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Citation for final published version:

Unalan, D. and Cowell, Richard 2019. Strategy, context and strategic environmental assessment. Environmental Impact Assessment Review 79 , 106305. 10.1016/j.eiar.2019.106305

Publishers page: <http://doi.org/10.1016/j.eiar.2019.106305>

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# Strategy, Context and Strategic Environmental Assessment

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Accepted for publication in *Environmental Impact Assessment Review*, August 2019

Pre-proof version.

## **Abstract:**

There have been many studies critically analysing inputs, processes and outcomes of SEA systems and practices for different country contexts. However, studies focusing on the inclusion of strategic elements in SEA processes are very limited in the literature. Strategic elements play an important role in materialising full advantage of SEA as a sustainability tool. In this study, we focused on the assessment of cumulative environmental impacts and potential alternatives as key strategic considerations in a SEA process. We propose a conceptual framework explaining how contextual factors may lead to a strategic or non-strategic SEA in this paper. The framework focuses on cumulative impacts and assessment of alternatives as key strategic elements and questions the role of decision-making context on the strategic SEA elements. To illustrate the practical value of our framework we analyse four pilot SEA case studies from Turkey. Findings of the case analysis highlight the role of political commitment, consensus on norms, flexible and adaptive managerial skills of SEA practitioners to integrate strategic elements in the SEA process as well as the framing influence of formal instruments. Furthermore, the findings provoke thought on whether such adaptive activity within SEA on these strategic elements helps to re-shape political commitment, values and administrative capacity.

## **Highlights**

- SEA regulations are insufficient to sustain effective SEA application
- Political commitment influences the inclusion of strategic SEA elements
- Administrative capacity influences the inclusion of strategic SEA elements
- Consensus on norms and values influences the inclusion of strategic SEA elements
- The discretionary power of practitioners help deliver the assessment of cumulative impacts and alternative PPPs

## **1. Introduction**

Strategic Environmental Assessment (SEA) is typically presented as ‘a process directed at providing the authority responsible for policy development and the decision-maker with a holistic understanding of the environmental and social implications of the policy proposal, expanding the focus well beyond the issues that were the original driving force for new policy’ (Brown and Therivel, 2000 cited in Dalal-Clayton and Sadler, 2005:11; Sadler and Verheem, 1996:27). Crucial to the likelihood of SEA in achieving this, is the capacity of such processes to attach to strategic decisions a range of considerations that become relevant and visible at this strategic level. Indeed, Bidstrup and Hansen (2014:29) define SEA as a tool that ‘secures strategic considerations in decision-making on the policy, plan and program (PPP) levels of activity’. Yet this begs questions about the conception of strategic environmental considerations, and the extent to which they are included.

The ‘strategy’ in SEA is defined as ‘the determination of objectives and means, and the adoption of courses of action to achieve specified ends’ (Noble 2000 in Bidstrup and Hansen, 2014:30). The strategy formation in ‘SEA is related to planning objectives, timing of the planning process and inclusion of what is referred to as strategic elements’ (Bidstrup and Hansen, 2014:30). For the environmental strategic elements, many authors agree that SEA can support sustainability by integrating cumulative impact assessment throughout the decision-making process from principles to practice (Rossouw et al., 2000; Stinchcombe and Gibson, 2001; Partidario, 2009; Lobos and Partidario, 2014) and subjecting alternatives to analysis. However, ‘SEA practitioners are found to work within an institutional reality that in some cases acts as a barrier for strategic consideration of alternatives, systemic impacts and/or a broader notion of sustainability’ (Bidstrup and Hansen, 2014:33). In many cases, despite the

language of sustainability and the use ‘sustainability’ or ‘sustainable development’ as an overarching and guiding principle adopted by decision-makers, integration of strategic considerations fail in SEA practice. ‘Apparent deference to sustainability in such SEA cases yields little of substance’ (White and Noble, 2013:64).

So, SEA aims to improve decision-making and, for many commentators, effectiveness is gauged by the inclusion of strategic elements into decision making process and subjecting them to assessment (Gunn and Noble, 2011). If strategic elements appear to be lacking in planning practices, full advantage of SEA tools may fail to materialise (see Bidstrup and Hansen, 2014; McGimpsey and Morgan, 2013; Sadler et al., 2011). These studies raise a line of new and important questions like: What are the key strategic considerations in the sense of SEA’s contribution to sustainability? And, why do SEAs fail to adequately include strategic elements? Barriers to inclusion of strategic considerations have been under researched in the SEA literature. Some studies (Bidstrup and Hansen, 2014; Partidario, 2012; Therivel and Ross, 2007; Fischer, 2007; Nooteboom, 2007) have noted how contextual factors such as political institutions and administrative capacity may challenge the inclusion of strategic elements. How contextual factors may lead to a strategic or non-strategic SEA thus requires further examination. This article focuses on identifying key strategic elements and aims to examine how decision-making context influences the extent to which strategic elements are addressed in SEA processes.

