Scientific Papers. Series B, Horticulture. Vol. LXVI, No. 1, 2022
Print ISSN 2285-5653, CD-ROM ISSN 2285-5661, Online ISSN 2286-1580, ISSN-L 2285-5653

BIBLICAL GARDENS AT CHEIA MONASTERY DOMAINS

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Abstract

The paper deals with the research and valorisation of the relationship between sacred spaces and forest landscapes through the insertion of biblically-themed gardens into a 20 ha monastic domain, surrounded by the forests of Cheia mountain resort, located in central Romania. The site is crossed by a natural water course with two ponds and comprises a series of mixed tree groups and groves, increasing the landscape diversity of Cheia Orthodox Monastery area. The first stage of the project consisted in a complex research of the site from a cultural, historical, functional, ecological and visual point of view. Following the site assessment, a landscape redevelopment strategy has been proposed through minimal interventions. It is intended to introduce biblical thematic gardens focused on the conservation of the dendrological vegetation, on the valorisation of the local ambiances through visual and functional integration of the site in the context of the mountain forest landscape and Cheia resort. The proposed vegetation presents a distinct symbolic value in each thematic area that confers a particular visual identity and a specific spiritual role. The conclusions reveal the high potential of the site from visual, environmental and touristic point of view. The opportunity to increase the attractiveness of the monastic domain is highlighted by inserting multiple uses, such as educational, religious, cultural, recreational etc.

Key words*: Bibllical gardens, Cheia Monastery, Landscape design, Landscape analysis.*

INTRODUCTION

The site is located in a natural setting with a high landscape value and presents a tourism potential which is currently insufficiently exploited. At present, it is necessary to create a suitable area for the spiritual preparation of the monks and pilgrims, since the monastery domain is largely unused. Its integration in the context of the Cheia resort and the tourist circuits in the area by promoting the spiritual identity can significantly contribute to increasing the tourist attraction on the local level (Bândiu, 2009). Given the increasing acceleration of traffic problems and the anthropic pressure on the Prahova Valley, the entire tourist area has the potential to develop in the next decade as an alternative for tourists from Bucharest and beyond.

Măneciu commune is located at a distance of 47 km from Ploiești and 18 km from Vălenii de Munte, being the last commune of Prahova county from the border with Brașov county. Cheia resort, part of Măneciu commune is located on DN1A road at the border of Brașov and Prahova counties, at an average altitude of 870 m. The annual average temperature is 6^0C and the annual precipitation regime is 750-800 mm. The studied site occupies about 20 ha - an important area of the territory of the locality. The village of Cheia, was formed gradually from the second half of the nineteenth century. (Ivan, 2010; Niculescu, 1977)

MATERIALS AND METHODS

The study was based on several applied research methods - used to perform field analyses on the Cheia Monastery Domains, Măneciu commune, Cheia village, Prahova county. The following research methods were used for the analyses: - Field visits - for analysis of vegetation, environments, functions, movements; - Field photos - for all analyses; - Site observations - for all analyses; - Consultation of bibliographic resources - for researching the physical environment, analysing functions, analysing traffic, researching tourist resources; - Consultation of websites - for physical environment research, traffic analysis, tourist resources analysis - Monks' queries - for all analyses;

Following the applied research, the information collected for each analysis was processed using a SWOT analysis. Subsequently, the synthesis

of the analyses and a diagnosis with the main dysfunctions and strengths of the site was prepared, based on which the vision, mission and strategy were developed (Holden and Liversedge, 2014; LaGro, 2007; McHarg, 1967).

RESULTS AND DISCUSSIONS

Circulation. There are two accesses to the monastery courtyard, on DN1A (made of gravel) and an asphalt road inside the Cheia resort, formerly marked by a double alignment of *Picea abies*. In the courtyard of the monastery the composition of the alleys is geometric. The outside domain of the monastery court is restricted, fenced and access can only be done with the permission of the monks. Currently, there is no perimeter alley that ensures accessibility throughout the area. The main access path is an alley that crosses the area. The watercourse is a barrier to accessibility on the site from several points, with only one concrete bridge in the middle of the site.

Land use. In the domain there are spaces with different functions. The monastery we can see today, dating from 1835 and kept in good condition, is surrounded by rectangular shaped cells. In the immediate vicinity of the monastic complex there are areas where the monastery supports itself by animal farming, greenhouses with vegetables, orchard and two pools with trout.

