

The influence of environmental impact assessments on the protection and development of landscapes in spatial planning in Poland

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Abstract: *The influence of environmental impact assessments on the protection and development of landscapes in spatial planning in Poland.* An Environmental Impact Assessment (EIA) is the name of a study that assesses the type and degree of potential transformations that can occur within landscapes after the implementation of the decisions in local plans. These studies mainly identify and suggest solutions in cases where the plan may disrupt the landscape. However, the EIA may also have an impact on the quality of the solutions used in the plans, including on landscape design. The influence of an EIA therefore derives not only from its evaluating role, but also from the support it can offer in the process of landscape design. This will result in landscapes that are sustainable and that function better. The purpose of this article is to show the theoretical and practical possibilities for strengthening the support and evaluation roles of EIAs.

Key words: landscape planning, legal aspects of EIAs, assessment of landscape transformation, evaluating role of EIAs, supporting role of EIAs

INTRODUCTION

The implementation of the findings of local plans is generally associated with the occupation of new, predominately undeveloped lands. The consequence of this is the transformation of landscape (not always to its advantage). Therefore, to mitigate the potential adverse impact of these processes, the contemporary local planning process introduced the EIA.

Its dominant role in evaluation is mainly dictated by the current laws in Poland, which stipulate that the primary task of an EIA is to assess the potential transformations that may occur as a result of the implementation of local plans. Based on this assessment an EIA indicates which solutions may disrupt the landscape and which should be eliminated.

Practical experience has shown that restricting an EIA only to the evaluation and identification of solutions that are harmful to the landscape cannot be decisive in their elimination from draft plans. Furthermore, it does not guarantee their elimination from landscapes. Therefore, in order to protect and shape the landscape, the role of EIAs should be expanded so that they also indicate the most favourable landscape alternatives (supporting role of EIA) to the solutions adopted in the plan, and then implement them in the plan. Only such action can guarantee the elimination of errors made in the design phase of plans. It should be noted that the evaluation and support roles of EIAs should not be separated. To identify favourable solutions it is necessary to conduct prior identification and evaluation of proposed solutions that could have an adverse impact on the landscape.

In practice EIAs could potentially be studies which are not limited only to evaluating solutions proposed in plans. Strengthening the supporting role of EIAs depends primarily on two things: changes in the interpretation of the law or clarification of its provisions and the degree of involvement of the authors of these studies in drafting plans.

MATERIALS AND METHODS

Ten local plans drafted for parts of Warsaw, along with their EIAs, were used as the base for analysis. The repealed and existing laws containing provisions on EIAs and the literature on the role of EIAs in the planning process were also reviewed. To determine the vital role of EIAs in landscape planning, legislation concerning EIAs, both repealed and in force in Poland, was analysed. Expert interpretations of the legislation were also consulted.

An analysis of only those legislative records currently in force in Poland, which specify the substantive scope of EIAs, was performed to demonstrate the possibility of expanding the role of EIAs in landscape planning. Based on these analyses and on results and experience gained in practice, we have determined the best method of developing EIAs in practice so that they can help to shape local landscape plans. We have also specified the desired level of involvement of the authors' predictions in the design process of the plan, the possible differences in the use of estimates in practice and the changing scope of the use of estimates in the course of enacting plans.

RESULTS AND DISCUSSION

The role of EIAs compared with the development of legislation

The provisions concerning EIAs in Polish legal acts were always vague enough to allow for free interpretation. For this reason they have never had a clearly defined role and in most cases that role has been defined by their authors.

The term "forecast" was used in Polish planning practice in the 1970s and 1980s. This term described a way of thinking which referred only to predicting how nature would respond to a planned investment [Kassenberg, 1999]. The obligation to prepare forecasts [Kolipiński, 1997] was introduced by the provisions of the Law on Spatial Development (Journal of Laws of 1994 No. 89 Item 415). Less than a year later the Minister of the Environment, Natural Resources and Forestry introduced an act laying down requirements to be met for forecasts of the impact of local zoning plans on the environment (Journal of Laws of 1995 No. 29 Item 150), which led only to a series of discussions among planners about the role of EIAs in the planning process. Some drafters of plans treated EIAs as playing a supporting role with respect to their paper plans in terms of their discussion and evaluation. Others regarded the forecast function as a description, justification and documentation of solutions adopted in the plan [Kolipiński, 1997]. The basic role of forecasting, however, revolved around the role of the impact of evaluation findings on the landscape plan.