To the causal relationships between context and strategic elements, an analytical framework is developed and then, tested by SEA practices from Turkey . In Turkey, several pilot SEA applications led by the Ministry of Environment and Urbanization to gain experience before publication of the National SEA Directive (Official Gazette, dated: 08.04.2017, no: 30032).

The pilot SEA cases applied by the guidance of the Draft National SEA Directive. The contents of the National SEA Directive and the Draft Directive are same. The legal and administrative context were also same before and after the National SEA Directive. Therefore, examination of pilot SEA cases instead of SEA cases after the National Directive have assisted to understand institutional barriers and opportunities to incorporate strategic considerations of SEA in decision making processes in Turkey. There have been profound shifts of the contextual conditions around SEA from one where integration with EU requirements was a driver, as part of pursuing EU accession, to a situation where this agenda has become marginalised (Turkey 2018 Progress Report, Ministry of Foreign Affairs, Directorate for EU Affairs). This faltering Europeanization makes the Turkish SEA experiences especially interesting in this regard. A critical review of Turkish SEA system and practices through the analysis of four cases of SEA application from different sectors is provided by this study.

The next section of the paper explains the analytical framework and methodological aspects adopted in the study. The third section provides background information about Turkish SEA legislation and outlines the legal and administrative institutional context and content of the recent SEA legislation. Then the third section subsequently presents the analyses of four SEA cases from Turkey using the analytical framework that draws on causal links between contextual factors and inclusion of strategic elements. Findings from the in-depth analysis of the cases are outlined in the end of third section. Finally, the paper concludes by explaining the major factors shaping outcomes of SEA in practice based on the findings of Turkish SEA application.

## **2. Analytical Framework and Method**

### **Key strategic elements in SEA**

Several defining features or principles that make SEA strategic have been suggested by the scholars in the literature (e.g. Noble and Gunn, 2015; Lobos and Partidário, 2014; Partidário, 2012; Kirchhoff et al., 2011; Fischer, 2003). The International Association for Impact Assessment (2002) identifies performance-based criteria that characterize a good quality SEA, namely that SEA is integrated, sustainability-led, focused, accountable, participative, and iterative. The OECD SEA guideline (OECD, 2006) defines fifteen principles for good SEA methodology considering both short-term and long-term effects. Noble and Nwanekezie (2017:166) suggest ‘four foundational principles of SEA which are closely interconnected and do capture the most basic, defining features of strategic assessment’. These features are strategically focused, exploratory of strategic options, nested, and sensitive to PPP and decision-making contexts.

Drawing on the principles defined by the EU SEA Directive (2001) and the (OECD SEA Guidance, 2006), this paper focuses on two principles for SEA as strategic elements. These are consideration of cumulative impacts and reasoning for the best or chosen alternative. The concept of strategic in SEA is conceived related to the outcomes that are the broader and long-term sustainability effects rather than the outputs- short-term and immediate effects within the scope of this paper.

Assessment of cumulative impacts is considered one of the key strategic considerations in a SEA process. By undertaking cumulative impact assessment in a strategic context, where policies or programmes provide the framework for multiple individual projects, SEA

proactively avoids some of the pitfalls of project-by-project decision-making with the potential to set a course for the future of a region (Sadler and Verheem, 1996; Partidario, 1996). Cumulative impacts can be properly assessed in the contexts if SEA has clear delineation of assessment roles and responsibilities; clear provisions, standards, thresholds for the environment and ecosystems; mechanisms to ensure impartiality of assessment review; and opportunity for meaningful participation and deliberations (Rebelo and Guerreiro, 2016; Bidstrup et al., 2016).

Comparative evaluation of potential alternatives is also regarded as a key strategic consideration in SEA processes. The European SEA Directive (2001/42/EC) demands that environmental reports should describe and evaluate likely significant impacts and their cumulative nature, and ‘reasonable alternatives’ of PPP -policy, plan and programme-initiatives (Baker et al., 2013:5). Potentially, SEA can have greater influence on the choice of alternative developments during the earlier stages of decision-making whereas EIA is primarily concerned with how a proposed development should take place to minimize adverse environmental impacts (Sadler and Verheem, 1996; Gunn and Noble, 2011). The comparative evaluation of PPP alternatives provides a basis for decision-making and comparison of results of strategic actions regarding sustainability (Chaker, et al. 2006). The exercise of political power is reflected on the design, implementation and use of SEA and this may be especially visible in the identification of alternatives (Bina, 2007).