Vegetation and landscape value. Following the analysis of vegetation, two major categories of vegetation were identified, spontaneous and planted. The spontaneous vegetation occupies the largest area of the site and includes areas with tree and shrub vegetation, lawn that dominates the site with herbaceous plants and marsh and river vegetation near the watercourse and lakes. The planted vegetation is present especially near the monastery.

Depending on the water surface, vegetation and relief, several types of landscape have been identified. The zones were named according to the volume, textures, colors and openness. Each area was evaluated with grades from 1 to 5 depending on the physical values, among which - relief, water and vegetation; perceptual values - depth, amplitude, volumetric aspects, accents, color, textures and balance value, depending on which a global value has been established (Table 1). The analysis was designed based on combining landscape assessment methods proposed by landscape architects Ian McHarg, James LaGro and Florin Teodosiu (Boc, 2012). Also, for each area the following criteria were evaluated: the ratio between spontaneous and planted vegetation, the share of tree, shrub, herbaceous, dominant species, invasive species and those in a degraded state (Table 2).

Zone 1 has been called the *Water Flow*, and the state it transmits is "Between static and dynamic". It includes a stream and an artificial lake. In Zone 1, the spontaneous vegetation, the swamp vegetation (*Typha angustifolia*) and the river vegetation predominate, where *Salix caprea* has an invading character.

Zone 2 was called the *Obscure Forest*, characterized by a high diversity of tree species. It comprises vegetation predominantly planted with different species of deciduous and resinous trees (*Abies* sp.*, Picea abies, Pinus silvestris, Fagus* sp.*, Acer pseoudoplatanus, Larix* sp.*).* The vegetation is characterized by a diversified texture, chromaticity and volumetry.

Zone 3 is called the *Tree of Life* and expresses the idea of centrality. It is a meadow area, where the dominant element is a *Fagus sylvatica* tree.

Zone 4 called the *Hidden Mirror* arouses the curiosity of discovery. It is an area with natural lake, being the largest water mirror on the surface of the domain, surrounded by spontaneous vegetation with an invasive character, predominantly deciduous (*Fagus* sp.*, Betula* sp.*, Salix caprea, Rosa canina*).

Zone 5 is called the *Test Hill*, which awakens states of uncertainty. It is the highest point on the site, it contains a *Fagus sylvatica* grove, and offers wide perspectives to the entire surface of the domain.

Zone 6 is called the *Illuminated Forest* and creates a feeling of tranquility. This area is discovered in a deciduous forest, predominantly composed of *Fagus sylvatica*, located at the edge of the site.

Table 1. Landscape value assessment

LANDSCAPE VALUES	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6	ZONE 7	ZONE 8	ZONE 9	ZONE 10	ZONE 11
PHYSICAL VALUES	3,25	3,13	2,66	4,13	4,5	2,66	2,33	2,5	1,83	3,66	3
topography	3	2	2	4	4	1	1	1	1	2	1
water	5	3	2	5	-	2	-	3	-	-	3
vegetation	3	5	4	4	5	5	2	2	1	4	5
built elements	2	-	-	-	-	-	4	2	2	5	-
PERCEPTUAL VALUES	3,83	3,66	3,5	4	3,5	3	3,16	1,33	1,16	4	2,83
landscape depth	4	2	5	3	3	2	5	2	1	3	4
amplitude	4	2	5	4	3	2	5	2	2	3	1
volumetry	3	5	2	5	5	5	1	1	1	3	5
accents	4	5	4	4	4	2	4	1	1	5	3
colors	4	4	3	4	3	3	2	1	1	5	2
textures	4	4	2	4	3	4	2	1	1	5	2
BALANCE VALUE											
unity vs diversity	4	5	3	5	4	4	3	2	1	5	4
GLOBAL VALUES	3,69	4	3,05	4,4	4,16	3,22	2,83	1,94	1,16	4,22	3,27

LEGEND	
Very low value	1
Low value	2
Average value	3
High value	4
Very high value	5

ZONA 4

After Boc, Vladimir, 2012. *Strategii de branding pentru valorificarea peisajului în mun. Zalău**
**Analysis based on the association of proposed methodol by McHarg, James LaGro and Florin Teodosiu*

