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## **The role of the SEA in planning and programming processes**

**Abstract.** The current paper aims to outline the potential and most important aspects of the Strategic Environmental Assessment process (directive 2001/42/EC). First of all, the analysis considers the importance of evaluation instruments in decision-making processes and moves on to environmental assessment, focusing on the peculiarities of Strategic Environmental Assessment. Although SEA is an innovative instrument in favouring and promoting a democratic approach to the government and development of the territory, it nonetheless presents a series of problems. The latter regard aspects such as: its integration into planning and programming activities, its role within these processes, the methodologies applied, stakeholder involvement, the quality of the assessment process and the how the suggestions are perceived and acknowledged.

**Key words:** Strategic Environmental Assessment (SEA), evaluation, plans and programmes

## **Evaluation supports planning and programming processes**

The evaluation of policies, planning and programming processes is fundamental not only to optimize the available resources, but also to involve the larger numbers of people in understanding and agreeing on solutions for the problems.

Thus, evaluation becomes doubly important as a strategic instrument for decision makers: it furthers knowledge acquisition as well as establishing needs and identifying more effective and efficient methodology; it also encourages greater consensus concerning the solutions adopted.

The evaluation actually takes place in a political context where the policy makers are also the commissioners responsible for the evaluation; the evaluators and the results of the evaluation can be easily influenced.

This aspect is particularly relevant when the evaluation concerns aspects which are non-priority objectives of the plans and programmes examined (as often happens with environmental evaluation) and even more problematic if the evaluation occurs at the preliminary stages, when plans and programmes are still being defined and the effects of the strategies adopted are uncertain.

The evaluation of plans and programmes developed as an independent branch of knowledge acquisition in the USA during the sixties. It later spread to Europe and became common practice, particularly in those countries with strong ties with North America. The European Structural Funds programmes, concerning socio-economic development, (MEANS, 1999) greatly promoted this type of evaluation. Local traditions have influenced and channelled evaluation processes which have resulted in a variety of different approaches, ranging from highly democratic governance (as in Scandinavian countries), to a more conventional central government approach, while at regional level, the approach has

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remained both varied and dynamic (as in France). In many countries evaluation trends have reflected the political changes of the governments (as in the United Kingdom).

However, it is universally acknowledged that the introduction of evaluation processes in many States of Southern Europe is a direct result of the requirements imposed by the regulations of the European Structural Funds.

The development of evaluation within the various specialist sectors of the European Community is aimed at identifying issues which are relevant to the stakeholders. The objective is to reduce the range of knowledge uncertainty regarding the possible outcomes of the plans and programmes drawn up, which in turn will favourably influence both the choice of the strategy and its subsequent implementation. In short, evaluation aims to optimise the design of plans and programmes and to guarantee that they are effective and efficient by making available a variety of possible interventions and instruments which, in turn, provide a monitoring system for short, mid and long term results capable of verifying assumptions and rectifying errors. The evaluation system must therefore be an integral part of the policy/programme cycle.

Stakeholders are policy makers, professional and specialist interests, managing authorities and administrators, citizens and those affected by public action. The relevance of each different group of stakeholders depends on the initial purpose for which the evaluation is being carried out. If the purpose is ensuring that there is a justification for a policy/programme and that resources are efficiently deployed (planning/efficiency), it will mainly meet the needs of planners and policy makers; if the purpose of evaluation is demonstrating how far a programme has achieved its objectives and how well it has used its resources (accountability) it will mainly meet the needs of policy makers, programme sponsors and parliaments; if the purpose of evaluation is improving the performance of programmes and the effectiveness of how they are delivered and managed (implementation), it will mainly meet the needs of programme managers and the programme's main partners; if the purpose of evaluation is knowledge production, it will mainly meet the needs of policy makers and planners; if the purpose of evaluation is improving and developing capacity among programme participants and their networks and institutions (institutional strengthening), it will mainly meet the needs of programme partners and other programme stakeholders.