## **2.2. Interactions between strategic elements and contextual factors**

In different decision-making contexts, SEA systems and frameworks place varying degrees of emphasis on the assessment of a policy’s, plan’s or program’s cumulative impacts and on



the evaluation of alternatives (Gunn and Noble, 2015, Noble and Nwanekezie, 2017). There is a growing consensus that institutional context matters greatly for environment and sustainability assessments (Slung et al., 2009; Coteur et al., 2016). In the SEA literature, various institutional factors have been defined to learn how to perform good institutional assessments as part of SEAs. Turnpenny et al.(2008) have conducted a layered form of institutional analysis -concerning the individuals involved in doing assessments in the bureaucracy and the availability of resources on the micro level; organizational issues such as management structures, coordination procedures and incentive systems on the meso level; and the legal and administrative context as well as the role of stakeholders in the decision making process on the macro level. Based on the research conducted by Gachechiladze-Bozhesku and Fischer (2012), lack of institutional commitment, lack of resources, lack of legal/formal requirements, and lack of clear guidelines/methods have been found as the key obstacles encountered in SEA practices. Zhang et al. (2013) have grouped critical factors into four main categories that influence success of SEA as communication and understanding, resources and capacity, timing and organization, will and trust.

In the SEA literature, insufficient political will has been highlighted as the most significant barrier to SEA (Hildén et al., 2004; Liou and Yu, 2004; Noble, 2004; Retief, 2007; Sheate and Partidário, 2010; Zhu and Ru, 2008 in Zhang et al., 2013:95). SEA literature has also reported that lack of consensus on norms and values, insufficient information on the SEA process by the public, and weakness of the legal frames (Rega and Baldizzone, 2014). There are more impeding factors depending on the institutional contexts that act as a barrier for strategic consideration of alternatives, systemic impacts and a broader notion of sustainability (Bidstrup and Hansen, 2014). In this paper, political commitment, consensus on norms and values, and

administrative capacity are used to develop an analytical framework explaining links between institutional barriers and inclusion of key strategic SEA elements.

Experiences have shown that the SEA process does not deliver on its promise in theory and in principle to be a more effective mechanism for addressing cumulative impacts and alternatives in the contexts where there is lack of political commitment. If the application of SEA is not seen beneficial and political commitment to achieve the full potential of SEA is poor, it is unlikely to be considered as a tool for sustainability in decision-making (see DETR, 1998; IEEP, 1994). In such contexts, politicians are also not willing to share decision-making powers and use the input of participating stakeholders in formal decision making (Unalan and Cowell, 2009a). However, stakeholder involvement is valuable for recognition and solution of problems, especially if there is high uncertainty about the impacts of the PPPs and their alternatives (Leung et al., 2015).

SEA is not only about technical studies but also about acting as a facilitator of decision-making and setting ‘a dialogue platform with stakeholders’ (Partidario, 2012:49). A process component is also vital in establishing a permanent dialogue between SEA and the decision process throughout the decision cycle, and to ensure ‘SEA flexibility and adaptability to each case’ (Partidario, 2012:12). In particular, flexible and adaptive managerial skills are required to undertake ad-hoc adaptive measures (Acharibasam and Noble, 2014). SEA process needs to be designed each time to fit the contextual conditions (Partidario, 2012).

Shortages of expertise and organisational capacity in the government’s administrative machinery cause inefficient and/or limited assessment of cumulative impacts and alternatives. Administrative capacity plays significant role for aligning decision timings and inputs needed

from SEA process i.e., taking action in response to unforeseen or unanticipated impacts as well as foreseen and controllable circumstances.

Depending on the contexts, ‘decision-makers may be sceptical towards the full implementation of SEA tool and perceive it as an administrative burden’ (Bidstrup and Hansen, 2014:34). In a political context, consensus on norms and values with regard to criteria and method setting for evaluating cumulative impacts and alternatives has been suggested as an important factor affecting the inclusion of these strategic considerations (Runhaar and Driessen, 2007; Nilsson et al., 2009; Tetlow and Hanusch, 2012). ‘Lack of consensus may cause severe problems should agreement be required on cumulative impacts and alternative options’ (Runhaar and Driessen, 2007:9).

**(Figure 1 – to be inserted here)**

In certain decision-making contexts, a lack of political commitment, consensus on norms and values and administrative capacity can act as barriers for integration of cumulative impact assessment and alternatives, and thus SEA practice in such a context results in non-strategic SEA. Non-strategic SEA implies an SEA where the ideal advantages of assessment of higher level decisions (PPPs) simply do not materialise. Non-strategic SEA also implies that long-term objectives inspired by sustainability principles are not achieved. Figure 1 above illustrates how possible causalities interact and how contextual factors may shape SEA outcomes. Important questions arise as to whether strategic elements can be equally included in all SEA contexts and policy systems (Dalal-Clayton and Sadler, 2005; Fischer and Gazzola, 2006; Noble, 2003; Partidario, 2005; Loorbach, 2010), or whether there is inevitably variation by the nature of the problems at stake and different practices, even with the similar problems

(Fischer and Seaton, 2002). In this study, it is considered that an evaluative comparison of sectoral applications in a country contributes to our understanding of why strategic SEA elements get included or neglected in different sectoral PPPs even in the same country context, under the same regulations. For this reason, this paper focuses on four SEA applications from different sectors in Turkey and compares four cases to develop the causal relationships between contextual factors, the inclusion of strategic considerations and outcomes of SEA practices.

