cooperation began with the preparation of project proposals and is ongoing. At the moment, the Executive Committee of the Ivano-Frankivsk City Council has discussed the idea of the project with the State Enterprise "Ivano-Frankivsk Forestry" and received positive feedback. From this discussion, all events and activities (ES evaluation stage, development of specific goals for IMMP) were carried out due to the close and active participation of each institution.

4.3 Recommendations on the distribution of priority ESs

- Distribution of priority ESs

The main ecosystem services are:

- Regulating ES
- Cultural ES

Regulating ES: Local air quality. The forest protects settlements from pollution due to its proximity to the main city road, rural roads and factories / companies that produce products.

Cultural ES: Recreation and tourism. Repeated use of routes (cycling, walking, horseback riding, skiing, ATV riding, motorcycles), panoramic trails, and tourist routes are common for the focus area.

Cultural ES: Cultural Heritage. The natural monument of local significance "Vovchynets Hill" has historical and cultural value.

- Other multifunctional forests

Forests offer a wide range of different products, such as cork bark, resin, mushrooms, nuts, game or berries, as well as recreational services that are increasingly valued in the market. Promoting new value chains for such products can be a powerful economic incentive for integrated forest management schemes, enhancing forest versatility, promoting sustainable forest management and promoting agricultural development.

- Appropriation overlap

Focus area is large, but still provides several ES services. Priority ecosystem services (non-wood products, local air quality, recreation and tourism, science / education and cultural heritage) intersect with the ES without importance (timber production, climate mitigation and noise protection). This mix of ES services opens more opportunities for multifunctional development of the region.

4.3.1 Distribution of priority ESs

Table 1.

List of ecosystem services provided or likely to be supplied by the focal area.

Ecosystem services group	Type of ecosystem services	Product or benefit of ES	ES supply environment
Providing ES	Products and supplies for pets	Plant products and raw materials originating from the wild (mushrooms, berries, nuts, wild fruits, edible and aromatic plants)	Areas where relevant plant species (forests, steppes, meadows, swamps, freshwater and marine ecosystems) naturally grow or can be grown by humans.
		Beekeeping products	Areas where honey plants grow (agricultural landscapes, gardens, forests, steppes, meadows, swamps).
		Areas where honey plants grow (agricultural landscapes, gardens, forests, steppes,	Areas where plants used naturally grow as fodder (forests, steppes, meadows, swamps, freshwater ecosystems).

		meadows, swamps).	
	Non-food raw materials.	Other forest products derived from trees (shrubs, needles, resin, etc.).	Natural and artificial forest ecosystems.
	Medicinal raw materials.	Plant raw materials from natural and artificially created ecosystems (herbaceous plants, trees, algae, lichens, fungi with medicinal properties)	Habitats where relevant species naturally grow or can be grown (forests, steppes, meadows, swamps, freshwater and marine ecosystems)
	Other forms of extraction of biological material from natural and artificial ecosystems	Decor products, collections, scientific collections, natural horticultural and seed material	Areas where the relevant animal species live or the relevant plant species grow, as well as where the relevant elements of inanimate nature are located (forests, steppes, meadows, swamps, freshwater and marine ecosystems).
	Fresh water.	Sources of water for drinking, industrial use (for people, domestic animals, industrial production) and irrigation.	Freshwater catchments, ground and surface waters, forests and other tree plantations, which provide transportation of precipitation to soil horizons and water filtration.
	Genetic resources	Ecosystems of all types.	Natural populations of species that are stably preserved in ecosystems.
Adjusting ES	Regulation of climatic conditions	Regulation of the temperature of the earth's surface and air	Natural vegetation, moisture and natural processes in terrestrial ecosystems of all types.
		Regulation of moisture cycle	
		Regulation of air flows	
	Self-regulation of local natural ecosystems	Regulation of air composition and quality	Natural vegetation in ecosystems of all types
		Replenishment of groundwater reserves	Terrestrial ecosystems of all types, as well as artificial plantations with closed vegetation
		Regulation of surface water composition and	Natural vegetation in aquatic and surrounding water

		quality	ecosystems, natural microflora (bacteria) of ecosystems, the presence of natural floodplains in plain rivers
		Homeostasis of ecosystems	Natural ecosystems of all types.
	Soil regulation	Soil formation	Natural vegetation in terrestrial ecosystems of all types. Artificial plantings (forest belts, reclaimed lands, buffer strips, fallows).
		Soil protection against erosion	Natural vegetation in terrestrial ecosystems of all types
		Symbiotic services of soil organisms	
	Pollination of plants	Pollination of plants by insects and wind	Natural habitats of pollinating insects (steppes, meadows, forests, swamps, reservoirs).
	Natural protection against pests	Control of the number of agricultural pests by entomophagous insects, birds, mammals. Regulation of zoonotic infections.	Habitats where invertebrates and vertebrate entomophagous live.
	Protection against natural disasters, mitigation of adverse climatic conditions	Shore protection and flood protection	Coastal ecosystems of watercourses and reservoirs. Floodplain and swamp ecosystems
		Protection of settlements from storms, reduction of mechanical damage of crops by winds, protection of fields from dust storms	Protection of settlements from storms, reduction of mechanical damage of crops by winds, protection of fields from dust storms
		Reducing the effect of frost on the crop	
Cultural ES	Recreation and spiritual enrichment services	Environment for recreation, tourism, cycling, sports, etc.	Natural landscapes, biodiversity, processes and phenomena in ecosystems
		Social functions of wildlife use (hunting, fishing, photo hunting, etc.)	
		A source of creative inspiration and ideas	Habitats where the relevant species live naturally or can be