ZONE 2

ZONE 5

ZONE 1

ZONE 10

Table 2. Vegetation assessment

VEGETATION TYPES	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6	ZONE 7	ZONE 8	ZONE 9	ZONE 10	ZONE 11	TOTAL
1 SPONTANEOUS VEGET.	80-100%	20-40%	80-100%	80-100%	80-100%	80-100%	80-100%	40-60%	40-60%	60-80%	<20%	60-80%
1.1 Arborescent	<20%	20-40%	<20%	80-100%	80-100%	80-100%	<20%	<20%	<20%	<20%	<20%	20-40%
Abies alba	-	-	-	<20%	-	-	-	-	-	-	-	<20%
Picea abies	-	-	-	<20%	-	-	-	-	-	-	-	<20%
Alnus glutinosa	-	-	-	20-40%	-	-	<20%	-	-	-	-	<20%
Fagus silvatica	<20%	40-60%*	<20%*	60-80%*	80-100%	80-100%	<20%	-	-	-	-	**20-40%**
Betula pendula	<20%	-	-	20-40%	-	-	-	-	-	-	-	<20%
Salix caprea	20-40%*	20-40%*	-	40-60%*	-	-	-	-	-	-	-	<20%
1.2 Shrubs	<20%	<20%	<20%	20-40%	<20%	<20%	<20%	<20%	<20%	<20%	<20%	<20%
Cornus sanguinea	-	-	-	20-40%	-	-	-	-	-	-	-	<20%
Rosa canina	<20%	<20%	-	20-40%	<20%	-	-	-	-	-	-	<20%
1.3 Herbaceous	20-40%	<20%	80-100%	20-40%	20-40%	20-40%	80-100%	<20%	<20%	20-40%	<20%	60-80%
Hypochoeris radicata	<20%	-	-	<20%	<20%	<20%	20-40%	<20%	<20%	40-60%	20-40%	<20%
Trifolium sp.	<20%	20-40%	-	<20%	-	<20%	20-40%	<20%	<20%	60-80%	40-60%	**20-40%**
Astrantia major	-	20-40%	-	-	-	-	-	-	-	-	-	<20%
Centaurea phrygia	-	-	-	20-40%	-	-	20-40%	-	-	-	-	<20%
Holcus lanatus	20-40%	-	40-60%	<20%	<20%	<20%	40-60%	-	-	<20%	-	**20-40%**
1.4 Palustrine	40-60%	<20%	<20%	<20%	<20%	<20%	<20%	<20%	<20%	<20%	<20%	<20%
Typha angustifolia	40-60%	-	-	-	-	-	-	-	-	-	-	<20%
2 PLANTED VEGETATION	<20%	60-80%	<20%	<20%	<20%	<20%	<20%	40-60%	40-60%	40-60%	80-100%	**20-40%**
2.1 Arborescent	<20%	60-80%	<20%	<20%	<20%	<20%	<20%	40-60%	40-60%	40-60%	80-100%	**20-40%**
Abies concolor	-	-	-	-	-	-	-	-	-	-	<20%	<20%
Picea abies	-	40-60%	-	-	-	-	-	40-60%	20-40%	20-40%	80-100%	<20%
Pinus silvestris	-	<20%	-	-	-	-	-	60-80%	<20%	-	-	<20%
Larix decidua	-	40-60%	-	-	-	-	-	-	-	-	-	<20%
Thuja occidentalis	-	-	-	-	-	-	-	-	-	60-80%	-	<20%
Tilia tomentosa	-	-	-	-	-	-	-	-	-	<20%	<20%	<20%
Acer pseudoplatanus	-	<20%	<20%	<20%	-	-	-	-	-	-	-	<20%
Fruit trees	40-60%	-	-	-	-	-	-	20-40%	<20%	-	-	<20%
2.2 Shrubs	<20%	<20%	<20%	<20%	<20%	<20%	<20%	<20%	<20%	40-60%	<20%	<20%
Juniperus sabina	-	-	-	-	-	-	-	-	-	20-40%	-	<20%
Berberis thunbergi	-	-	-	-	-	-	-	-	-	20-40%	-	<20%
Syringa vulgaris	-	-	-	-	-	-	-	-	-	<20%	-	<20%
Chaenomeles sp	-	-	-	-	-	-	-	-	-	<20%	-	<20%
2.3 Herbaceous	<20%	<20%	<20%	<20%	<20%	<20%	<20%	<20%	<20%	20-40%	<20%	<20%
Hosta sp	-	-	-	-	-	-	-	-	-	20-40%	-	<20%

LEGEND	
Very low coverage	<20%
Low coverage	20-40%
Average coverage	40-60%
High coverage	60-80%
Very high coverage	80-100%

*Invasive species
*Vegetation in poor condition

Zone 8 and 9 are production areas and arouse a sense of chaos. Here, there are fish, vegetables, fruit trees and animal husbandry activities.