The starting point for Polish efforts for accession to the European Union can be considered the moment of break-

through in changing the approach to the role of EIAs. Very quickly it became necessary to adapt Polish legislation, including the issue of EIAs, to European Union (then community) law [Wajda, 1998]. In the case of EIAs, this adaptation was to rely mainly on withdrawal from the concept of impact assessment as the determination of a specific document for how to conduct the assessment of the impact [Rudlicki, 1998]. This meant that there was an opportunity to expand the role of EIAs. The EU accession period was also the time when the role of the authors' forecasts in these studies began to change. This happened because the authors were accumulating practical experience in preparing forecasts. It was thus possible for the ambit of forecasts to expand beyond evaluation and begin to play an additional supporting role.

In 2012 an EIA in Poland remained a study that is first of all conducted to identify and assess the natural environment and the extent of potential transformations in the landscape of the plan area (evaluation role). This is despite the fact that, thanks to the provisions of the Environmental Protection Law (Journal of Laws of 2008 No. 25 Item 150), an EIA has become part of the process of an SEA (strategic environmental assessment). As a part of this process, as in the United States, EIAs could begin to pursue two goals: to anticipate the negative effects of human activities on the environment and effectively counter them [Sas-Bojarska, 2006].

For EIAs to become part of the SEA process in practice and to start to realize both of their goals, work on them should be a continuous process that is closely linked to work on the plan. It would

seem that this is only possible if authors include the EIA process in the draft plan, which requires further legal regulation. There is a need to clarify the potential relationship between these two documents and the way work on the EIA is to proceed in the course of planning. Without these rules EIAs will continue to play only a forecasting role which necessarily limits the help they can offer in shaping planning. For these reasons the role of EIAs in the drafters' predictions and plans depends mainly on how the drafters interpret the legislation.

The obligatory content of EIAs and its potential role in the planning process

The issue of EIAs in Poland is now (2012) regulated by two laws: the Law on Spatial Planning and Development (Journal of Laws of 2003 No. 80 Item 717), which introduced a duty to support project plans with EIAs, and the Law on the Provision of Information about the Environment and its Protection, Public Participation in Environmental Protection and Environmental Impact Assessment (Journal of Laws of 2008 No. 199 Item 1227), which defined the substantive scope of this study.

Both of these laws failed to rule on the role of EIAs in the planning process at local level. It follows from reading them that the substantial scope of an EIA is clearly associated with the various tasks it is believed that the legislation should act to develop. In the provisions of the Act concerning the scope of this study, the issue is the intention to divide the contents of the predictions into three sections, which are named in the pro-

vision as introductory, main, and final parts. Each can be assigned to provisions referred to in the Act and are necessarily included in an EIA. Following an analysis of the provisions of the Act, a potential layout for the contents of an EIA can be proposed (Fig. 1).

The final part is a summary of the assessment made in the main body of the EIA. Proposals for alternative solutions designed to ensure improvement to the landscape and natural environmental function should also be placed in this section. The aspects that are most im-