			grown (forests, steppes, meadows, swamps, freshwater and marine ecosystems)
	Cognitive services (scientific, educational, upbringing)	Scientific study of biodiversity and natural processes	Natural ecosystems of all types
		Opportunity to illustrate education	
		Raising children in contact with nature	Natural landscapes of biodiversity, processes and phenomena in ecosystems
	Conditions for the formation of cultural identity of ethnic and social groups	Formation of identity of ethnic and social groups on the basis of landscape diversity, features of natural conditions and nature management	Natural ecosystems of all types
Supporting ES	The influence of the environment on the formation of living organisms	Formation of climatic conditions and zoning based on climatic and landscape factors	Natural conditions and ecosystems of all types
	Influence of living organisms on the formation of the environment	Global biochemical cycles	Chemical processes in the environment, the activity of microorganisms.
		Primary productivity of ecosystems and greenhouse gas deposits	Vegetation.
		Biodiversity support	Natural process.

4.4 Detailed forest zoning

- Zoning for forest land use

The plan provides for the zoning of the most popular activities in the area:

1. Recreation areas:

- o Sports area (Figure 6):

- routes for extreme riding (downhill)
- routes for cycling (cross country) and treadmills.

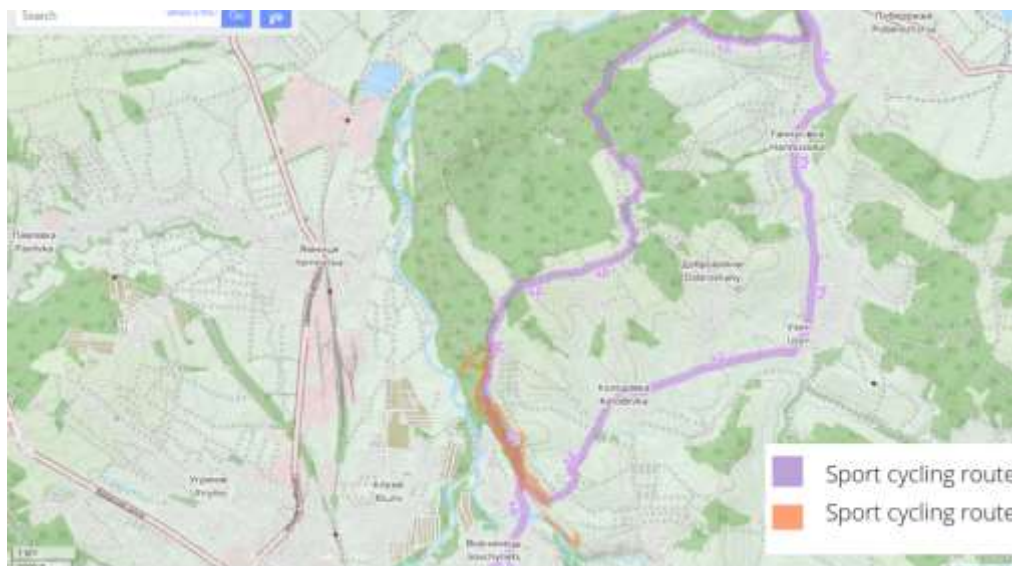


Figure 6. Existing bicycle routes in the focal area

- sports grounds
- volleyball courts

- o Relaxation area

- meditation
- yoga
- psychotherapy and rehabilitation sessions
- conducting seminars and trainings in the open air

- o Family recreation area:

- gazebos, barbecue
- playground

- o Area for artists:

- platforms for artists and designers
- photozone

2. Areas of environmental and educational activities

- bird watching sites
- walking routes to study biodiversity
- seasonal sites for observation of rare flora

3. Recreation area for people with disabilities

- wheelchair lanes
- information boards (Braille code and relief landscapes)

4. Convenience zones:

- parking
- landfills
- toilets

The main goals of the spatial development strategy are the multifunctional use of the territory, the coexistence and safety of all users, and the protection of the environment. Space must develop based on the concept of sustainable development. In turn, the area should be accessible for all categories of citizens, especially people with disabilities and the elderly, and recreational activities should be inclusive. Planning of recreational areas in Figure 6.

The strategic priorities of the spatial organization are:

1. Sustainable management of urban forests
2. Elimination of negative impact on forests
4. Development of recreational and aesthetic attractiveness of the territory
5. Eco-educational and educational activities

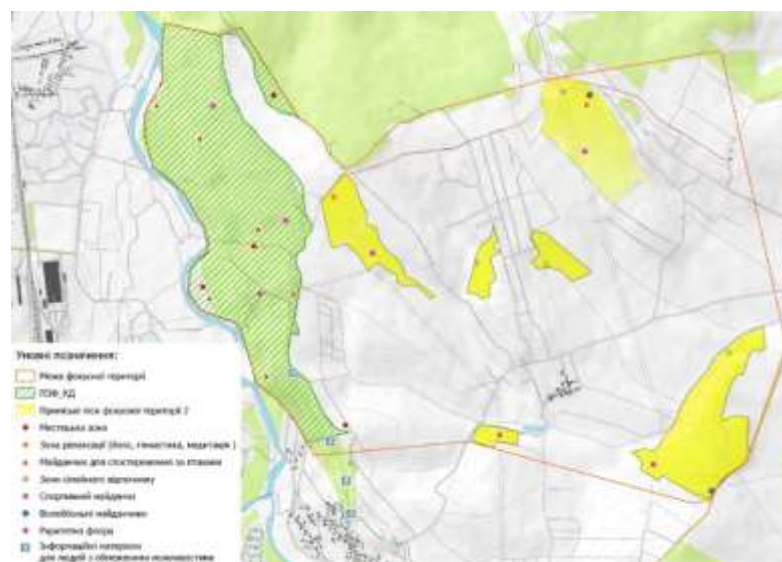


Figure 7 - Planning of recreational areas

4.5 Measures

- forestry and forest management
- arrangement of entry points
- recreational paths, bicycle ranges
- bicycle space
- points of interest (observation decks)
- information points: marking, equipment for routing
- playgrounds
- areas for playgrounds and forest schools
- accessibility to UPF (accessibility by public transport, availability of parking spaces, road construction)
- promotion and informing users

4.5.1 Detailed forestry planning and forest management

- Forestry and forest management

- Condition / problems

The area is maintained and protected. No special forest treatment is carried out. Forestry in the area is not developed. Among the problems is the accumulation of waste.