### **2.3. Methodology**

The case chosen from Turkey where the SEA has recently been initiated to test the analytical framework. As a case study, the four pilot SEA projects were followed and analysed since they represent same contextual conditions with the formal SEA implementation. The pilot cases were implemented according to the Draft SEA Directive which has been adapted from the EU SEA Directive (42/EC/2001). Turkey's SEA implementation is considered as a good example to examine how a challenging context influences the extent to which key strategic SEA elements are integrated in decision-making. To address the core questions of this paper it is necessary to examine the internal content of SEA documentation but also relate that to the external social relations that constitute the wider context. Therefore, environmental reports which are the products of SEA process and the interviews with the SEA practitioners and participants of public meetings are the main sources of data in this study. This study reviews and compares environmental reports of four SEA practices with focus on key strategic considerations and outcomes. Each case's environmental report is read and analysed by the researchers in the light of the conceptual framework (see Figure 1). For each case study, face-to-face interviews were also conducted with the respondents of the pilot SEA applications

who were main SEA team experts (team leader and one expert from the team)), NGO members (three members) who attended public meetings organized for SEA, and two officials from the Ministry of Environment and Urbanization (MoEU). There were ten respondents to be interviewed for each pilot case. Two officials from the MoEU were the same people to answer the questions for each case. The interview interpretation of the researchers were confirmed by the ministerial officials. The MoEU is an important Ministry in the Turkish context because it is responsible from environmental policy-making including SEA implementation and urban planning. Interview questions were based-on the factors in the analytical framework. Same questions were directed to the respondents of each case. First set of semi-open questions were about institutional context and designed to understand the degree of political commitment, consensus on norms and values, and administrative capacity for SEA implementation. Second set of questions were about key strategic elements designed to understand how cumulative impacts and alternative plans were determined and assessed. A comparison table was prepared to evaluate four different sectoral cases considering strategic or non-strategic SEA outcomes. Interviews helped understand the treatment given to strategic elements, rather than simply noting their presence or absence from environmental reports. Together, these qualitative research methods helped understand the specific contextual conditions affecting the level of cumulative impact assessment and evaluation of alternatives, and outcomes of SEA processes for each case.

### **3. Analysis of SEA Implementation in Turkey**

#### **3.1. The administrative and legal context for SEA**

*Turkey's has a largely top-down and centralised public administration system (Yildizcan and Bayraktar, 2017). There is need for changes in institutional settings to make public participation stronger in the current context of Turkey. This includes a stronger role for NGOs, greater environmental awareness, a more effective decision-making process. Turkey's planning process has not been transparent and does not involve alternative proposals. There is also lack of coordination between relevant organisations, local organisations and public. For example, the ministries such as Ministry of Energy and Natural Resources, Ministry of Public Works prepare sectoral development plans and send them to municipalities without prior discussion with relevant organisations or the public. The current administrative context limits effective SEA implementation.*

*A group of officials from the MoEU were assigned the responsibility to prepare and enforce the SEA legislation. This group, the Ministry's SEA team, made particular use of 'improved environmental protection' discourse as it reflected their departmental interests and benefits. 'Europeanisation' discourse as a discursive strategy to obtain support from other officials and to strengthen institutional capacities was not strong as before when the EU membership of Turkey was a core policy of the government. The pilot SEA projects have a significant place in understanding the capabilities of domestic actors and institutions to implement the National SEA Directive.*

The National SEA Directive has been entered into force in 2017 (Official Gazette, dated: 08.04.2017, no: 30032). In the preparation of National SEA Directive, the aim was to harmonize with EU legislation (42/EC/2001) (Unalan and Cowell, 2009a). However, the EU SEA Directive (42/EC/2001) is not fully harmonised and implemented by the national SEA regulation. The ongoing stalemate in EU-Turkey relations has weakened the appeal and

influence of Europeanisation (Aydın-Düzgüt and Kaliber, 2016). The downturn in EU-Turkey relations resulted in countervailing dynamics of ‘de-Europeanisation’ and disempowerment of ministerial officials who are in charge of SEA adoption (Unalan and Cowell, 2009b; Bosnak, 2016). Therefore, the EU is not presently being used as a normative context for the implementation of National SEA Directive.