There is an overarching objective, into which all the other objectives noted above slot in. This overarching purpose concerns learning; evaluation from this perspective has as its purpose: to learn through systematic enquiry how to better design, implement and deliver public programmes and policies.

What, exactly, are the peculiarities of environmental evaluation in this context? Does the evaluation satisfy the needs which have been identified so far? Is the criteria the same or is it the environmental issue at hand which determines the differences?

## **Environmental evaluation as a key-factor for sustainable plans and programmes**

Environmental evaluation consists of a knowledge-process that examines the effects that human activities have on the environment and identifies ways of avoiding or minimizing any foreseeable negative impact.

We can ascertain that the objective of environmental evaluation is to act as an instrument for supporting and optimising decisions and interventions that regard the environment, and have the population's interest at heart.

It is therefore the community as a whole, and not simply the planners or investors, who determine the choices. The community, however, is a complex structure which comprises numerous, different stakeholders and as a consequence, the criteria for making decisions also vary. Bearing this in mind, environmental assessment is an important tool which can help avoid or solve possible conflicts and it allows for the democratic governance of all evaluation activities.

Furthermore, environmental assessment aims to integrate environmental, social and economic capital based on the sustainability of the plans and programmes while maintaining the technical standards of scientific research conducted on the environment from a chemical, physical, biological and ecological view point. This occurs because, in the majority of cases, the need to safeguard the environment is neither the main nor the sole objective of the evaluation, thus environmental protection must also consider the socio-economic objectives for which the plans and programmes have been drawn up.

In order to guarantee the sustainability of the plans and programmes, the assessment of the environment must occur during the content formulation phase. It is anticipatory research in that it identifies, estimates and evaluates the impact on the environmental system being considered, in the period prior to the actual implementation of the plan/programme. The approach has to deal with uncertainty concerning content and the lack of methodology, the heterogeneity of the variables in play and the subsequent difficulties of modelling the systems under scrutiny. The latter do not result in codifications or generalities which are truly scientific in nature and make it difficult to foresee possible scenarios.

Within the Community, the methodology for environmental evaluation of socio-economic development programmes are mainly aimed at outlining a concept and to proposing the general content. The base questions for the evaluation are identified; a specific model is proposed according to which analysis must take into account environmental, social, economic and human capital; a matrix is defined for evaluating the sustainability of the programme (the concept, on the other hand, may also apply at the planning stage and is divided into actions which are evaluated considering the various capitals, the financial resources and other interrelated themes).

The theory adopted, when specific environmental issues are concerned, is the DPSIR Model<sup>3</sup>, which is often ignored in evaluation practices.

On the whole, what is fundamental is understanding the extent to which integration is achieved regarding needs analysis, strategy, the management system, the choice of alternatives and the monitoring system. The latter is particularly important when evaluating the outcome of the actions chosen and should take place during the executive phase of the plan /programme., thus giving rise to a cycle of continuous evaluation, which is highly recommended in scientific contexts. Furthermore, it is the real key to "making the whole planning process coherent and geared towards sustainability (Enplan, 2005).

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<sup>3</sup> Driving force-Pressure-State-Impact-Response Model.

## **The peculiarities of the SEA compared with other environmental assessment instruments**

The Treaty establishing the European Community states that Community policy on the environment “shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source” (art. 174, par. 2). The Sixth Environment Action Programme<sup>4</sup>, in force until 2010 states that interventions must be grounded on principles of prevention and precaution and must apply to all sectors. With reference to European policies for sustainable development adopted in 2001<sup>5</sup>, the European Council summit in Gothenburg also insists that environmental issues should be integrated into all European policy sectors.

Environmental assessment is an instrument which guarantees that the environmental principles sanctioned by the EU are observed. In the early eighties, Community legislative measures were initially oriented towards the policies of the member states and processes aimed at evaluating the possible effects on the environment of both public and private projects.

The well-known directive 85/337/EEC<sup>6</sup> on the assessment of the effects of certain public and private projects on the environment (s.c. EIA directive) aims to guarantee that member states adopt necessary measures so that projects that, due to their nature and position, will have a significant impact on the environment may be evaluated prior to issuing authorisation to proceed. The EIA directive, which still represents a milestone with regard to environmental assessment, is extensively applied within the EU, where methodologies and techniques are shared and consolidated by the public decision-makers.

