GREEN SPACES IN THE FOCUS OF STRATEGIC ENVIRONMENTAL ASSESSMENT: CHALLENGES AND PRACTICES OF UKRAINIAN COMMUNITIES

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Introduction.

In the context of transformational changes taking place in Ukraine in the social, economic, spatial and environmental spheres, the implementation of strategic environmental assessment (SEA) at the level of territorial communities is of particular relevance. The SEA is an important tool for integrating the environmental component into strategic planning processes, which ensures a balance between socio-economic development and environmental protection.

For communities that develop and implement their development strategies, strategic environmental assessment allows not only to identify potential risks to the environment and public health, but also to ensure the formation of effective environmental policy at the local level. It serves as a basis for making informed management decisions that take into account long-term environmental, social and spatial impacts.

The SEA plays a special role in the preservation of green spaces, which are a key component of the urban and rural landscape. Green areas perform important ecosystem functions, such as air purification, microclimate regulation, noise reduction, and creating a comfortable environment for residents. In the context of expanding development and transport infrastructure, it is the SEA that allows us to assess in advance the risks of fragmentation or loss of green areas, propose alternative approaches to spatial planning, and establish protective regimes.

SEA is especially important in the context of post-war recovery, when communities are forced to combine the need for rapid economic growth with the obligation to restore and protect the natural environment. Thus, SEA is not only a legal requirement under the Law of Ukraine “On Strategic Environmental Assessment” but also a practical tool for implementing the principles of sustainable development declared in national and international policy.

The purpose of the study is to analyze the methodological basis for conducting strategic environmental assessment of community development strategies, assess the practical experience of its implementation in Ukraine, identify existing difficulties and outline possible areas for improving the process, taking into account current challenges and trends. One of the practical tools for implementing a transparent and high-quality strategic environmental assessment is the Unified Register of Strategic Environmental Assessment maintained by the Ministry of Environmental Protection and Natural Resources of Ukraine (available at https://eia.menr.gov.ua/seo).

The registry provides open access to the full package of SEA-related documents, including scoping statements, SEA reports, announcements of public discussions, conclusions of the authorized body and decisions on approval of documents. For local governments, this resource is a valuable source of examples and templates that can be used to prepare their own documents.

In addition, the registry allows the public to track the SEA process in any community in Ukraine, which increases the level of trust and involvement of residents in environmental management processes. For professionals, it is a convenient tool for monitoring the implementation of legislation, as well as a source for analytics and comparison between communities.

The use of the Unified SEA Registry is an important step towards the digitalization of strategic environmental planning, transparency of decision-making, and improvement of environmental governance in communities.

Regulatory and legal framework for SEA in Ukraine. The implementation of strategic environmental assessment in Ukraine is based on the adaptation of the principles and procedures enshrined in European legislation, in particular Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment (SEA Directive). This legal act became the basic document for the development of Ukraine's national legislation in the field of strategic environmental planning.

Ukraine has committed to implement the provisions of Directive 2001/42/EC in accordance with the EU-Ukraine Association Agreement, in particular Annex XXX to Title V, Environment. As a result, in 2018, the Law of Ukraine 'On Strategic Environmental Assessment' No. 2354-VIII was adopted, which entered into force on 20 March 2018. This law establishes the legal and organisational framework for SEA and defines the procedure for conducting it for state planning documents (SPD) that may have a significant impact on the environment.

The SEA procedure in Ukraine is structured and includes the following steps:

- Preparation of a notification on the publication of the SPD and submission of an application for scoping the SEA;
- development of the SEA Report containing an analysis of the environmental status, vulnerability of the territories, predicted impacts, and alternatives;
- public discussion and obtaining a conclusion from the authorised body (Ministry of Environmental Protection and Natural Resources of Ukraine);
- taking into account the results of the assessment when approving the SPD;
- informing about the approval of the document with due regard to the SEA.

To ensure a uniform approach to the implementation of SEA in practice, the Ministry of Environmental Protection and Natural Resources has developed and approved the Methodological Recommendations for the Implementation of SEA of State Planning Documents (2021), as well as separate recommendations for urban planning documentation (2023). In 2024, Order No. 1382 of the Ministry of Environmental Protection and Natural Resources of Ukraine dated 31.10.2024 approved methodological recommendations for taking into account the climate component in state planning documents and during the implementation of strategic environmental assessment and environmental impact assessment. The guidelines clearly outline the sequence of actions, the content of the report, the requirements for impact assessment, and the specifics of taking into account public opinion.