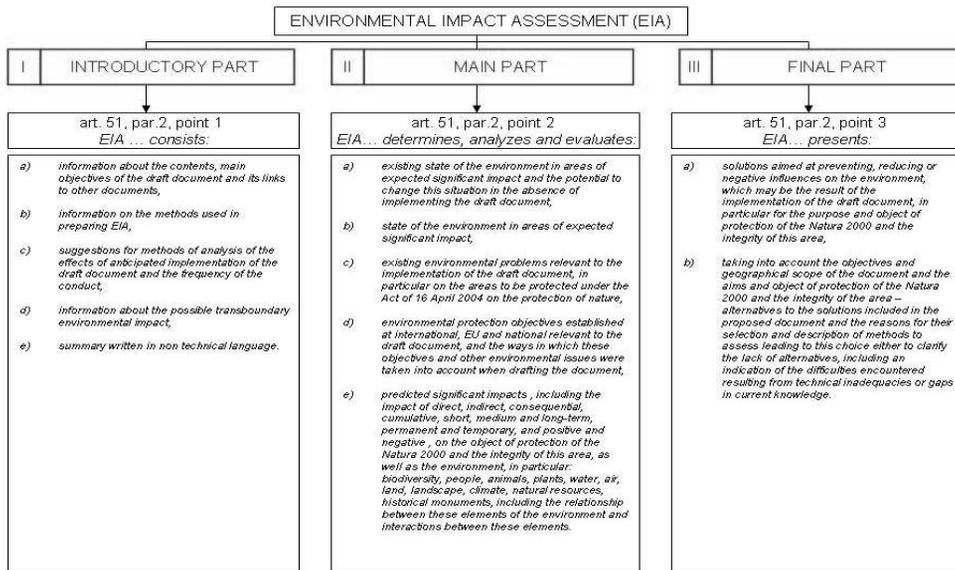


FIGURE 1. Possible content layout for EIAs

The primary task of the introductory part should be to describe the document (here, this is the local plan). There should also be a summary of the evaluation methodology. The information contained in the main part of the EIA should first set out the current state of the natural environment of the areas and then address the issues and problems. Finally, it should set out directions for protecting the environment and link this to the object and purpose of the local plan. This section should also assess the impact of the plan's findings on the environment and landscape.

portant in relation to the basic role of EIAs, that is, identifying solutions that can significantly disrupt the natural environment and landscape, are those assessments included in the main part. The supporting role of EIAs may prejudice the proposals contained in the final part of the document and alternative solutions to those adopted in the plan are likely to change landscapes outcomes in practice. This raises a number of questions: What is the purpose of indicating alternative solutions which are better for the environment at the development stage of the EIA when these are generally developed

after the completion of a plan? How far is it the case that, in spite of everything, the role of an EIA is now limited to one of assessment? Are the proposed alternatives likely to be used in an existing project?

The degree of involvement in drafting a plan

Considering the above questions, it is important to state that alternatives should be implemented during the drafting of the plan. This means that it is necessary to strengthen cooperation between the planning team and the EIA team. The power of the EIA and the opportunity to use the study in an extended range depends largely on the degree of involvement of its authors in the design of the plan (Fig. 2).

There are two possible options for cooperation between the two teams. In the first, the authors of an EIA are not involved in the project plan. The EIA is prepared at the final stage of the plan

when most spatial decisions have already been made. The solutions that affect the formation and functioning of the landscape are indicated only in the EIA. The role of the EIA is largely limited to assessment: introducing most of the changes without having to repeat the planning process is unlikely to be possible. The scope for change is limited mainly to the most important and most significant changes to the arrangements that shape the landscape.

When the EIA authors are involved in the draft plan, alternative solutions are introduced into the draft plan as planning proceeds. In this way it is possible to implement more favourable solutions to the landscape. In addition, the overall effort in creating the plan is greatly reduced, making this option much more beneficial. It not only has a greater impact on the proper management of the landscape, but also on the length of the drafting process. It is only with this type