Zone 10 is called the *Spiritual Court* and transmits a state of peace, otherwise specific to a holy place. It comprises the monastery

complex and the inner courtyard which contains a planted vegetation composed of deciduous and coniferous shrubs and perennial species.

Zone 11 is called the *Forest Tunnel*, which puts you in the position to choose between two directions. It represents the main entrance, marked by a double alignment of *Picea abies* in a precarious state.

The zones with the highest landscape value are those located near the watercourse (zones 1 and 4), the areas with rich tree vegetation (zones 2 and 5) and the courtyard of the Cheia monastery.

Synthesis. The presence of a natural environment with insufficiently enhanced landscape diversity resulted. From the point of view of the neighborhoods, it was noticed a picturesque natural framework, several vantage points to the monastery complex and the mountain massifs. On the ecological level, the vegetation on the site is in good condition and is integrated into the local natural landscape. Functionally, several areas within the site are difficult to access and there is a physical barrier between the site and the resort. The production zones are unsightly (Figure 1).

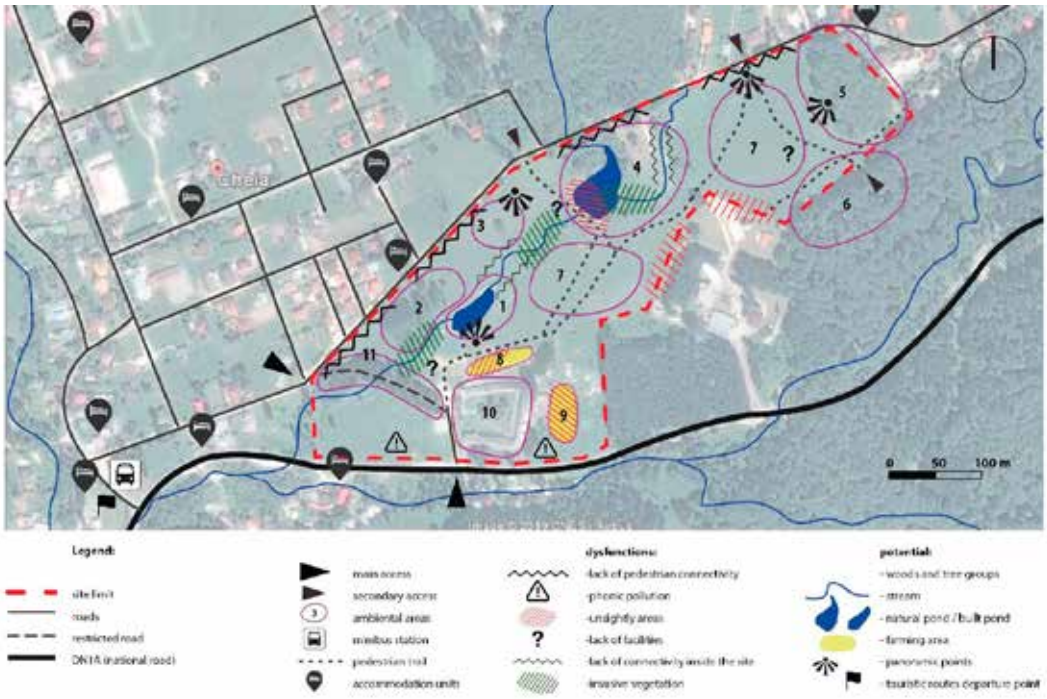

Figure 1. Synthesis plan

Strategy. Based on the diagnosis, the proposed vision targets the landscape enhancement and functional integration of the site as an element of tourist attraction of the Cheia resort (Figure 2).