In addition to Directive 2001/42/EC, the European SEA model also includes the implementation of the provisions of the Protocol on Strategic Environmental Assessment to the Espoo Convention. The Protocol provides for the procedure of environmental impact assessment in planning at the national and transboundary level.

Strategic environmental assessment is closely linked to the implementation of other environmental and urban planning laws of Ukraine, including:

- Law of Ukraine 'On Environmental Protection' https://zakon.rada.gov.ua/laws/show/1264-12#Text;
- The Law of Ukraine 'On Land Protection' https://zakon.rada.gov.ua/laws/show/962-15#Text;
- The Law of Ukraine 'On the Nature Reserve Fund of Ukraine' https://zakon.rada.gov.ua/laws/show/2456-12#Text;
- The Law of Ukraine 'On Regulation of Urban Development' https://zakon.rada.gov.ua/laws/show/3038-17#Text.

In this context, the European Green Deal, which was adopted by the European Commission in December 2019, is also an important benchmark for Ukraine's environmental policy. This strategy envisages achieving climate neutrality in the EU by 2050 and contains a number of initiatives aimed at protecting biodiversity, preserving ecosystems, reducing pollution, developing a circular economy and sustainable agricultural policy. As part of the Association Agreement, Ukraine has declared its readiness to gradually implement the approaches laid down in the Green Deal, which directly affects the strategic environmental assessment. In particular, the SEA is seen as a tool for integrating climate

goals, biodiversity conservation and resource efficiency into strategic planning processes. This approach is in line with the pan-European trend of transforming spatial development on the basis of climate and environmental responsibility.

Thus, Ukrainian SEA legislation is the result of adaptation to European norms, which allows for unified approaches to integrating environmental considerations into planning processes. In practice, this means that all new community development strategies should not only contain economic and social goals, but also take into account long-term environmental impacts and ways to mitigate them in accordance with EU requirements.

Methodology of strategic environmental assessment. The methodology of strategic environmental assessment (SEA) in Ukraine is based on a systematic analysis of the environmental aspects of state planning documents (SPD), primarily community development strategies. This process involves identifying the potential impact of the implementation of strategies on the environment, public health, nature reserve objects, as well as the spatial structure of the territory, including green areas and plantations.

The SEA is conducted at the stage of development or approval of the SPD and aims to:

- identify environmental risks associated with the implementation of the strategy;
- assess the current state of the environment and vulnerable areas that may be adversely affected;
- to propose reasonable alternatives taking into account the principles of sustainable development;
- identify measures to mitigate or prevent negative impacts;
- ensure transparency of the process through public discussion.

An important component of the SEA is the consideration of ecosystem services, including the role of green spaces in improving air quality, reducing noise pollution, retaining moisture, and creating a comfortable microclimate. Public discussions are increasingly focusing on the reduction of green areas in the process of urbanisation, which increases the relevance of taking such aspects into account in strategic planning.

The SEA methodology requires mandatory analysis:

- the state of atmospheric air;
- quality of surface and groundwater;
- land use and soil structure;
- biodiversity;
- public health.

In the process of analysis, it is important to take into account cumulative and secondary effects, such as reduced accessibility of green areas as a result of the expansion of transport or housing infrastructure. Practice shows that it is through the SEA that it is possible to preserve certain areas of green spaces that have not been designated as nature reserve sites but have local ecosystem or social significance.

Another methodological feature is information on sensitive areas, taking into account the density of development, the presence of water bodies, green areas and recreational facilities. This information allows us to assess which projects or programmes may have a critical impact on the ecological balance.

It is important that the SEA is not a one-off procedure - its results should be integrated into further stages of the strategy implementation, accompanied by environmental monitoring and adjustments in case of changes in external conditions.

Thus, the SEA methodology in Ukraine includes tools that allow for early detection of threats to the reduction of green spaces and suggesting alternatives for their preservation and development, which is key to ensuring the environmental sustainability of communities.

Research results.

Strategic environmental assessment (SEA) has gradually become a mandatory and effective environmental monitoring tool for communities planning their development in accordance with the principles of sustainability. In 2024-2025, strategic environmental assessment reports were prepared on community development strategies in Poltava Oblast. In particular, for the Martynivska Rural Territorial Community, Velikobahachanska Settlement Territorial Community, Velykobudyshchanska Rural Territorial Community, Velykorublivska Rural Territorial Community, and Kolomatska Rural Territorial Community.