**Table 1.** Comparison of key SEA requirements in the EU and Turkish SEA legislation

SEA Requirements EU SEA Directive(42/EC/2001)	Turkish SEA Directive (30032/08.04.2017)	Notes
SEA is mandatory for all PPPs which are likely to have significant effects on the environment (Article 3:2).	No	<i>SEA is not mandatory for all PPPs likely to affect the environment in the Turkish SEA Directive(Article 2:1).</i>
Member States may provide for coordinated or joint procedures fulfilling the requirements of the relevant Community legislation (Article 4:2).	No	<i>The Community legislation has not yet been fully harmonized by Turkey (Article 4:1).</i>
A public consultation process must be established during the assessment of PPPs and that appropriate time frames are set, allowing sufficient time for consultations, including the expression of opinion, and the results of any consultation must be taken into account by the competent authority (Article 6:2).	Partial	<i>Sufficient time for consultations has not been established during the assessment of plans and programmes (Article 10:3).</i>

Member States should ensure that, when a plan and programme is adopted, the relevant authorities and the public are informed and relevant information is made available to them by the competent authority (Article 9:1)	Partial	<i>The competent authority can provide limited information to the relevant authorities and the public (Article 14:2)</i>
An environmental report should be prepared containing reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme (Article 5:1).	Partial	<i>The environmental report does not have to contain reasonable alternatives of the plan or programme (Article 12:2).</i>
Member States should communicate to the Commission any measures they take concerning the quality of environmental reports (Article 12:2)	Partial	<i>Non-member states voluntarily communicate to the Commission (Article 14:1).</i>

Source: the authors

Table 1, above, summarise the degree of compatibility between the EU and Turkish SEA provisions. At present, the Turkish SEA Directive does not require all sectors to implement SEA. It includes a list of required sectors that are subject to SEA and their specified timing for implementation in the Appendix (see Appendix 1). The Directive does not entail full implementation of the requirements of a transboundary environmental agreement since Turkey has neither signed nor ratified the Espoo or Aarhus Conventions.

According to the provisions of the Turkish SEA Directive, the Ministry of Environment and Urbanization (MoE&U) evaluates and examines the information and documents provided by the Competent Authority. The Ministry informs the public about the decision and its reasons, after the screening process, via the Internet. The Competent Authority is responsible for



preparing a draft scoping report and organizing a scoping meeting in order to obtain the opinions of the Ministry, other related organizations/institutions and their representatives (the environment and health institutions/organizations, representatives of the universities, research institutions, profession chambers, unions, associations and NGOs active in the field of environment and health) and the public. A Draft Scoping Report is based on the information required to be included in the SEA Report. The organizations/institutions, representatives and the public are informed by the Competent Authority on the finalized SEA Report via Internet.

In Turkey, experience in SEA has been gained by the implementation of pilot projects from various sectors. SEA for four sector plans has been implemented under the scope of 'Technical Assistance for Implementation of the By-Law on Strategic Environmental Assessment-EuropeAid/13344/D/SER/TR' project that has been jointly funded by the EU and Turkey. The Project, which started its activities on 12 May 2014 and ran until May 2016, has mainly been devoted to support the MoEU in create conditions (legal, institutional, administrative, technical) for full and effective implementation in Turkey of the By-law on Strategic Environmental Assessment and introduction of SEA procedures in the Turkish planning framework system.

### 3.2. The current state of SEA implementation

As noted in the Section 2.2, an evaluative comparison of sectoral applications is deemed helpful to understand why strategic SEA elements get included or neglected in different sectoral PPPs even in the same country context, under the same National SEA Directive. As other analysts have noted, policy styles and the treatment of sustainability concerns can vary widely between sectors (Jehlicka and Cowell, 2003). In order to compare different sectoral

applications, the below listed SEA pilot projects (Table 2) were selected for analysis, using the conceptual framework (see Figure 1).

**Table 2.** Four SEA Pilot Projects from Turkey

<b>Sectors/Plans for SEA Pilot Projects</b>	<b>Aim of the Plan</b>	<b>Scope of SEA</b>
<b>Regional development sector: Ankara Regional Plan</b>	to take in account the potentials and also vulnerabilities/fragilities of the Region that are hampering the socio-economic development; to develop alternative solutions	the analysis and evaluation of the current situation and trends of the region with regard to the key environmental issues
<b>Water management sector: Buyuk Menderes River Basin Management Plan</b>	to examine all potential impacts on the water resources including factors affecting the water bodies like climate change; to take into account aspects to be likely affected by water quality or quantity e.g. biodiversity, agriculture	the analysis of significant environmental impacts on the most important activities and on the most sensitive areas; suggestions to improve environmental quality in the river basin
<b>Renewable energy sector: Konya Karapinar Energy Specialization Industry Zone (KESIZ)</b>	to prepare a plan for the use of concentrated solar power systems within the KESIZ	the analysis of possible impacts of KESIZ development process on key components of the environment; suggestions for avoiding, reducing or offsetting identified adverse impacts