The mission includes the following objectives:

- context: connecting the site with the resort and enhancing the natural environment;
- ecological: the conservation of valuable vegetation in zones 2, 5, 6, 11 and its completion with vegetal compositions in zones 1, 3, 4, 7 that integrate in the local context;
- functional: creating a pedestrian traffic network that interconnects existing and proposed access points and points of interest; introducing functions and facilities that enhance the specificity of the place;
- aesthetic: enhancing the types of landscapes by creating a concept that highlights the connection between the natural environment and the sacred space (Bândiu, 2011);

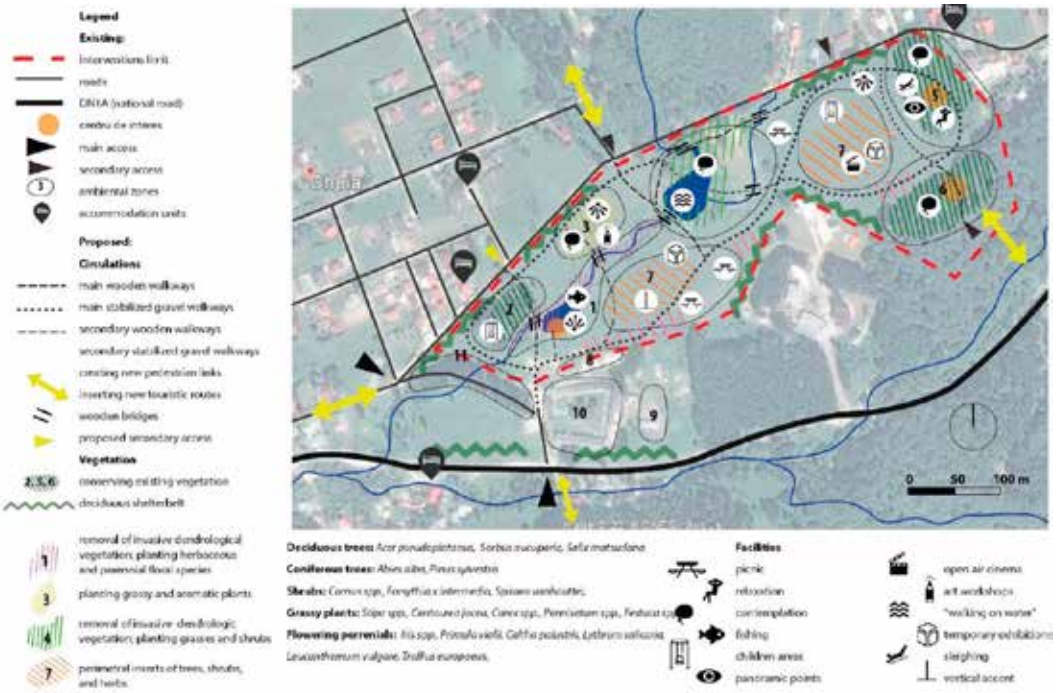

Figure 2. Strategy plan

Concept. Starting from the landscape zones identified on the site, the concept involves the creation of thematic areas through minimal interventions. Thus, seven bible-themed gardens are proposed, each marking an important event in the Old and New Testaments (Bândiu, 2011; Douglas, 1995). The proposed concept responds both to the needs of the monks community and to the need to promote the locality of Cheia, as a tourist resort of national interest, considering that there are very few parks and gardens with a biblical theme in the world.

The landscape design solution for the Domains of the Cheia Monastery proposes the creation of a free style composition, through which the proposed points of interest are interconnected and linked to the six access points to the site.

The vegetal composition preserves the existing structure, along with a series of minimum and medium insertions of groups of trees and shrubs, but also of sub-shrub and herbaceous vegetation. It is proposed to introduce new specimens from the species existing on the site, but also a selection of new species suitable with the local climate (Iliescu, 2008). Completing the existing species with the proposed ones offers a rich seasonal variation throughout the year.

From the point of view of the proposed functions, the space is characterized by a relatively large diversity without having a strong visual impact. Functions and facilities are proposed with the role of relaxation, walking, contemplation, artistic creation, playgrounds, exhibition spaces, but also areas with utilitarian role.

CONCLUSIONS

The proposed solution respects the principles of ecological, economic and social sustainable development. At the ecological level, it has a minimal impact on the environment, most of the interventions built being minimal, and the proposed species are integrated into the local ecosystem. From an economic point of view, the investment is designed to involve relatively low costs, made possible by the use of predominantly local materials and plants in small quantities. At the social level, the site is addressed to both monks and pilgrims, as well as to the general public through the proposed functional and environmental diversity.

