

## Plant Material Selection and Green-space Management Researches in Soveja Touristic Area

Alexandru Paul LAZĂR-BĂRA<sup>1)</sup>

<sup>1)</sup>Faculty of Horticulture, University of Agronomic Sciences and Veterinary Medicine Bucharest,  
59 Mărăști bd., Bucharest, Romania; alexandru.lazarbara@gmail.com.

**Abstract.** Valuating the landscape features of Soveja mountain resort territory requires integrated approach of the environmental and cultural resources in respect with the site's green space reliability as well as its economic and social potential. The touristic area was subject to a landscape planning study. Subsequent landscape development objectives became the basis of green-space set-up and management strategies. In this study, plant material is approached as a connecting element of habitat distribution, land use and risk mitigation. In the first stage, touristic perimeter was defined around the urban core of the mountain resort, using the 2-hours walk isochrones. The whole landscape system was assigned an environmental education theme based on geographic features and charismatic fauna valuation, a national identity theme and a local tradition valuation. The area was divided into three concentric zones aiming specific wilderness / human impact ratios. The central area, corresponding roughly to the built resort perimeter, became the whole area's safety core – plantations were set to ensure native birds and herbivore fauna habitats, as well as staged blooming for traditional bee-keeping support; forest clearings and forest skirts were the main nature models taken into account. The median ring was set for more permissive wild-life access, in connection with promenades and wild-life observation spots: ecosystem management of the forest surrounding the resort was meant to create a park environment. The outer recreational ring, with forest and pasture paths was fully exposed to wild-life. This approach would serve landscape conservation and valuation for tourism and local communities benefit.

**Keywords:** charismatic fauna valuation, ecosystemic management, environmental education, mountain resort, landscape identity

**Introduction.** Soveja mountain resort landscape planning must rely on local conditions also valuating the outer landscape resource. At the same time, tourism specific environmental pressures must be mitigated within local and regional landscape. The resort's green space system is integrated into the green infrastructure (Benedict and McMahon, 2006) of the Soveja Depression, thus integrating ecological and cultural features (Mureșan, 2011).

**Aims and objectives.** This study responds to essential green-space requirements, presenting a methodology for plant material selection in consideration of the environmental factors, ecosystem amenities, economic and energetic efficiency, cultural identity, environmental culture, biodiversity protection and social demand.

**Materials and methods.** A mountain resort's specific in the Carpathians – such as the case of Soveja, the one in the homonymous depression, in the north of the Land of Vrancea – comes from the settlement's purpose of connecting society with natural or semi-natural environment, making sustainable use of its services. Therefore, natural environment and society connect on landscape level, the socio-ecologic features affecting green-space planting reliability. Environmental features affect plant material selection in the resort's case in two ways: through ecologic factors (biogeographical features) and through cultural landscape – related to heritage and to environmental culture. The habitat mapping of the whole tourism affected area according to *paleartic habitats* classification system (Doniță, 2005) provided site-specific ecological restrictions. Phyto-sociological field surveys (*sinfito-sociologic map*: Cristea et al., 2004) and previous researches (CORINE land cover) were used in order to provide the biotope map the detail level necessary for green-space planning.

Environmental culture requires charismatic fauna and flora valuation. Their use within green-space planning is meant to be comprised within adequate biotopes. Geographic features' valuation requires also integration of green space planning and management, as in the case of landmarks. These were identified and adequate plantation restrictions were drawn on the green space map. From social perspective, green-space reliability must provide urban and landscape planning essential tools, being at the same time affected by existing land-use and planned developments. The touristic perimeter was defined around the urban core of the mountain resort, using the 2-hours walk isochrone. The inner resort plantations are set to provide references to outer landscape – which in some cases requires specific biotope creation in order to comply with ecosystem management principles. Other green-space uses were also considered, such as dog-walking (Iojă et al., 2011). Cultural identity relies on tradition valuation within cultural landscape. Its features were previously approached (Lazăr-Băra, 2012 and Damian, 2011) and representative species were assigned specific locations, according to their symbolic features. Traditional occupations supporting cultural landscape impact green-space composition as well: logging is resembled by the tall tree species – spruce, fir, beech and birch being the most representative; sheep grazing affects pastures flora and their resort correspondents – park lawns; bee-keeping provides an essential service for the semi-natural ecosystems, pollination, being at the same time a traditional local occupation; landscaping for bees requires tree-skirt plantations staged flowering, with no essential consideration for the location within the resort area, since bees travel up to 5 km to reach flowers.

The green-space ecosystemic management is more efficient in ecosystem service production if the plantations are adequately planned before (Farr, 2008). The area was divided into three concentric zones aiming specific wilderness / human impact ratios. The central area, corresponding roughly to the built resort perimeter, became the safety core of the tourist area.

**Result and Discussion.** Plantations were set to ensure native birds and herbivore fauna habitats, as well as staged blooming for traditional bee-keeping support; forest clearings and forest skirts were the main nature models taken into account. The median ring was set for more permissive wild-life access, in connection with promenades and wild-life observation spots: ecosystemic management of the forest surrounding the resort was meant to create a park environment. The outer area, fully exposed to wild-life, was assigned forest and pasture paths.

**Conclusion.** Plant material use in mountain resorts' green spaces connects habitat distribution, local identity, land use and risk mitigation.

## REFERENCES

1. Benedict, M. A. and McMahon, E.T. (2011). Green infrastructure: linking landscape and communities. Island Press. USA.
2. Cristea, V., Gafta, D. and Pedrotti, F. (2004). Fitosociology (in Romanian). Editura Presa Universitară Clujeană, Cluj Napoca, 259-261 p.
3. Damian, N. (2011). The Land of Vrancea, study of cultural geography (in Romanian). Terra publishing. Focșani, Romania.
4. Doniță, N., Comănescu Pauca, Biriș, I.A., M., Budu, E.C., Gheorghe, I.F., Mihăilescu, S. and Popescu, A. (2005). The Habitats of Romania (in Romanian). Editura Tehnică și Silvică, Bucharest.
5. Iojă, C.I., Rozyłowicz, L., Pătroescu, M., Niță, M.R., Vânaș, G.O. (2011). Dog walkers' vs. Other park visitors' perceptions: the importance of planning sustainable parks in Bucharest, Romania. *Landscape and urban planning* 103(1): 74-82. Elsevier.
6. Farr, D. (2008). Sustainable Urbanism: Urban Design with Nature. Wiley
7. Lazăr-Băra, A. (2012). Miorița, quest for landscape. *JOURNAL of Horticulture, Forestry and Biotechnology* 16(2):78-83. Timișoara, Romania.
8. Mureșan, A. (2011). Elements of interdisciplinarity in the regional study of Vrancea Land. *Geographia Napocensis* V(1):85-92. Cluj-Napoca, Romania.