A standardised approach was applied to analyse the current state of the environment and the impact of the planned activities, in accordance with the Law of Ukraine 'On Strategic Environmental Assessment'. The main elements of these studies were studying the state of the air, water and land resources, biodiversity, and public health. Common to all communities was the need to assess the risks caused by the hostilities, including soil contamination, damage to infrastructure and increased social vulnerability.

In the process of strategic planning for the development of territorial communities, an important component is to take into account the opinions of residents, especially on issues related to the environmental state of the territory. Conducting surveys allows us to form a realistic picture of environmental problems, expectations and priorities of local residents. An analysis of the development strategies and strategic environmental assessment (SEA) reports of five communities in Poltava Oblast shows that this practice is becoming increasingly common.

In preparing the SEA report, it is worth noting that all five communities conducted a survey of residents in the process of drafting their development strategies. This indicates a high level of public involvement in the planning process. It is worth noting that the level of detail of environmental issues in the surveys depends on the specifics of the community and the form of research organisation.

The surveys included blocks related to environmental issues, including: the condition of green areas, the quality of drinking water, the need to clean water bodies, the problem of unauthorised landfills, the request for the expansion of recreational spaces, and expectations for greening settlements. In some cases, residents also spoke about the environmental impact of the hostilities, the need to control industrial waste and preserve forest resources.

The form of the survey varies. For example, in the Velykobahachanska community, it was organised in the form of an online survey, while in the Velykorubliivska and Martynivska communities it was conducted in the format of focus groups, open discussions or collection of written proposals during public hearings. This allowed us to reach both the general population and representatives of target groups (business, education, healthcare, and youth).

The results of the surveys were taken into account when formulating the strategic and operational goals of the development strategies. In particular, the environmental expectations of residents became the basis for setting priorities in the areas of environmental safety, development of environmental infrastructure, conservation of water resources, protection of green spaces, improvement of drinking water quality, etc.

An analysis of the results of a survey of residents of five territorial communities in Poltava Oblast shows clearly defined expectations for improving the environment, particularly in the areas of household waste, water supply, recreational space and the preservation of natural vegetation.

One of the requests of citizens was the need to preserve and restore forest belts. This aspect was directly or indirectly mentioned in the responses of residents of Martynivska, Velykorublivska and Kolomatska communities.

Forest belts perform an extremely important ecosystem function, protecting areas from wind erosion, improving the microclimate, reducing noise and dust, and creating biodiversity. In the context of climate change and intensification of agricultural production, their preservation is critical for sustainable development.

Water and air pollution, poor condition of green spaces, low level of environmental culture in households, inefficient waste collection and disposal systems, and poor maintenance of public spaces are also among the most common environmental problems identified by community residents. In some communities there is a growing interest in restoring the recreational potential of the area and protecting wetlands (Table 1).

Table 1. Results of a survey of community residents for planning development strategies

Community	**Environmental issues in the survey**	**Main environmental issues according to the survey results**
Velikobahachanska	Assessment of green areas, demand for clean water, recreational spaces	Pollution of water bodies, lack of landscaped green areas
Velykobudyshchanska	Water quality, air quality, household waste	Poor air quality, accumulation of household waste
Velykorublivska	Expectations for improved landscaping and waste management	Lack of garbage containers, unauthorized landfills
Kolomatska	The state of landfills, the need to clean up the river	Littered areas, the need to clean up the river
Martynivska	Environmental infrastructure, water quality, forest conservation	Problems with water supply, deforestation, illegal dumping

This data suggests that citizens' environmental awareness is growing, and the demand for systematic environmental planning is relevant. In particular, the restoration of protective forest belts can be included as a separate project or task in community strategy implementation plans. This will provide not only environmental but also social benefits, such as improved living conditions, health, and the development of local ecotourism.

Thus, the practice of interviewing residents not only creates a basis for the development of sound environmental policy, but also strengthens the dialogue between the authorities and citizens. This helps to improve the quality of strategic planning and adapt environmental measures to the real needs of the population.

It is worth noting that in each of the SEA projects, special attention was paid to green areas and their preservation.

The reports of the strategic environmental assessments have shown that biodiversity issues are beginning to take a prominent place in the strategic planning of communities. Although most of the threats are of anthropogenic origin - intensive agriculture, development, deforestation - some communities are already including preventive or compensatory measures in their strategies (Table 2).