Since the nineties the EU has shown marked interest in the issue of biodiversity. The well-known Rio de Janeiro Convention on biological diversity was held in 1992 and that same year, the Habitat Directive (92/43/EEC) on the conservation of natural habitats and of wild fauna and flora. The Gothenburg strategy drawn up by the Council of Europe in 2001, and the Johannesburg summit on sustainable development in 2002 both emphasised the need to halt the loss of biodiversity. With this in mind, the European Union drew up a new policy for the safeguard of natural and semi-natural habitats, flora and fauna, and which regards the creation of a European network of protected areas - the Natura 2000 Network. This includes the introduction of a new environmental assessment tool known as the assessment of environmental implications on Natura 2000 sites covered by article 6 of the Habitat Directive. Interest shown for the preventative assessment approach explicitly set out and defined in EIA has now shifted towards a wider range of plans and projects which are less codified, and a more precise environmental area which is that of Natura 2000.

Environmental impact assessment and the assessment of environmental implications on Natura 2000 sites were prodromic in the “Copernican-style revolution” of environmental assessment, namely the introduction of strategic environmental assessment (SEA), in accordance with Community Directive 2001/42/CE, on the assessment of the effects of certain plans and programmes on the environment. Environmental assessment no longer concerns specific project categories or specific areas which are of naturalistic interest, but

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<sup>4</sup> Environment 2010: our future, our choice.

<sup>5</sup> Updated by the European Council in 2006.

<sup>6</sup> Directive 97/11/CE introduced modifications, while legislation and procedures remain unchanged.

rather the much wider scope of the plans and programmes<sup>7</sup>. SEA consists of the preparation of an environmental report, followed by consultations, the provision of information on the decision, and controlling the environmental effects by a monitoring system. As far as its plans, requiring an assessment of the environmental impact on Natura 2000 sites, are concerned, it is necessary to define a common strategy with a view to avoiding the duplication of assessment procedures. The start up of the SEA in the early stages of available plans and programmes allows for a more effective integration of the environmental issues when drawing up the necessary documentation and guarantees that potential conflicts between development and environmental objectives will be addressed.

The SEA approach is radically different: the environment is no longer considered to be an external factor which requires corrective measures at the planning stage (which was the case with EIA), nor is it an assessment tool which is limited to selected areas such as Natura 2000 sites, in the case of assessment required under article 6 of Directive 92/43/EEC), but it becomes a determining component of the plan/programme.

The area undergoing evaluation is vast. Together with its traditional interpretation, the environment now has a further reaching interpretation and includes the air, water, soil, nature etc. It also extends to territorial components such as the landscape, or social contexts such as the population and health care. SEA extends beyond environmental aspects and encourages the evaluator to investigate the implications based on the social and economic sustainability of the plans and programmes. Basically, it is the main instrument for guaranteeing the sustainability at the planning and programming stages to allow for, as the 1987 Brundtland Report states, sustainable development which meets current day needs, without compromising the opportunities for the future generations to satisfy theirs.

## **SEA in the EU context**

Getting the member States to adopt Directive 2001/42/EC as part of their national legislation has been a long, arduous process, which has not yet been completed.

National regulations acknowledging the directive should have been adopted by, and no later than, 21 July 2004. Nonetheless, Italy, Austria, Belgium, Cyprus, Greece, Spain, Finland (more precisely the Province of Aland), Luxemburg, Malta, The Netherlands, Portugal and Slovakia did not comply. The European Commission opened breach proceedings and a written ultimatum dated 11 July 2005 was sent prior to referral to the European Court of Justice.

With regard to Poland, a local, strategic environmental assessment had already been requested in 1994 (Special Planning Act). SEA became compulsory at regional and national levels in 2001 with the Environmental Protection Act, Poland's most important document in the field of environmental protection, also known as "The Environmental Constitution". Subsequent to modifications introduced by the Environmental Protection Act of May 2005, Poland adopted the SEA directive in full.