- Target condition

The area is protected, used effectively, cleared, and users are well informed about the behavior in the forest area. Forest management is being improved. Forestry is developed.

- Objective

Objective - to achieve all 7 criteria of good governance:

- (i) Increasing forest cover
- (ii) Conservation of the living ecosystem and biodiversity
- (iii) Soil and water protection
- (iv) Increase productivity
- (v) Meeting the basic needs of communities (through eco-compatible actions)
- (vi) Increasing participation status
- (vii) Increasing managerial sensitivity

- Priority A very important priority to be met in the next 2 years

- The most important ES o providing ES

- o regulatory ES
- o cultural ES

- Possible measures - Restoration of degraded territory
- Regular analysis of population assessment and behavior
- Educational activities
- Strengthened measures for protection and cleaning of the territory

- Unwanted or prohibited activities

The following actions are prohibited or restricted:

- Use of motorcycles in some areas
- Breeding hearths
- Accumulation of waste

- Forestry measures

Reforestation

Cleaning

Thinning

Reforestation work is planned so that plantations with the best main tree species grow on the site with optimal costs in the shortest period of time in the new generation of forests. In the process of reforestation, natural reforestation of various existing tree species and old tree crops, wood and deciduous species that contribute to biological diversity, try to preserve as much as possible.

Reforestation works involve mineralization of the soil, i.e. scarification of the soil so that the seeds reach the soil and begin to germinate during the sowing year.

- Timber production measures

Timber production is not efficient in the area due to its proximity to the reserve. The purpose of production is to produce a valuable range of wood at optimal cost. At the same time, forest resources in the focus area are not considered valuable.

- Infrastructural measures

Forest improvement consists of maintenance, renewal and reconstruction of roads and drainage.

- Costs EUR 50000.00

- Financiers State Budget, Ivano-Frankivsk Forestry

- Coordinators of Ivano-Frankivsk Forestry

- Stakeholders of the Executive Committee of Ivano-Frankivsk City Council, Population of Ivano-Frankivsk city territorial community

- Legal basis

Forest Code of Ukraine

Land Code of Ukraine

Relevant laws of Ukraine

Regulations on state protection of forests

About the nature reserve fund of Ukraine

Relevant forestry regulations and guidelines

4.5.2 Detailed planning of arrangement of entry points

- Sphere and map Arrangement of entry points



Figure 8 - Possible entry points to the focus area

- Status / Problems

There are currently several inputs in the focus area (see Figure 7). However, they are all difficult to access (you need to get to the forest through rural roads, and then field roads)

Public transport (route №51) runs at the entrance to the villages of Kolodivka and Dobrovlyani. Condition - the entrances are not equipped, there is no place for parking, parking for bicycles, barriers, information tables.

- Target condition

Arranged entrances. Parking spaces have been identified and built. Information boards are organized and understandable for visitors. Waste collection point with a coating for wind protection is properly arranged. The waste transportation system is well organized.

- Purpose

The aim is to minimize any conflicts between users through arranged and controlled entry for cars or other motor vehicles.

The following will be improved:

- containers purchased and installed (2022)
- information boards were purchased and installed (2022)
- equipped parking spaces (2024)
- arrangement of toilets (2022).

- Priority

A very important priority that needs to be partially met in 2022

- The most important ESs o Cultural EPs

Possible measures High-quality entrances will control the load of visitors, cars entering the area. This will protect the forest from damage caused by human activities. Moreover, the space for entry may include small business development, infrastructure, and structure.

- Unwanted or prohibited activities Actions that are not allowed or restricted:

- Driving a car in a forest area
- Use of motorcycles in some areas
- Breeding hearths in places not intended for this purpose
- Accumulation of waste

- Forestry activities

Planting new trees on the site and organizing the flow of visitors is very important and valuable for the focus area.

- Measures for wood production None

- Infrastructure measures

The infrastructure component includes road construction, construction of a separate parking space, containers and toilets.

