European Landscape Convention main provisions implementation measures in strategic spatial planning documents
(Armenian experience)

In the Spatial development planning process, guided by the principles of sustainable development and to ensure healthy, comfortable, safe and secure environment for the population, it becomes necessary that the human activities, in the result of which the landscapes are transformed and lose their unique features and key characteristics, initially be organized on the basis of the balance between natural and man-made systems, making predictable consequences of these impacts, and thus to develop a complex of appropriate measures to prevent from negative impacts and develop those for protection of valuable parts of natural landscapes, to provide a favorable, available, environmentally safe and friendly, comfortable living environment to satisfy humans main demands: *living, work, recreation.*

This include:

Urban sphere

- Protection of landscapes from overloading
- Regulation of densities in the central urban zones, limitation of unregulated expansion
- Expansion of green areas, parks maintenence, pedestrian alleys development (the city green framework arrangement), bicycle paths organization
- Limitation of transport communications in historical and protected areas

Environment sphere.

- Carbon emission mitigations,
- Competible, environmetally friendly city spatial development variant choice
- Energy saving buildings erection (reconstruction), renewable energy usage
- Waste amount reduction (reusage, recycling up to 30-50 %)),
- Sustainable transport organization (competible communication systems, retracing the transit highways out of the city living areas boundaries, new transport means usage, pedestrian and bicycle movement provision
- Sustainable engineering infrastructure

The need for landscape issues consideration in spatial planning documents

All three types of landscapes-unique landscapes, ordinary and degraded types, require appropriate action such as:

- Promote landscape protection (refer more valuable landscapes),
- Government (to all kinds of changes) and
- Planning process (the creation of new landscapes).

Legislative regulation of the above-mentioned issues in local spatial planning documents drafting process is regulated by normative-legal documents adopted in various sectors.

Landscape planning is being developed as a separate department or independent project involved in spatial planning documents.

In the RA Government REGULATION appendix on communities (settlements) Master Plans Development, expertise, agreement and approval and amending (2011 December 29, N 1920-N), based on European Landscape Convention main provisions, the detailed information on landscape different types appropriate actions guidelines is given. They are:

- *In the stage of the assignment,*

According to the design program, the following items are to be considered:

- Data on the use of green public areas, landscapes and recreational areas.
- The main priority directions of development (the basic requirements for the development of spatial organization of community: the preservation and improvement of the landscape, of engineering infrastructure, based on community development programs,).
- The main perspective directions of spatial development of the community, including:
  - The community development-driven programs requirements for the community architectural and functional development, the organization of the maintenance and development of engineering infrastructure,
  - preservation and improvement of the linear objects of the environment,
  - landscape protection and improvement,
  - separation of regulatory areas of urban development,
  - territorial organization and development,

— preservation of sites of historical and cultural heritage protection.

Project elaboration requirements:

• Community spatial development plan (main plan), in the result of complex evaluation plan based on the multifactor analysis of the actual land uses are proposed and the project proposals for the protection of landscapes, restoration or organization (creation) are fixed.

Within the Graphical part of drawings:

The landscape organization plan outlines:

• The forest, water and other target positions, as well as the areas included in the areas of natural complexes within the community boundaries,

• Classification and evaluation of landscapes, including natural complexes, as well as others, including degenerative areas,

• Separation of different separation modes assessed landscapes by zones,

• Special protection measures for the essential features of the landscapes,

• Recommendations on the development of landscape design, restoration or creation (creation).

With the adoption of the Convention into spatial planning amending regulatory document processing, plenty of new items concerning landscapes management appear:

• The detailing of landscape issues complex in spatial planning and urban planning policies,

• As well as in cultural, environmental, agricultural, social and economic, and any other policies with possible direct or indirect impact on the landscape,

• Carrying out public participation of local and regional authorities and other stakeholders, in raising civil society, private organizations and public authorities' awareness about the value of landscapes, their role and the changes implemented or planned in it.

Landscape management position in hierarchy of spatial planning documentation

Landscape component exists at all levels (national- the settling plan, regional- territorial planning and local- urban projects of communities) spatial planning documents. All major components of natural and anthropogenic / urban landscapes are subject of complex analysis and assessment.

Here are the three level hierarchy structure of spatial planning documentation in Armenia

• Country level (settling system analysis).

• Region level (territorial planning structure analysis).

• City level (master plan planning structure analysis).

Spatial planning documents are developed in three main phases:

• Study and analysis of the current situation (baseline data),

• Complex estimation of the areas on the combination of results of multifactor analysis,

• Long-term (perspective) development of the area, forming a development strategy based on:

  — the active development of the regions,

  — as well as the economical operation and maintenance, protection,

  — public awareness, ensuring transparency in decision-making, equality and a sense of responsibility.

Combining the three main phases of landscape basic actions with spatial planning phases, it is evident that they have similarities with landscapes *"identification (identification) - evaluation - Landscape quality objectives definition," chain.*

The main goal of architectural - landscape analysis is the choice of solutions, in which the city growth does not displace or suppress the landscape, moreover, incorporates it into itself.

The sequence of landscape actions in spatial planning documents follows:

The first stage:

• A preliminary study of the natural and urban planning situation, taking into account both the current trends of their development and the historical past, (landscape assessment at a higher hierarchic level of planning (regional planning).

• Identification of the problems of the city development in its natural surroundings.