Italy had still failed to comply within the deadline. Legislative decree 152/2006 (Environmental Consolidation Act) introduced SEA at a national level but it will not come into force until 1 August 2007, with a possible deferral to 1 January 2008.

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<sup>7</sup> Article 3 of the directive defines the area of application and the sectors subject to SEA.

## **Possible relationships between SEA and the planning / programming process**

The SEA directive does not discipline aspects concerning the position of the evaluation and the decisional procedures. It is the responsibility of the member states to regulate this aspect by passing laws which adopt the directive and which are obliged to take into account the methodologies, the attitudes, and cultural aspects of the plans and programmes peculiar to the member state. The issue concerning the positioning of the evaluation in relation to the process of defining the plans and programmes is of primary importance in view of the fact that the results of the evaluation are partly dependent on this. Article 8 of the Directive states that: "The environmental report prepared pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of any transboundary consultations entered into pursuant to Article 7 shall be taken into account during the preparation of the plan/programme and before its adoption or submission to the legislative procedure." The range of possible options comprises at least three alternatives which represent a sort of ascending climax: SEA as a fundamental phase for decisions to be made; SEA as an integral part of the decision-making process; SEA as a decision-making process. In the first case, SEA is carried out at a delimited, independent time which is similar to what happens in EIA procedures. The evaluator is usually an environmental expert who remains outside the planning and programming process. This (reductive) view of SEA lacks strategy, dialogue and the exchange of communication between planners and evaluators. In the second case, SEA is seen as an integral part of the planning and programming process. The predisposition of environmental reports is in tandem with the drawing up of the planning / programming document and allows for the evaluation of the various scenarios proposed. The constant exchange of information between the planner, the programmer and the evaluator means that the decision-making process is synergic and consequently more effective and efficient in terms of results and time required.

The third case, on the other hand, represents the optimum, though not always workable, situation. It presents SEA as a complete decision-making process which permeates all decisions concerning plans and programmes. Considering the current state of practice in force and the evaluation culture in each member state, it is an arduous objective to reach. This is due to the many factors that influence the choice plans and programmes and the fact that environmental sustainability does not play a key role.

## **Clear and shady areas concerning the implementation of SEA**

Given that Strategic Environmental Assessment is an innovative instrument which has only recently been put into practice, it still contains some aspects which are uncertain and subjective. The main problems regard: its integration into the planning and programming cycles; the definition of roles within this process; the methodology adopted; the involvement of the stakeholders; the quality of the evaluation and the criteria adopted for receiving the results of the assessment.

As previously mentioned, directive 2001/42/EC means that SEA should be an integral part of the drawing up process for plans and programmes; an interactive process which

favours the transfer of information between the evaluation results and the plans and programmes - and vice versa.

From the systematic viewpoint, SEA is extended to the executive phases of the plans/programmes; this approach allows for corrections and adjustments to be made should the plans/programmes reveal unexpected, negative effects. Should this be the case, the introduction of a monitoring system would be fundamental, but this is often ignored when carrying out SEA, despite being expressly included in the Directive.

SEA is frequently applied only when the contents of the plan/programme have already been defined (occasionally with the imprimatur of the authorities), leaving little margin to contribute to the drawing up of the plan/programme. This partly depends on the misinterpretation of SEA, which is seen as simply being the fulfilment of regulations on behalf of the planning/programming authorities, who often do not perceive the advantages. For this reason, pre-assessment should be enhanced and used to train the authorities responsible for planning/programming concerning the uses of evaluation and its development. Possible discrepancies between assessment and planning/programming processes also have a negative effect on the choice of available planning/programming alternatives, as well as on the introduction of offsetting measures<sup>8</sup>, and the effective usefulness of the assessment and consultations. If the latter are excessively behind schedule, important changes cannot be made to the plan/programme based on the considerations which emerge from the environmental report or the public opinion.