- Additional plan / sketch, if required

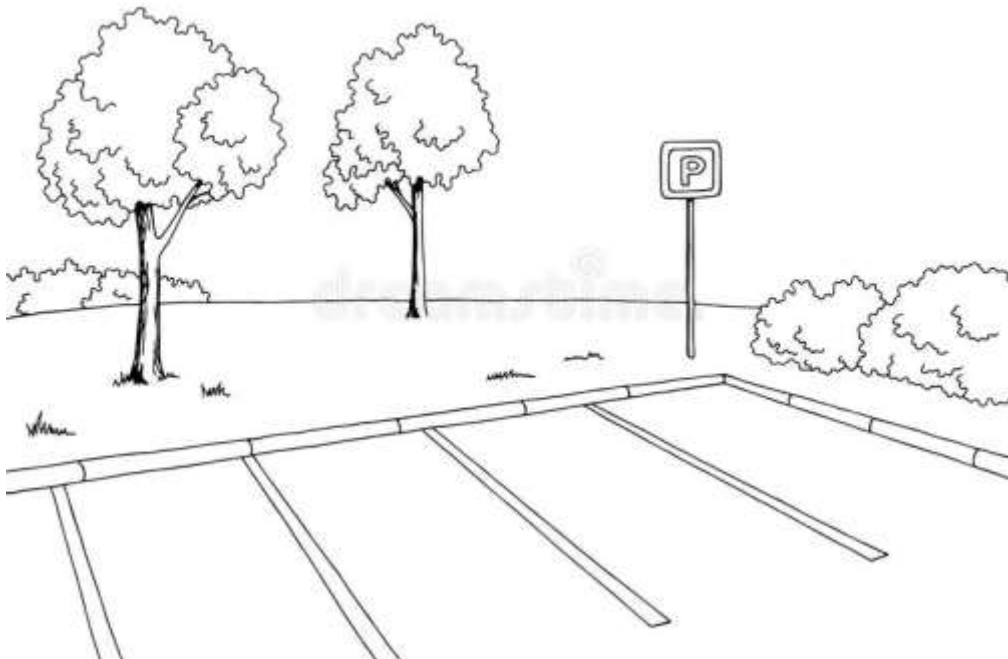


Figure 9 - Possible option for a parking space in the focal area

- Costs 80000.00 euros

- Financiers Local budget,
Executive Committee of Ivano-Frankivsk City Council,

- Coordinators of the Executive Committee of Ivano-Frankivsk City Council,

- Stakeholders of Ivano-Frankivsk Forestry

Population of Ivano-Frankivsk city territorial community

- Legal basis

- Forest Code of Ukraine
- Land Code of Ukraine
- Relevant laws of Ukraine
- Regulations on state protection of forests
- About the nature reserve fund of Ukraine
- Relevant forestry regulations and guidelines

4.5.3 Detailed planning of recreational paths, bicycle ranges

- Condition / problems: Unmarked routes / paths, easy to get lost, no information signs and guides. However, there are interesting places in the forest, flora and fauna, natural water sources to which you can develop new routes.

- Target status: In the next 5 years, new routes are developed and promoted for different categories of users with different levels of complexity, a well-organized marking system.

- Purpose

The aim is to promote a healthy lifestyle, cycling, active leisure and downhill as a modern sport, while preserving the original natural state of the trails.

The following will improve:

- 30 information and training boards / signs, installed along the entire length of the bicycle route
- 5 more routes have been developed and popularized
- 4 bicycle ranges were modernized and secured

- Priority A very important priority to be met in 2022-2024

- The most important ES

- o ES culture

- Possible measures Possible (planned) measures:

- Cycling
- Hiking
- Downhill competitions
- Cycling lessons
- Routes / trails for tourists
- Training trails

- Unwanted or prohibited activities. The following actions are not allowed or restricted:

- Driving a car in a forest area

- Use of motorcycles
 - Breeding hearths
 - Accumulation of waste
 - Mixing routes
 - Felling of trees
 - Hunting
 - Biodiversity damage
 - Any construction works
 - Any urbanization interventions
- Forestry activities. Planting new trees on the site and organizing the flow of visitors is very important and valuable for the focus area.

Biodiversity protection is the most important factor in passing through the reserve

- Measures for wood production None
- Infrastructure measures None
- Costs 10000.00 euros
- Financiers Local budget and grant costs,
Executive Committee of Ivano-Frankivsk City Council,
- Coordinators of the Executive Committee of Ivano-Frankivsk City Council;
SE "Ivano-Frankivsk Forestry"
- Stakeholders of the Population of Ivano-Frankivsk City United Territorial Community
- Legal basis
 - Forest Code of Ukraine
 - Land Code of Ukraine
 - Relevant laws of Ukraine
 - Regulations on state protection of forests
 - About the nature reserve fund of Ukraine
 - Relevant forestry regulations and guidelines