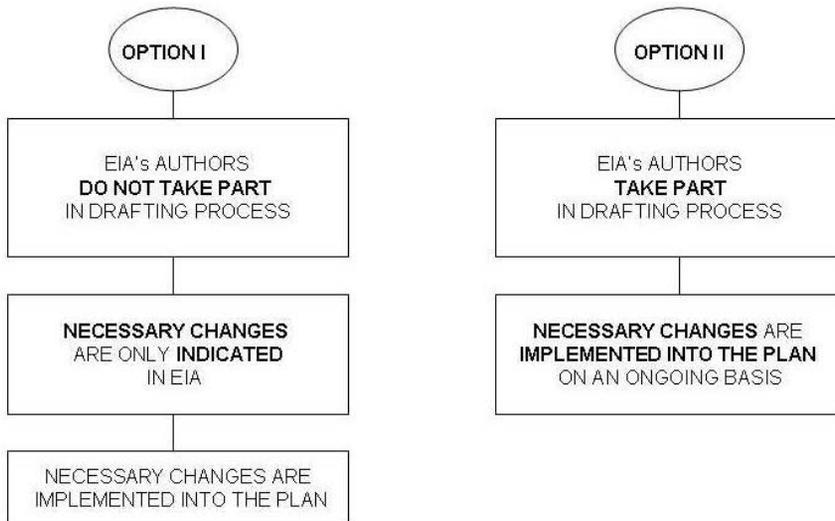


FIGURE 2. The possible degree of involvement of EIA authors in drafting master plans

of cooperation that EIAs become a fully-fledged part of the SEA procedure.

The possible scope of use for EIAs in practice

A dual role for EIAs is only possible with the direct involvement of the authors in the drafting process. Where this is the case it increases the real impact of the EIA on the type of spatial solutions used in the plan. Only then is it possible to include the plan in a broader range of resources that have a direct impact on the protection of the landscape. When both teams work together the authors of the plan provide a draft plan to the authors of the EIA (Fig. 3a). The authors of the EIA assess the impacts of proposed solutions on the natural environment and

landscape and suggest alternatives that can contribute to a better functioning of the landscape. The authors of the plan can become familiar with the negative effects of the solutions they have proposed and then implement alternatives in the plan. This can reduce negative impacts on the environment. Not all of the proposed solutions are put into the plan. The cooperation of both teams of authors is based here on the rules of cooperation combined with collaborative discussion. The course of action described above can be repeated several times. Ultimately, the result of this cooperation should be a draft compromise. Because the alternatives are introduced in a timely manner there is no need to retrofit the EIA into the plan.

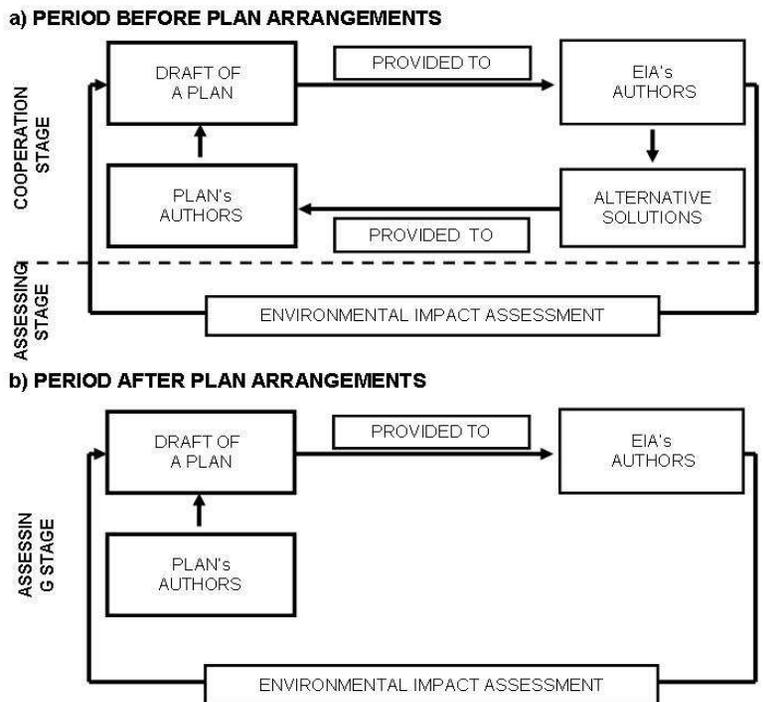


FIGURE 3 (a and b). Scope of use for EIAs in practice

If the role of EIAs is limited to assessment, the entire stage of team collaboration is skipped. In this case the draft plan is forwarded to the EIA's authors. The authors then develop a study and suggest possible alternatives that may be incorporated into the draft plan (Fig. 3b).