In particular, the Velykobahachanska and Velykobudyshchanska communities are focused on the development of ecotourism and recreation as a tool for preserving landscape diversity. The Velykorublyvska community focused on waste management, which is an important factor in reducing environmental pressure on the natural environment. The Kolomatska community has highlighted the protection of coastal zones, while the Martynivska community focuses on ecosystem restoration.

Table 2. Risks to green spaces and corresponding measures provided for in community strategies

Community	Possible risks to green spaces	Measures to preserve/restore green spaces
Velikobahachanska	Habitat fragmentation, intensive agricultural use	Development of ecotourism, creation of new green areas
Velykobudyshchanska	Decrease in the number of species, degradation of natural ecosystems	Creation of recreational spaces, educational events on environmental issues
Velykorublivska	Pollution of territories, disturbance of natural habitats due to infrastructure projects	Environmental education, centralized and separate waste collection, creation of parks and recreation areas
Kolomatska	Deforestation, drainage of coastal areas	Protection of coastal strips, landscaping, wetlands protection
Martynivska	Disruption of ecosystems as a result of the war, reduction of natural habitats	Restoring ecosystems, preserving green areas, supporting local recreational infrastructure

Practice has shown that communities have begun to include the environmental component in all strategic directions in their Development Strategies, from the economy to digitalisation. Communities held public discussions of SEA drafts, which allows them to involve local residents in shaping environmental policy.

At the same time, there was some uneven access to environmental data during the SEA process, in particular on air quality or the amount of accumulated waste.

Therefore, the technical capacity to model the projected impact of the measures was limited during the SEA.

Thus, the experience of implementing Strategic Environmental Assessment in these communities demonstrates significant progress in the implementation of European environmental approaches at the local level, while also revealing the need to improve information support, training and digital impact assessment tools.

Despite the positive developments in the implementation of strategic environmental assessment at the local level, Ukrainian communities face a number of systemic challenges that make it difficult to fully realise the potential of SEA as a tool for environmental protection and environmentally responsible planning.

1) Lack of up-to-date environmental data. One of the most common problems is the lack of high-quality, localised environmental monitoring. Data on the state of air, water, soil or biodiversity is often general, regional or outdated. In most SEA reports, information on soil conditions is presented only in general terms, without reference to specific areas. This makes it difficult to assess the real impact of strategic measures.

2) Limited technical and human capacity. Most communities carry out SEAs with the participation of external experts, as there are no environmental or urban planning specialists with experience in implementing such procedures in local governments. As a result, communities are not always able to independently monitor or control the implementation of environmental recommendations contained in SEA reports.

3) Formal approach to alternatives and scenario analysis. In some cases, the consideration of alternatives is declarative. Instead of an in-depth analysis of possible scenarios for community development, only the ‘zero scenario’ and the optimistic one are often presented. This reduces the quality of strategic planning and does not allow for a full assessment of the benefits or risks of different areas of strategy implementation.

4) Insufficient integration of the SEA into the decision-making process. In some cases, SEA results have no real impact on changing the content or structure of strategies. This is especially true for communities where the strategy was already almost completed at the time of the SEA, and the procedure was carried out ‘in parallel’ without the possibility of making adjustments. This situation reduces environmental assessment to a formality rather than a management tool.

5) Limited public participation. Despite the existence of public discussion procedures, the actual participation of residents in SEA is low. The reasons for this may include lack of awareness, lack of available feedback tools, and limited communication from the authorities. This prevents local knowledge from being taken into account and increasing trust in the decision-making process.

6) Military challenges and uncertainty. Due to russia's full-scale aggression, communities often operate under conditions of increased uncertainty. Damage to infrastructure, contamination of territories, and violations of sanitary and epidemiological regimes all add a critical new context to the SEA that is not yet sufficiently addressed in the methodological recommendations.

Thus, although SEA in Ukraine is actively developing, there is a need for methodological support, staff training, digital transformation and improvement of the regulatory and information environment.

The development of SEA in Ukraine demonstrates significant progress in promoting an environmentally responsible approach to local development planning. At the same time, the identified challenges indicate the need for comprehensive improvement of both the regulatory environment and practical mechanisms for SEA implementation. The main areas for improving SEA practice at the level of territorial communities include:

1) Development of SEA standards and templates. Many communities face difficulties in organising the SEA process due to the lack of agreed sample documents, examples of reports, and forms for assessing alternatives. The development of a national set of templates (in a step-by-step format) adapted to the strategies typical for territorial communities will help reduce barriers for communities with limited resources.