<p><b>Agriculture sector:</b></p> <p><b>Bozcaada and Gokçeada</b></p> <p><b>Agriculture Master Plan</b></p>	<p>to define the needs and strategies for efficient use of potential agricultural resources; to develop agricultural projects and project areas through analysing existing resources, opportunities and constraints with a sustainable development vision</p>	<p>the analysis of the current situation and likely environmental issues in the concerned territory; suggestions in the light of consultations with stakeholders organized within the concerned territory</p>
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### 3.3. Four cases of SEA

#### *Case 1. SEA for Ankara Regional Plan (ARP)*

The Ankara Regional Plan for 2014-2023 was prepared between 2012 and 2014, and definitively approved in 2015. The SEA for ARP was carried out by the SEA team assigned by the Ministry of Environment and Urbanization. Political commitment to integrate SEA findings in decision-making before the approval of the Plan was high among members of the beneficiary authority. The interviewed ministerial officials expressed their enthusiasm to optimally consider inputs provided by SEA at the early stage of plan preparation and avoid likely negative impacts by the implementation of ARP.

In order to evaluate potential for environmental impacts the evaluation has been mostly performed by the SEA team of experts by putting the relevant ARP policies in direct relation with the identified environmental objectives. Interviewed SEA team expert explained that categorization of likely cumulative impacts created by suggested changes for Ankara such as urban renewal, transportation and infrastructure was formulated to enhance the performance

of the ARP. The expert added that suggestions on mitigation measures and monitoring system were also included in the scoping work. The SEA team themselves had attained consensus on goal setting and criteria selection for the assessment of environmental impacts. The team agreed on the subjects of environmental baseline analysis as population and human health, biodiversity, flora and fauna, air quality and noise, climatic factors, water, material assets (transport and waste management), cultural heritage, and soil and landscape. The SEA analysis was fully aligned with the requirements stipulated by the draft SEA By-law for Turkey.

However, a SEA team expert pointed out that ARP did not consist of specific localized investment projects and neither did it indicate the precise location of envisaged activities. As pointed out, it was not possible to identify precisely localized impacts on the environment for most of the envisaged measures. For this reason, present and future cumulative impacts of the ARP were regarded as not possible to be fully taken into consideration for the assessment.

Two public participation meetings were organised with the stakeholders from public and private sector to give them the opportunity to ask explanations on the SEA process and outcomes, express their views and possibly provide specific comments and inputs to both Scoping Report and final SEA Report for ARP. The first SEA Scoping meeting was organized and held in Ankara in 2015, with 41 participants from 28 local Institutions and organizations. The second Participatory Meeting for SEA of Ankara Regional Plan was held with 27 participants including the following Institutions and NGOs: Ministry of Culture and Tourism, Province AFAD-Prime Ministry Disaster & Emergency Management Authority, Ministry of Science, Industry and Technology, Provincial Directorate of Culture and Tourism, General Directorate of Meteorology, General Directorate of Forestry, Ministry of Development,

Çankaya University, Ankara Directorate of Public Health, Ministry of Forestry and Water Affairs, Provincial Directorate of Environment and Urbanization ; and NGOs like WWF-Turkey and The Turkish Foundation for Combating Soil Erosion, for Reforestation and the Protection of Natural Habitats.

As summarized by one of the participants of SEA Scoping Meeting, an NGO member, key issues raised by the participants were improved energy supply and infrastructure quality for the manufacturing sector, transport and logistics facilities, detailed water quality analysis, better specification and explanation of the environmental objectives for biodiversity (i.e. increase by 5% protected areas in the provincial territory), inclusion of integrated railway systems, ring services and bicycle parking places in mobility section of the report, clear explanation for urban green areas. During the Scoping Meeting, three planning options come out as: living in Ankara-egalitarian, socially connected Ankara (1); working in Ankara-productive in creating added value, sustainability growing, competitive and innovative Ankara(2); and environment in Ankara-environmentally conscious, conservationist and green Ankara(3). Alternative scenarios were discussed on the issues such as growing urban population and increasing urban density. Alternative scenarios such as allowing urban sprawl or making the city more compact were discussed to achieve sustainability targets implied by these options.

***Case 2. SEA for Büyük Menderes River Basin Management Plan (BM RBMP)***

Former Ministry of Environment and Forestry prepared a River Basin Management Draft Plan for Büyük Menderes in 2010 under the auspices of Turkey's transposition of the Water Framework Directive (2000/60/EC). Büyük Menderes River stands out as the longest river in

the Aegean Region with its length of 584 km. The BMRB Draft Management Plan was the first river basin management plan ever prepared in Turkey. The Plan contained information about the current condition of the basin: human activities as well as their pressures and impacts on the surface waters and groundwater. The SEA process for the RBMP was launched in January 2015 by an information meeting and continued until February 2016.