The extent of the role of EIAs at different planning stages

The procedure for drawing up a plan can be divided into seven stages. At each stage the degree of progress on the draft plan is larger and the role of the EIA must be varied. This has been made necessary by the statutory procedure for determining the various stages of the project plan. The preparation of an EIA should begin when the concept option is selected (concept stage plan). Even at this stage it is necessary to specify all of the issues relevant to the protection of the landscape. At each of the subsequent stages there can be very close cooperation between the two teams, which lasts until the end stage of external arrangements with the authorities referred to in the Law on Spatial Planning and Development. In this case the EIA fulfils both roles and it is possible to eliminate most of the spatial design errors.

When the master plan has been agreed the role of the EIA must switch to assessment. This is because up to that time the authors of the plan, and therefore also those of the EIA, are limited when it comes to significantly modifying the draft plan. Those stages at which the authors of the EIA are actively involved in the project plan are therefore of most importance in the formation and protection of the landscape. They have a direct impact on the design of spatial solutions

and on the quality and type of spatial solutions used in the plan (Fig. 4).

CONCLUSIONS

If EIAs are used only as a study in which solutions detrimental to the landscape are indicated this would seem to be a significant reduction in its role as the producer of an environmental study for the plan. This implies that the potential for securing sustainable landscapes in this case is also limited. Therefore, efforts should be made to expand the vital role of EIAs. It would seem that the main way to expand the role of EIAs and to enable them to influence the spatial solutions used in the plan, which are later put into effect in the landscape, is to refine the legal regulation. Issues related to the course of work on the EIA should be clarified, especially in relation to the course of work on the plan. It is important to ensure that the authors of EIAs are able to take a greater part in creating plans. This would bring invaluable benefits to the landscape. The effect of broadening the role of EIAs would be to make better-informed design decisions. Greater emphasis would then be placed on the proper development and protection of landscape values in the areas of local plans. The use of the potential power of EIAs as an instrument that has a significant impact on landscape design (in accordance with the principles of environmental protection) also depends on determining the mode of their preparation. This should be done in the light of the procedure for preparing plans and the degree of involvement of their authors in the development plan.

THE PROCEDURE FOR DRAWING UP PLANS IN PRACTICE	THE ROLE OF THE EIA
RESOLUTION OF AN ACCESSION TO A PLAN	
REQUESTS FOR A PLAN	LACK OF WORK ON A EIA
DRAFTING PROCESS	ASSESSING ROLE
ARRANGEMENTS OF A PLAN	SUPPORTING ROLE
SHOWDOWN OF A PLAN	ASSESSING ROLE
CORRECTION OF A PLAN	
ESTABLISHMENT OF A MASTER PLAN	

FIGURE 4. The possible role of an EIA during drafting of a master plan

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Streszczenie: *Sila Prognozy oddziaływania ustaleń planów miejscowych na środowisko w prewencji i kształtowaniu krajobrazu w planach miejscowych w Polsce.* Prognoza oddziaływania na środowisko to nazwa dokumentu, w którym ocenia się rodzaj i stopień potencjalnych przekształceń, jakie mogą zaistnieć w krajobrazie po realizacji ustaleń planów miejscowych. Opracowania te przede wszystkim identyfikują i wskazu-

ją zastosowane w planie rozwiązania, które mogą zaburzyć funkcjonowanie krajobrazu. Jednak „Prognozy...” mogą mieć także wpływ na jakość zastosowanych w planach rozwiązań, w tym na kształtowanie krajobrazu w obszarach planów. Siły „Prognozy...” należy więc upatrywać w fakcie, że może ona nie tylko oceniać (oceniająca rola „Prognozy...”), ale także wspomagać (wspomagająca rola „Prognozy...”) proces projektowania krajobrazu. Efektem tego będą lepiej funkcjonujące, zrównoważone krajobrazy przyszłości. Celem tego artykułu jest wskazanie teoretycznych i praktycznych możliwości ugruntowania oceniającej roli i wspomagającej roli „Prognozy...”, a wskazanie możliwości wykorzystania jej potencjalnej siły jako instrumentu mającego wpływ na kształtowanie krajobrazu.