2) Strengthening the analytical and digital capacity of communities. The introduction of GIS platforms, environmental databases, and mapping of vulnerable areas (green zones, protected areas, aquifers, coastal strips) will significantly improve the quality of analysis in the SEA. Digitisation of environmental information will not only allow for faster assessments, but also for continuous data updates in the course of strategy implementation.

3) Professional development of local specialists. Training programmes should be implemented for local government officials, employees of public utilities, and civic activists involved in SEA. Topics should cover both technical aspects (impact assessment, scenario analysis) and public communication skills.

4) Institutional support and inter-municipal cooperation. Since most communities do not have separate environmental departments, it is advisable to form cluster environmental offices or engage specialists from the oblast level to support SEA procedures. Inter-municipal experience exchange platforms can also be introduced, allowing communities to learn from each other and save resources.

5) Consideration of wartime challenges in the SEA methodology. Full-scale war has created a new context for community development planning. Damage to infrastructure, pollution of territories, and population migration should be taken into account as separate factors of environmental vulnerability. Methodological recommendations need to be updated to reflect these realities.

Conclusions.

Strategic environmental assessment is gradually transforming from a formal requirement into an effective tool that allows integrating environmental priorities, including the preservation of green spaces, into strategic planning at the local level.

It is determined that the key advantages of SEA are the ability to assess potential environmental risks at an early stage, to propose reasonable alternatives, and to ensure public participation in the formation of sustainable development policy. In this regard, the protection of green areas as elements of spatial sustainability and public health is of particular importance.

At the same time, a number of challenges have been identified in the practice of SEA: limited data, lack of specialists, and poor integration of assessment results into strategic documents. In response to this, we are suggest these include the introduction of digital tools, staff training,

strengthening inter-municipal cooperation, and updating methodological approaches to take into account the military context.

In summary, SEA is a promising mechanism that allows combining the environmental, social and economic interests of communities. Harnessing its potential is critical in the process of post-war restoration of territories and the formation of environmentally responsible spatial development.

REFERENCES

1. On Strategic Environmental Assessment, Law of Ukraine No. 2354-VIII (2023) (Ukraine). https://zakon.rada.gov.ua/laws/show/2354-19#Text
2. *Directive - 2001/42 - EN - EUR-Lex*. (2001). EUR-Lex — Access to European Union law — choose your language. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32001L0042
3. On approval of Methodological recommendations for conducting strategic environmental assessment of urban planning documentation, Order No. 705 (2023) (Ukraine). https://zakon.rada.gov.ua/rada/show/v0705926-23#Text
4. Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context, Protocol United Nations (2015). https://zakon.rada.gov.ua/laws/show/995_b99#Text
5. On Environmental Protection, Law of Ukraine No. 1264-XII (2024) (Ukraine). https://zakon.rada.gov.ua/laws/show/1264-12#Text
6. On Land Protection, Law of Ukraine No. 962-IV (2024) (Ukraine). https://zakon.rada.gov.ua/laws/show/962-15#Text
7. On the Nature Reserve Fund of Ukraine, Law of Ukraine No. 2456-XII (2025) (Ukraine). https://zakon.rada.gov.ua/laws/show/2456-12#Text
8. On the Regulation of Urban Planning Activities, Law of Ukraine No. 3038-VI (2025) (Ukraine). https://zakon.rada.gov.ua/laws/show/3038-17#Text
9. Unified Register of Strategic Environmental Assessment. (n.d.). Home | EcoSystem. https://eco.gov.ua/registers/yedynyi-reiestr-stratehichnoi-ekolohichnoi-otsinky
10. Strategic Environmental Assessment of the Comprehensive Plan. (2022). https://decentralization.ua/uploads/library/file/819/SEO_ready.pdf
11. Community Development Strategy. (2024). Martynivka Village Council. https://martynivka-gromada.gov.ua/strategiya-rozvitku-gromadu-10-46-54-12-06-2024/
12. Development Strategy of the Velykobagachka Community. (2024). Velykobagachka Community. https://velyka-bagachka-rada.gov.ua/strategiya-rozvitku-velikobagachanskoi-gromadi-15-40-34-31-07-2024/
13. *The european green deal*. European Commission. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en
14. Development Strategy of the Velikorublivska Rural Territorial Community. (2024). Velikorublivska Community. https://velykorublivska-gromada.gov.ua/docs/1643908/