As far as the evaluator is concerned, it is necessary to establish whether he should remain independent from the planning/programming authorities in order to guarantee that his opinions remain autonomous and unconditioned by the limits imposed by the plan/programme, or whether closer ties with the authorities might be more effective in guaranteeing interaction between the various processes.

The decision depends on a number of factors: the degree of competence of the planning/programming authority with regard to environmental issues and assessment; the appropriate involvement of stakeholders which can adjust the risks which could arise from a point of view which is excessively subordinated to the plan/programme, (in the case of a SEA developed by the planning/programming authority). An independent evaluator on the other hand, could have an important role as a moderator between the different interests which are at stake; particularly when conflicts arise between the stakeholders and the planning/programming authorities (such as interventions on infrastructure) or among the stakeholders themselves.

Shared evaluation methodologies and sources of information are a key factor in reaching consensus. The topic is strongly linked to the general quality of the environmental reports which must satisfy the minimum standards guaranteed by the member state (article 12, 2, Directive 2001/42/EC). The many assessment tools and techniques proposed at Community level for the evaluation of the environment<sup>9</sup> are in fact not supported by official EU documentation concerning the specific analysis methodologies which should be applied when carrying out SEA. With regard to environmental analysis, the DPSIR model proposed by the European Environment Agency often makes it difficult to select appropriate indicators which allow for the complete application of SEA within the context

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<sup>8</sup> These aspects are often marginal or totally absent in environmental reports.

<sup>9</sup> Evaluability assessment; logic models; concept or issue mapping; social surveys; multicriteria analysis; use of secondary source data; cost effectiveness analysis; cost benefit analysis, etc.

and the time scale provided, and which concern the causal connections between human activity and the environment. The evaluator generally possesses more or less up to date information concerning the state of the environment. Data on drivers and pressures, however are often lacking and aggregated on a vast spatial scale, while data on impact and responses need to be compiled case by case. With regard to the classification of indicators, the use of descriptive indicators is common, while the use of performance and eco-efficiency indicators is rare. The evaluator hardly ever uses policy effectiveness indicators and total welfare indicators that target an overall view of the sustainability.

Another problem which needs to be mentioned, is that in several cases the amount of detail contained in the plan/programme is not sufficient to determine what the significant effects are.

The complexity of the cognitive processes makes it increasingly important to agree on the methodologies with the stakeholders during scoping. This, in turn, will allow for valid analysis and assessment will represent a common, shared basis for discussion. The Directive, however, states that during scoping is obligatory the involvement of the environmental authorities only, while deferring public opinion to the consultation phase.

In order to make discussion more effective, it is necessary to identify the different categories of stakeholders who show potential interest. This would make it easier to identify to what degree the stakeholders could be, or wish to be, involved during consultations with the environmental authorities and the general public. They must also be given sufficient and timely information in order to formulate and put forward their opinions. Recourse to specific methods aimed at consultation (steering group, focus group, advisory committee, etc.) could be strategic in encouraging dialogue and entente between the authorities and the citizens, especially in countries where evaluation practices are less established and where there is less public involvement at the definition stage of the plan/programme.

## **Conclusion**

We can confirm that SEA is based on a concept where the content and the assessment become significantly interdependent. The way the process is conducted determines the orientation of the content and the usefulness of the assessment; the progressive results stemming from the assessment make it possible to identify snags in the assessment process; the process allows for the resolution of conflicts and the establishment of common interests.

Objectives aim at integrating environmental and socio-economic sectors in a move towards sustainable development. The difficulty lies in integrating assessment and planning/programming, as well as getting those with vested interest to commit.

Experiences in Europe reveal that good practice and identification of possible difficulties depend on how deeply embedded the environmental culture actually is and the degree to which the authorities encourage it, as well as on the assessment and the involvement of society as a whole when public decisions are at stake.

From this viewpoint it is important that the planning/programming authorities commit to fully comprehending how SEA can contribute to the decision-making process, if it is applied as an instrument which aids problem solving, and not simply viewed as a need to comply with legislation. As a result it also enhances and increases democratic governance and the development of the territory.

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