For the key issues and specific concerns identified at the scoping stage, the description of the existing situation provided a basis for estimation of likely future impacts of the RBMP implementation. Industrial, agricultural and domestic sources of pollution were identified as the main types of threats for the Büyük Menderes River Basin. Heavy metal pollution, pesticides contamination, improper discharge of municipal wastewater and other nutrients, improper discharge of geothermal waters were among the pollutants in the basin. The main sources of pollution were domestic and agricultural activities whereas industrial sources had less impact. There were also climate change-related impacts that caused falling water levels in the lakes of the basin in recent years. Based on the identified impacts, the assessment methods were formulated and suggestions for the water management and monitoring systems were made to enhance the performance of the RBMP.

Two public participation meetings were organised for improving the relationship between parties including; local and national authorities (municipalities, provincial directorates of environment and urbanization, water and wastewater administrations), non-governmental organization, civil society, irrigation unions, academicians, and definitely local inhabitants. There were 6 representatives from MoEU and 4 from the Ministry of Forestry and Water Affairs, SEA experts of the project, 57 participants from 16 different local Institutions and organizations attended the SEA Informative meeting and Scoping meeting. The participants

raised several questions and comments on the scoping report and the comments were compiled by the Consultant as an annex to the Scoping Report and SEA report.

Interviewed SEA team expert pointed out that they had several gaps in data and information when conducting the baseline impact analysis. There were not enough studies and documents on the past situations regarding some aquatic species in the river basin, especially the macrophytes, invertebrates, algae. There was lack of data on the effects of drought on bird, fish and algae species. Data on illegal hunting were missing to a large extent. There was also very limited or no data regarding the climate change for the Büyük Menderes River Basin. In addition, there was a serious knowledge gap regarding the climate change in general. Given this, consensus on evaluation criteria, standards, thresholds for the environment and ecosystems was out of question. As the two interviewed ministerial officials pointed out, current and future cumulative impacts of the RBMP were not possible to be fully taken into account. However, despite the gaps in data and information, the SEA team conducted an analysis of likely impacts enabling the formulation of suggestions and recommendations towards a new RBMP. Therefore, SEA outcomes could be utilised in decision-making process to a limited extent.

A SEA team expert explained that alternative scenarios or options for better management of the Basin's water resources were not elaborated during the SEA stages. The same experts also explained that the ministerial officials hold strong political commitment to implement SEA for the RBMP. Despite the presence of strong political commitment at the highest administrative levels inclusion of cumulative impact assessment and evaluation of alternatives failed in the RBMP. As a result of failed inclusion of strategic elements, the process ended with non-strategic SEA implementation.

*Case 3. SEA for Konya Karapınar Energy Specialization Industry Zone (KESIZ)*

In Karapınar District of Konya Province, a total area of 5.958,7 hectares including 2.718,6 hectares (Zone 1) and 3.240,1 hectares (Zone 2) was declared as an Energy Specialization Industrial Zone (KESIZ) by the decision of the Council of Ministers (Official Gazette, 08/09/2012, numbered 28405) to increase the attractiveness of investment in electricity from solar energy. A SEA for the KESIZ Plan was conducted between 2015 and 2016 with an aim to support the final decision-making on the proposed zone by evaluating whether it poses any significant environmental risks; to support environmental decision-making on specific projects that would be undertaken within the proposed zone by clarifying detailed environmental issues and mitigation measures that were to be addressed at project level; to support planning of any environmental infrastructure and future environmental management within the zone by examining issues such as water supply, waste disposal, etc.

The characteristics of areas likely to be significantly affected by the project were addressed and illustrated during the meeting, including categories of sensitive areas, economic profile, climate conditions, air pollution, geology and soil, water and groundwater resources, waste management practices, ecologically important land uses, biodiversity, cultural heritage and social aspects.

In the Karapınar district, there were 22 industrial activities in total; 21 of them were in the manufacturing sector and 1 was in the mining sector. The coal mine reserves having a significant potential in Karapınar area might lead to the developments in thermal power plant planned for electricity generation. Of possible concern may be a future development of thermal power plant which was being considered in association with planned opening of



lignite mine approx. 25 km south of KESIZ. There was no formal application for obtaining licence for such plant in 2015 and therefore the plant was not considered within the scope of SEA. Additionally, there were industrial raw material deposits in Karapınar and its surroundings. Use of these resources as well as excavation activities for coal mines might affect ground-water levels and thus cause negative impacts on the water supply in KESIZ. However, such impacts on water resources were considered as marginal compared to the possible impacts on agriculture.

A basic overview of direct environmental concerns that have been identified by the consultant's team and initial identification of the priority issues to be addressed in SEA were also discussed with the participants, aiming to get feedback and initial comments from the participants. The interviewed team expert from the consultancy explained that they requested help from the Ministry of Environment and Urbanization for missing data and documents to assess the cumulative impacts which were considered as crucial to finalize the SEA Draft Scoping Report for the KESIZ.