• Detailed assessment in accordance with the directions of spatial development of the city, the location of its public centers, public spaces, recreation areas, the critical points, etc.,

The second stage

• Analysis, analyzing landscapes by natural (climate, vegetation, availability, slopes, landscape dominants, etc.), geographical, engineering-geological (geodynamics process availability, seismic conditions) (multifactorial

analysis of archaeological, historical and cultural features) in terms of the reasons for the changes and their interdependence. Particular attention is also given to the analysis of the landscape by the public perception (aesthetic and emotional/ mental), and historical developments, both in terms of contemporary significance.

- Carry out identification across landscapes and analyze their characteristics and the forces and pressures transforming them, taking into account the changes,
- Assess the landscape, taking into account the particular values identified by the stakeholders and the public,
- Identification operation involves the appreciation of landscape features and at the same time, interconnected vision of the future, that is, with the objective of landscape quality in the process of cultural landscape creation.

The following main principles are to be kept for a cultural landscape creation:

- Separation of areas with maximum possible preservation of the natural environment,
- Harmonious combination of built and natural environment,
- Diversity and high valued sceneries,
- Balanced interaction of man-made and natural factors in the cities.

As one of the basic principles for urban projects is also the necessity of implementation of landscape-oriented urban development of the areas, which means that fundamental, landscape factors (rivers, reservoirs, forestry, hills, etc.) become urban development guiding dominants. Moreover, not only preserving, but also directing urban development at any level.

The following conditions are analyzed with future proposals of their organization at the national and regional level spatial strategies:

Natural

- Natural agricultural area,
- Location at altitudes above sea level ,
- The coefficient of horizontal partition area (km / km^2).

Morphological

- Relief type (plain, hilly, ridged, combined),
- The steepness of the slope (slope in degrees),
- The exposition of the slope (north, northeast, northwest, south, southeast, southwest).

Geological

- Soil-forming material (coating, loess, alluvial and others.),
- The level of groundwater, m,
- The salinity of groundwater,
- The structure of the soil ,
- The degree of stoniness (weak, medium, strong),
- Exposure to wind erosion (weak, medium, strong),
- Exposure to water erosion (weak, medium, strong),
- The meliorative condition of land (drainage, irrigation).

Aesthetic

- Dominant and specific points.

Anthropogenic

- Urban landscapes, land uses,
- Linear communications.

As a part of spatial planning documents of local level main zones list of land uses restrictions is being defined/ Special legal regimes / for guidance of location of the various activities in corresponding parts of the cities is to be carried out, in accordance with the economic and proper use of landscapes, egg:

- Spaces and protection zones of the objects of cultural heritage
- water protection zones,
- Coastal protection zones,
- Floods, landslides and other dangerous occurrences zones,
- Industrial facilities sanitary zones,
- Zones of protected natural area.

Within the local-level spatial planning documents elaboration of the concept of the free spaces of the city is an important item to be considered thus should be developed, in the frame of which a systematic study and planning of all the undeveloped areas is carried out as a separate urban planning object. This together with the built-up

residential and industrial areas formulates and regulates the settlement urban structure. Each element in the free areas system is of a different function, that is.

- planning regulatory,
- recreational,
- sanitary-hygienic,
- microclimatic,
- economic, technical,
- Architectural and Artistic,

All mentioned functions in specific conditions act as mutually complementary, neutral or exclusionary.

Green frame formulation and development of the city consists of:

- Public green spaces,
- Landscape parks,
- Green corridors,
- Natural landscapes,
- Forests,
- Water surfaces (rivers and coastal parts, lakes).

The local level anthropogenic analysis includes:

- Different urbanization level landscapes analysis (longitudinal, transversal sections),
- Definition of Landscape analysis with dominants and high valued views,
- Historical Landscapes management,
- Landscape classification and evaluation,
- High valued landscapes scenarios involvement into city structure.

Next phase to the landscape quality objectives definition is the forecast of corresponding permissible loads for Landscape separate functional zones with defined functions. In urbanized areas it is regulated in accordance with its definition and ensuring the density of population and construction, for recreational areas the total recreational capacity is calculated, which is limited by indicators of permissible load on the natural landscape. Three criteria are to be separated:

- Bio-ecological, based on the stability of natural landscapes,
- Technological, related to the physical and the hygienic requirements of the landscape for different types of recreational activities,
- Psychological, aesthetic, based on the requirements to the aesthetic factors of each activity, psychological comfort, as the immediate surroundings, besides comfort, design, need also emotional backdrop, causing positive or negative emotions.

Proposals for different landscape zones management

Development (clean bed and coastal areas for usage (coastal park zone)),

Protection through development (arrangement of waterfall by separating the slope to terraces and use as “transit” for underground water flow to the river by the slope causing erosion),

Recultivation of degraded landscapes (industrial waste field cultivation with soil layer, special chemicals and vegetation)

Protection from erosion, landslide (through engineering structures (terracing the slope with barrages)).

Conclusions

Architecture and landscape design in urban planning documentation should be based on,

- Local,
- Natural,
- Historical features.

The urban structures of great importance are to be placed in significant areas. They need to be emphasized and identified, as their role is more significant in the remaining urban structures.

Landscape monitoring and reporting (reports).

Strong pressures and the various problems connected with landscape protection, management and planning of activities that affect modern landscapes, require continuous monitoring and exchange of information. Monitoring observations are to be done at different levels, local, regional, national or international, using the compatible monitoring systems and ensure continuous exchange of information.