4.5.4 Detailed planning of bicycle space (bicycle stops)

- Sphere and map Recreational cycling space

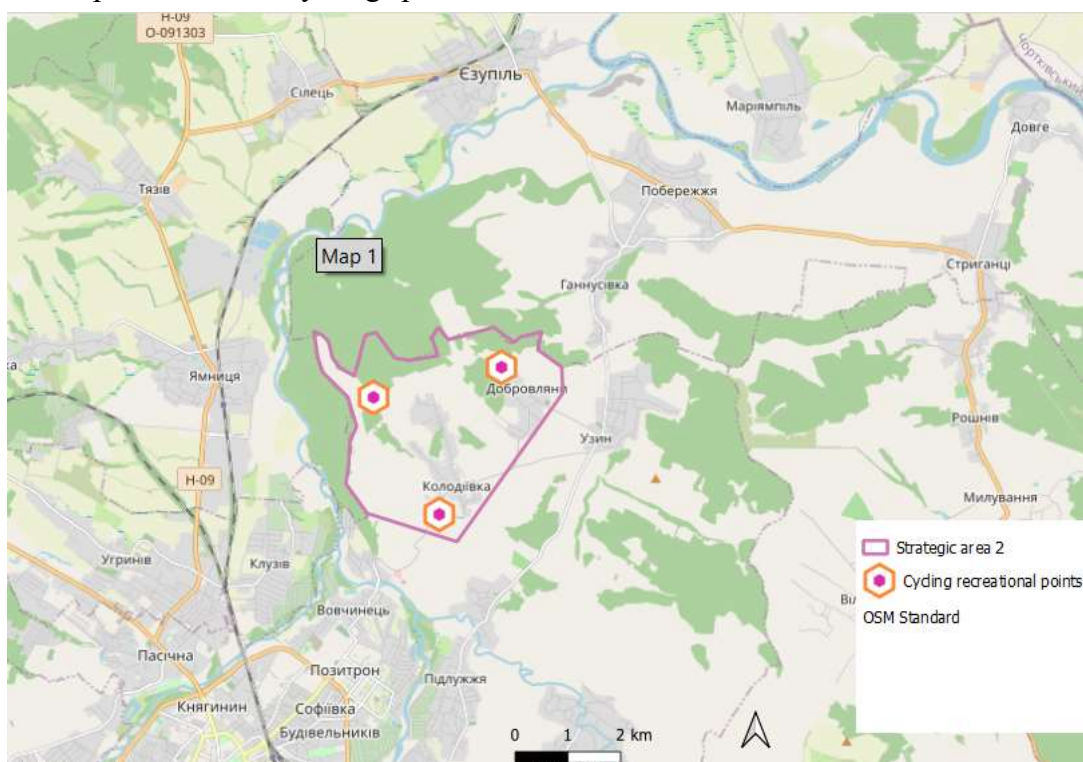


Figure 10 - Map showing the planned location of the bike stop

- Condition / Problems: Cyclists are part of the main focus area users. As mentioned above, the long bike route passes through the focus area. Currently, the focus area is not equipped with any recreational spaces.

- Target condition: You can perfectly arrange areas for cycling - put tables and benches, information boards and bicycle parking. This can protect trees and plants from any damage, prevent waste from leaving on the grass, and offer trash cans instead. There is a great ambition to develop national competitions.

- Purpose

The goal is to strengthen cycling culture in Ivano-Frankivsk by improving the multifunctional spaces, creating and promoting the development of downhill as a sporting activity of local and national importance. 3 bicycle stops will be installed.

- Priority A very important priority to be met in 2021.

- The most important ESs - Cultural ES

- Possible measures Possible measures:

meeting cyclists

workshops for cyclists on the spot, workshops for children

competition

- Unwanted or prohibited activities:

Activities that are not allowed or restricted:

- Driving a car in a forest area
- Use of motorcycles
- Breeding hearths
- Accumulation of waste
- Mixing routes
- Felling of trees
- Hunting
- Biodiversity damage
- Any construction works
- Any urbanization interventions

- Forestry activities

Planting new trees on the site and organizing the flow of visitors is very important and valuable for the focus area.

Biodiversity protection is the most important factor in passing through the reserve

- Measures for wood production None

- Infrastructure measures None

- Additional plan / sketch, if required



Figure 11a - Sketch of a recreational space for bicycles



Figure 11b - Sketch of a recreational space for bicycles



Figure 11c - Sketch of a recreational space for bicycles

- Expenditure of EUR 30500.00 (including EUR 25000.00 of URBforDAN grant)
- Financiers Local budget and grant costs.
Executive Committee of Ivano-Frankivsk City Council;
- Coordinators: Executive Committee of Ivano-Frankivsk City Council;
SE "Ivano-Frankivsk Forestry"

- Stakeholders of the Population of Ivano-Frankivsk City Territorial Community
- Legal basis
 - Forest Code of Ukraine
 - Land Code of Ukraine
 - Relevant laws of Ukraine
 - Regulations on state protection of forests
 - About the nature reserve fund of Ukraine
 - Relevant forestry regulations and guidelines

4.5.5 Detailed planning of places of interest (observation "green tower")

- Status / problems

The village of Kolodiivka is the highest village of Ivano-Frankivsk city community, so it is advisable to use this feature for interesting projects and attractions. The observation "green" tower can become one of such "highlights". At present there are no tourist attractions in the area.

- Target condition

There is an observation tower with landscaping and terraces on each floor.

- Purpose

The purpose is to increase the tourist attractiveness of the territory.

The following will be improved:

- entrance platforms are mounted;
- installed tower;
- the area will be cleaned;
- tables and benches are installed;
- Garbage cans are installed.

- Priority

An important priority to be met by 2031

- The most important ESs - Cultural ES

- Possible measures Possible measures:

contemplation of landscapes

photography

landmark on tourist routes

- Undesirable or prohibited activities

- Driving in the woods and close to the cliffs
- Breeding hearths
- Accumulation of waste

- Biodiversity damage
 - Any construction works
 - Loud and noisy activities
- Forestry activities

Planting new trees on the site and organizing the flow of visitors is very important and valuable for the focus area.

- Measures for wood production: None
- Infrastructural measures

Infrastructural measures include the construction of a road that passes near the area, construction work on the parking lot, preparatory work for the arrangement of the tower and the surrounding area

- Additional plan / sketch, if required



Figure 12 - Design proposal of the observation tower

- Costs 200000.00 euros
- Financiers: Local budget and grant costs.
Executive Committee of Ivano-Frankivsk City Council;
- Coordinators: Executive Committee of Ivano-Frankivsk City Council;
- Stakeholders: Population of Ivano-Frankivsk City United Territorial Community
- Legal basis
 - Forest Code of Ukraine
 - Land Code of Ukraine

- Relevant laws of Ukraine
- Regulations on state protection of forests
- About the nature reserve fund of Ukraine
- Relevant forest regulations and guidelines households

4.5.6 Detailed planning for information points: equipment for marking, routing

- Condition / problems

In the forest area you can find several boards with old markings for bicycle routes. Isolated cases in the field of sports and active leisure, which are provided by business entities.

- Target status

Well-equipped information points at the main entrance and along the routes. At the entrances to the villages of Kolodivkyka and Dobrovliany, you can arrange a equipment rental point for routes, trails or sports events.

- Purpose

The aim is to raise user awareness of the area and involve businesses in the development of new forms of active leisure on the hill.