The implementation of the biblically themed concept can lead to the emergence of a unique type of park in the Orthodox space that can become an important tourist attraction center in the region (Figures 3 and 4)

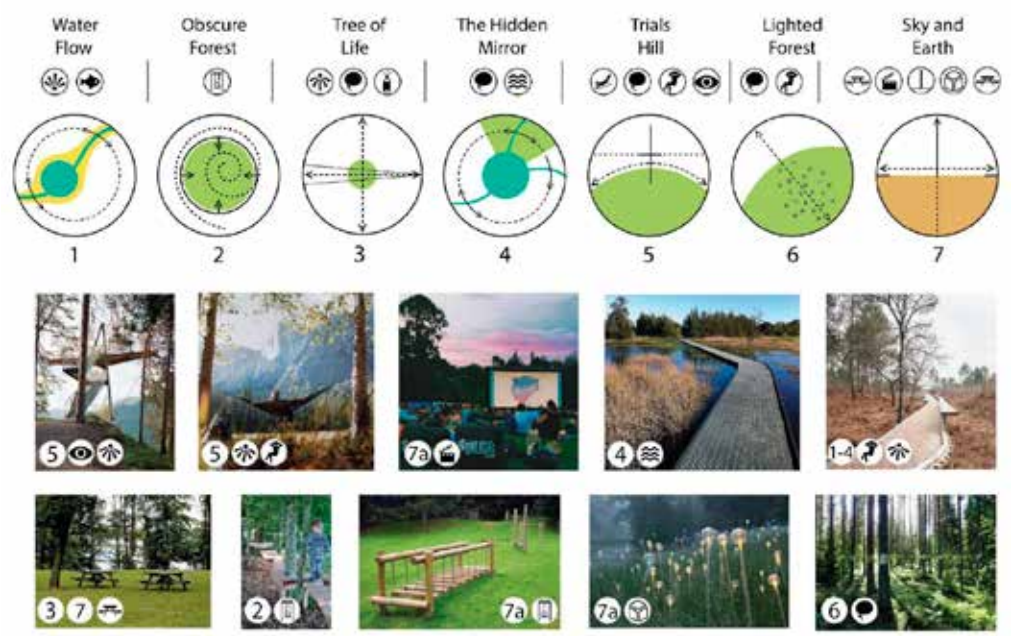

Figure 3. Concept

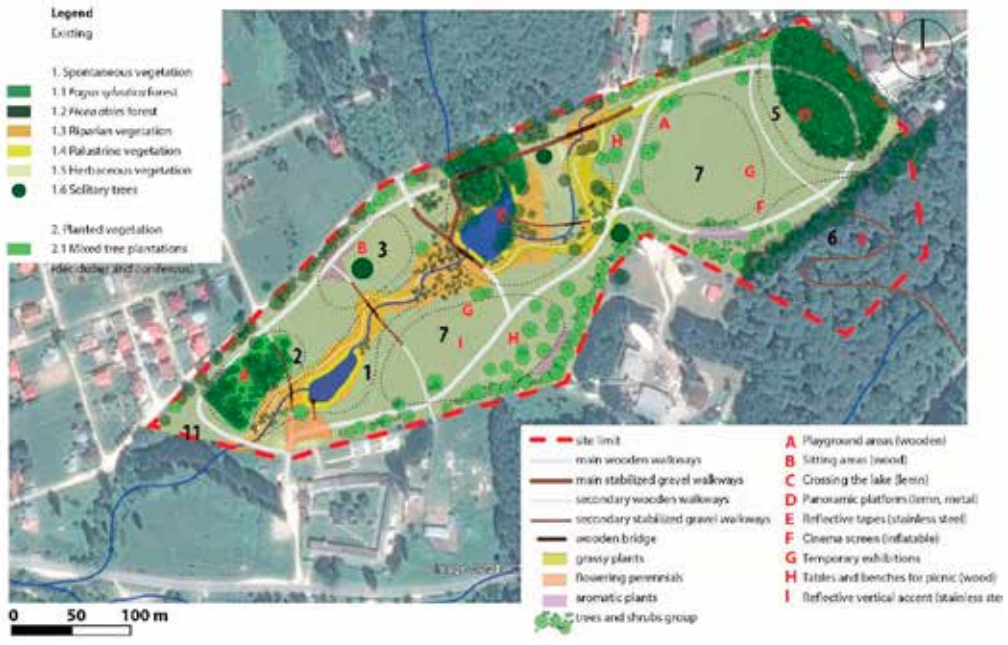

Figure 4. Landscape design proposal

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