The following will be improved:

- at least 4 information points located at the entrance;
- arranged rental points;
- involvement and development of business.

- Priority

A very important priority to be met in 2025

- The most important ESs - Cultural ES

- Possible measures Possible measures:

- Downhill skiing
- B.A.S.E + jumps
- Cable car
- Camping
- Forest school
- Mountain bike
- Volleyball
- Treadmills
- Sledges
- Snowboard tracks
- Orienteering, arrangement of walls for climbing lessons, territory of alternative types of games (laser, ultimate frisbee)
- Yoga

- Unwanted or prohibited activities Measures that are not allowed or restricted:

- Driving in the woods and close to the cliffs of the hill

- Breeding hearths
 - Accumulation of waste
 - Biodiversity damage
 - Any construction works
 - Loud and noisy activities
- Forestry activities
- Planting new trees on the site and organizing the flow of visitors is very important and valuable for the focus area.
- Measures for wood production None
 - Infrastructure measures - None
 - Additional plan / sketch, if required



Figure 13 - Example taken from the Internet

- Costs: 10000.00 euros + business investment
- Financiers: Local budget and business expenses, Executive Committee of Ivano-Frankivsk City Council,
- Coordinators: Executive Committee of Ivano-Frankivsk City Council; SE "Ivano-Frankivsk Forestry"
- Stakeholders: Population of Ivano-Frankivsk City United Territorial Community, Business sector
- Legal basis
 - Forest Code of Ukraine
 - Land Code of Ukraine
 - Relevant laws of Ukraine
 - Regulations on state protection of forests
 - About the nature reserve fund of Ukraine
 - Relevant forestry regulations and guidelines

4.5.7 Detailed planning of the space around the lake (terraces, pergolas, fishing areas) in Kolodiivka

- Sphere

Restoration of the lake and the surrounding space (terraces, pergolas, fishing areas) in Kolodiivka

- Condition / problems

The area is not equipped in any way for the leisure of visitors. The clean-up is being carried out by local activists.

- Target condition

The landscaped area around the lake can become an attraction in a small village. Visitors can combine walks in the woods with relaxation by the lake.

- Purpose

The purpose is to use the resources provided to improve the attractiveness of the area.

The following will be improved:

- Terrace paths around the lake;
- Recreation areas are arranged;
- Appropriate boards and plates are installed for clear logistics.

- Priority A very important priority that needs to be partially met in 2025

- The most important EPs - Cultural ES

- Possible measures Possible measures:

- Active leisure in the fresh air
- Fishing
- Photo sessions and creative activities

- Unwanted or prohibited activities Measures that are not allowed or restricted:

- Breeding hearths
- Accumulation of waste
- Biodiversity damage
- Any construction works
- Loud and noisy activities

- Forestry activities

Planting new trees on the site and organizing the flow of visitors is very important and valuable for the focus area.

- Measures for wood production: None

- Infrastructure measures: None
- Additional plan / sketch, if required
- Costs: 80000.00 euros
- Financiers: Executive Committee of Ivano-Frankivsk City Council
- Coordinators: Executive Committee of Ivano-Frankivsk City Council;
- Stakeholders: Population of Ivano-Frankivsk City Territorial Community
- Legal basis
 - Water Code of Ukraine
 - Land Code of Ukraine
 - Relevant laws of Ukraine
 - Regulations on state protection of forests
 - About the nature reserve fund of Ukraine
 - Relevant provisions and guidelines for water management

4.5.8 Detailed planning of territories for eco-camping

- Condition / problems

The area in the village of Dobrovlyan is suitable for the development of campsites (so close to the city, but the place is very quiet and peaceful, surrounded by forests). Currently, the village has no tourist attractions.

- Target condition

Arranged place for camping (tent camp in a modern style), over time can be transformed into glamping

- Purpose

The purpose - popularization of active rest on natural, change of the approach

The following will be improved:

- designed and installed camping town;
- landscaped area;
- promotion of camping.

- Priority A very important priority to be met in 2028

- The most important ESs - Cultural ES

- Possible measures:

- Active leisure in the fresh air
 - Learning environment
 - Camping
 - Tourism
 - Unwanted or prohibited activities:
- Measures that are not allowed or restricted:
- Driving in the woods
 - Breeding hearths in places not designated for this purpose
 - Accumulation of waste
 - Biodiversity damage
- Forestry activities
- Planting new trees on the site and organizing the flow of visitors is very important and valuable for the focus area.
- Measures for wood production: None
 - Infrastructure measures: None
 - Costs: 120000.00 euros
 - Financiers:
Executive Committee of Ivano-Frankivsk City Council;
Business
 - Coordinators: Executive Committee of Ivano-Frankivsk City Council;
 - Stakeholders: Population of Ivano-Frankivsk City Territorial Community, potential tourists
 - Legal basis
 - Forest Code of Ukraine
 - Land Code of Ukraine
 - Relevant laws of Ukraine
 - Regulations on state protection of forests
 - About the nature reserve fund of Ukraine
 - Relevant forestry regulations and guidelines

4.5.9 Detailed planning of accessibility to UPF (accessibility by public transport, availability of parking spaces, construction of roads)

- Scope
Accessibility to UPF (accessibility by public transport, availability of parking spaces, road construction)
- Condition / problems

There are bus stops in the villages of Kolodivkyka and Dobrovliany. Buses run from the city center (route №51). Bus stops must be built and well equipped.

Parking spaces are currently unavailable. The drivers park their cars anywhere, chaotically and it is not convenient for the villagers.

One of the main city roads ends at the entrance to Vovchynets Hill (Vovchynetska Street). There is an urgent need to continue the road through the hill, as it connects the city with other villages, which due to decentralization will become part of the Ivano-Frankivsk city united territorial community. People use this road to get to work, schools and kindergartens. In addition, there is a problem with road construction, as the hill consists of limestone. That is why this natural feature should be taken into account. There is still an opportunity to get to the villages from the village of Pidluzhzhia. However, this road also requires comprehensive work to restore the road surface.

- Target condition

Seating, weather protection and a sense of security and protection must be provided at bus stops. People need to know when the bus will arrive and where it is going. This is especially important for people who are unfamiliar with the services, such as tourists. The schedule, route information and map should be located at or near bus stops. The parking space must be clearly identified and marked for drivers. It must be connected to the road and not obstruct the entrance to residential buildings.

The road connecting the village of Vovchynets with the villages of Kolodiivka, Uzyn and Dobrovliany must be built.

- Objective

Objective - to improve the accessibility of the focus area №2 for users, increasing the level of comfort.

The following will improve:

"Smart" bus stops have been installed

Identified and built parking space

A road has been built.

- Priority: A very important priority to be met in 2029.

- The most important ESs - Cultural ES

- Possible measures:

- Convenient parking for people and nature conservation
- Developing tourist routes
- Development of another entrance to the territory
- Creating opportunities for business development in the area

- Unwanted or prohibited activities

Measures that are not allowed or restricted:

- Driving in a forest area
- Breeding hearths
- Accumulation of waste
- Biodiversity damage

- Forestry activities

Planting new trees on the site and organizing the flow of visitors is very important and valuable for the focus area.

- Measures for wood production: None

- Infrastructure measures

The following infrastructure measures must be carried out:

- preparatory work for the installation of a bus stop;
- road construction (approximately 40 km and parking spaces)

- Costs: 2000000.00 euros

- | | |
|----------------|--|
| • Financiers | Local budget, investments
Executive Committee of Ivano-Frankivsk City Council; |
| • Coordinators | Executive Committee of Ivano-Frankivsk City Council;
SE "Ivano-Frankivsk Forestry" |
| • Stakeholders | Population of Ivano-Frankivsk City Territorial Community |
| • Legal basis | <ul style="list-style-type: none"> ▪ Forest Code of Ukraine ▪ Land Code of Ukraine ▪ Respective laws of Ukraine ▪ Regulations on state protection of forests ▪ About the nature reserve fund of Ukraine ▪ Relevant forestry regulations and guidelines |

4.5.10 Detailed planning for promotion and informing users

- Status / problems

The level of awareness of residents about forests in the villages of Kolodiivka and Dobrovlia in Ivano-Frankivsk is quite low. But information about beautiful landscapes, Kozakova Dolyna Nature Reserve, cycling routes and rich history is quite limited.

According to the stories of elderly residents of the village of Kolodiivka, Kozakova Dolyna, the location has been known since 1648. At that time, the Cossacks of Vysochany set up camp on the picturesque site of present-day Vovchynets, where two Bystritsa rivers converge. Immediately in 1945 there was a liberation uprising in the camp. Later, in memory of the Cossacks, the residents nicknamed the place "Cossack Valley". Like the island of Khortytsia in the Zaporizhia region, in the Kozakova Valley grows an oak, which is more than 300 years old.

- Target status

Advertising and information activities are held regularly. The level of public awareness has increased. However, the information should include data on behavior in urban and interurban forests. Also, the load of users on the zone should still be monitored and controlled.

- Purpose

The aim is to promote UPF in the focus area №2 as a multifunctional recreational area and a place of rich natural biodiversity.

The following will be improved:

- The communication strategy of advancement of the territory is developed;
- Executive Committee of Ivano-Frankivsk City Council will promote and promote the territory among citizens and tourists;
- Travel agencies will include places for tourist excursions.

- Priority

A very important priority that should be followed regularly.

- The most important ESs - Cultural ES

- Possible measures:

- holding events on the territory
- developing tourist routes
- regular dissemination of information about the focus area №2.

- Unwanted or prohibited activities

Measures that are not allowed or restricted:

- Promotion of environmentally unfriendly activities
- Holding too loud and noisy events

- Forestry activities: None

- Measures for wood production: None

- Infrastructure measures: None

- Costs: 3000.00 euros

- Financiers

Local budget

Executive Committee of Ivano-Frankivsk City Council

- Coordinators

Executive Committee of Ivano-Frankivsk City Council;
SE "Ivano-Frankivsk Forestry"

- Stakeholders

Population of Ivano-Frankivsk City Territorial Community

- Legal basis

- Forest Code of Ukraine
- Land Code of Ukraine
- Relevant laws of Ukraine
- Regulations on state protection of forests
- About the nature reserve fund of Ukraine
- Relevant forestry regulations and guidelines

5 MANAGEMENT

5.1 Implementation / responsibility

List of key managers / coordinators and their responsibilities

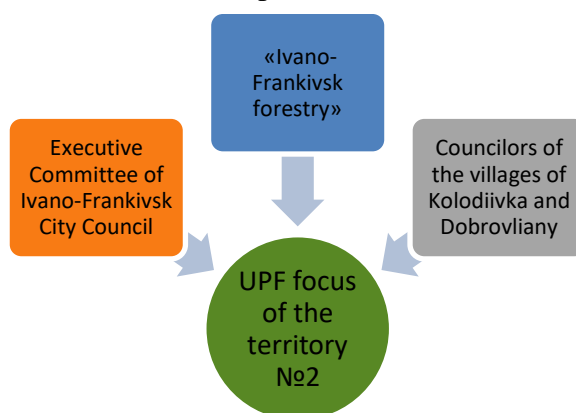


Figure 14 - Bodies that will be responsible for the implementation of the plan

Responsibility will be shared between forestry managers, representatives of city and village councils.

Table 2 - Activities and responsible body

Responsible body	Activities for which the body is responsible:
Executive Committee of Ivano-Frankivsk City Council	<ul style="list-style-type: none"> -arrangement of entry points - recreational paths, bicycle ranges - bicycle space (bicycle stops) - attractions (observation tower) - information points: marking, equipment for routing - eco-camping - space near ponds - availability of UPF - promotion and informing users
SE "Ivano-Frankivsk Forestry"	<ul style="list-style-type: none"> - forestry and forest management - recreational paths, bicycle ranges - bicycle space - information points: marking, equipment for routing - attractions (observation tower) - information points: marking, equipment for routing - eco-camping - space near ponds - availability of UPF - promotion and informing users
Councilors of the villages of Kolodiiivka and Dovbrovliany	<ul style="list-style-type: none"> - arrangement of entry points - bicycle space - information points: marking, equipment for routing - attractions (observation tower) - information points: marking, equipment for routing - eco-camping - space near ponds - availability of UPF - promotion and informing users

The responsible authorities will support and develop certain measures, ensure the implementation of infrastructure measures (if necessary), security and protection of the premises created under the project, will control and monitor the implementation of the IMMP.

6 MONITORING

6.1 Monitoring and control indicators

Table 3 - Monitoring and control indicators

Activities	Major improvements	Baseline indicator	Target value	Time
FORESTRY AND FOREST MANAGEMENT	Restoration of degraded territory	0	15 ha	Regular
	Regular analysis of population assessment and behavior	0	1	Regular
	Educational activities	0	3 per year	Regular
	Strengthened measures for protection and cleaning of the territory	0	1	Regular
ARRANGEMENT OF ENTRANCE POINTS	Purchased and assembled containers	0	5	2022
	Purchased and installed information boards	0	6	2022
	Parking space is arranged and equipped	0	1	2024
	Location of toilets	0	4	2024
RECREATIONAL TRAILS, BICYCLE POLYGONS	Information and educational boards / signs installed along the entire length of the bicycle route	0	30	2023
	More routes have been developed and promoted	2	7	2023
	Modernized and protected bicycle ranges	0	4	2025
BICYCLE SPACE (BICYCLE STOPPING POINTS)	Tables and benches, information boards and parking spaces for bicycles are installed in a certain area	0	3	2021
	Conducted practical classes for cyclists in an improved space	0	2	2024
	A new downhill competition project / initiative has been developed	0	3	2026
POINTS OF INTEREST (SURVEY)	An ecological green observation tower will be installed	0	1	2030

	The area is cleaned	0	1	2020 - 2022
	Tables and benches will be installed	0	10	2020 - 2022
	Garbage cans will be installed	0	10	2020 - 2022
INFORMATION POINTS: MARKINGS, ROUTE EQUIPMENT	At least 4 information points located at the entrance	0	4	2020-2021
	Arranged rental outlets	0	2	2020-2021
	Business is evolving	0	2	2020-2021
LAKE ARRANGEMENT	The lake is equipped for recreation and fishing	0	1	2025
ECOCAMPING	A camping town has been established	0	1	2028
	Territories cleared	0	1	2028
	Camping promotion	0	2	2028
ACCESSIBILITY TO UPF	The bus stop is mounted	0	1	2029
	A parking space has been identified and built	0	1	2029
	A road was built	0	1	2029
PROMOTION AND INFORMATION OF USERS	The communication strategy of advancement of the territory is developed	0	1	Regular
	The Executive Committee of the Ivano-Frankivsk City Council will promote and promote the territory among citizens and tourists	0	Regular	Regular
	Travel agencies will include a place for tourist excursions	0	At least 5	2024
VISITORS SURVEY	Periodic survey of visitors using a standard questionnaire	0	10	Every 6 months (2 per year, 10 to 5 years)

6.2 View plan

The plan will be reviewed every 2 years by the Executive Committee of Ivano-Frankivsk City Council and Ivano-Frankivsk Forestry. The main responsible body for control and monitoring the implementation of the plan is the Executive Committee of Ivano-Frankivsk City Council.

The strategic and operational parts of the IMMP will be combined into one common IMMP. IMMP will be added to the Environmental Protection Program of Ivano-Frankivsk until 2028 (or 2021-2025; not yet specified), which will be developed this year. The plan will be adopted by the city council. The state-owned enterprise Ivano-Frankivsk Forestry will use the IMMP as a guide for annual plans and will officially adopt it.

7 COSTS AND FINANCING

Table 4 - Costs and financing

Activities	URBforDAN grant funds, euros	Funding after the project, euros	Total costs, euros
FORESTRY AND FOREST MANAGEMENT	0.00	50000.00	50000.00
ARRANGEMENT OF ENTRANCE POINTS	0.00	80000.00	80000.00
RECREATIONAL TRAILS, BICYCLE POLYGONS	0.00	10000.00	10000.00
BICYCLE SPACE (BICYCLE POINTS)	25000.00	5500.00	30500.00
POINTS OF INTEREST (SURVEY)	0.00	200000.00	200000.00
INFORMATION POINTS: MARKINGS, ROUTE EQUIPMENT	0.00	10000.00	10000.00
LAKE ARRANGEMENT	0.00	80000.00	80000.00
ECOCAMPING	0.00	120000.00	120000.00
ACCESSIBILITY TO UPF	0.00	2000000.00	2000000.00
PROMOTION AND INFORMATION OF USERS	0.00	3000.00	3000.00
TOTAL	25000.00	2558500	2583500