The SEA pilot process for the KESIZ started with an initial information meeting in 2015, where the working draft of Scoping Report for Karapınar Energy Specialization Industry Zone has been presented to the participants coming from different institutions (e.g. relevant Ministries, Konya Governorship, TÜBİTAK, Hacettepe University, NGOs). SEA Local Information meeting, site visits and SEA Scoping meeting for the Konya-Karapınar Energy Specialized Industrial Zones have been organized with 53 participants. MoEU, Ministry of Energy and Natural Resources, Ministry of Science, Industry and Technology, Konya Governorship, Regional Directorates of Turkish Electricity Transmission Company, Prime Minister Disaster & Emergency Management Authority (AFAD), Forestry and Water Affairs,

State Meteorological Service, Konya Regional Directorate of Ilbank, Regional Directorate of Highways, Konya Provincial Directorate of Environment and Urbanization, Konya Provincial Directorate of Science, Konya General Directorate of Public Health, Konya Water and Sewerage Administration (KOSKİ), Agriculture and Rural Development Support Institution (TKDK), Turkish Foundation for Combating Soil Erosion, for Reforestation and the Protection of Natural Habitats were among the participants. Totally, 77 comments have been received from different public institutions or NGOs and integrated into the SEA Report before final approval from MoEU. Political commitment was strong among the ministerial officials to implement a fuller SEA. Two interviewed ministerial officials explained that they were keen to discuss key risks and mitigation measures with the participants who were coming from various institutions (36 participants) during the SEA Evaluation Meeting held on January 2016 in Ankara. It was noted by the officials that SEA was found useful in general and energy pilot study was considered as a good example for similar future implementations of the planning institutions, mainly MoSIT and MoENR, by all participants of the SEA Evaluation Meeting. Discussions during the Evaluation Meeting led to reach a consensus by the parties on identification of impacts and methods of assessment as well as goals of SEA implementation. Depth of assessment was limited by the lack of detailed parcelling of land allocations and lack of information on the transmission lines. According to the interviewed SEA experts, uncertainties were not constraining the use of SEA for decision-making about the overall environmental implications of the KESIZ. The lack of precise understanding of the nature and scale of possible impacts of large PV plants on migrating birds, especially on the birds that use the Main Migration Flyway that extends over the KESIZ area, was considered as the only significant knowledge gap in SEA decisions. Careful monitoring and remedial actions were

suggested in case of any significant bird kill during the initial stage of Zone 1 development. Poor data, lack of knowledge and shortage of expertise were regarded as constraining inclusion of cumulative impact assessment in the SEA process.

Alternative options for solar power systems were not discussed in relation to the quality of cumulative impact assessment. Locational options and technological options were listed and assessed as alternatives for the actual location and photovoltaic (PV) systems in the plan. Except locational options, no alternative scenarios were discussed for other aspects in the SEA process. As an outcome of SEA implementation in the KESIZ case, alternative scenarios as well as cumulative impacts were not fully evaluated and included in the SEA process.

***Case 4. SEA for Bozcaada and Gokceada Agriculture Master Plan(AMP)***

Gokceada and Bozcaada are two islands in the Northern Aegean Sea. From the administrative point of view, both islands are towns which have local municipalities; and both islands belong to the Canakkale Province. Both islands were included in the list of priority regions for development with the decision of Council of Ministers under the “decision on implementation, coordination and monitoring of the programme of 2012 (decision no: 2011/2303), which is published in the Official Journal (no: 28088; dated 18.10.2011). The SEA pilot project for Gokceada and Bozcaada Agricultural Master Plan which was prepared by the Ministry of Food, Agriculture and Livestock (MoFAL) was implemented between November, 2014 and April, 2015.

The aim of the scoping stage in SEA was to identify the key environmental and social issues (including health) related to the actions and measures proposed by the planning document

which includes strategies for efficient use of potential agricultural resources, definitions for agricultural projects and project areas to achieve sustainable development.

The SEA focus was mainly on development of 'baseline analysis' outlining likely future development of the key environmental and health issues in case of the Master Plan implementation. Further SEA analysis aimed at identifying likely adverse impacts of the proposed Agricultural Master Plan development and suggesting measures for avoiding, mitigating or compensating such impacts. SEA also aimed at identification of potential conflicts between the objectives and measures of the Agricultural Master Plan and development scenario included in the Urban Plan-2015 (e.g. conflicts between agriculture and other sectors for water, soil or other land resources).

The draft scoping report for Bozcaada and Gökçeada Agricultural Master Plan was presented and discussed at the information meeting with the key stakeholders. The SEA scoping meeting was arranged to get feedback on the problems of agriculture sector in Bozcaada and Gökçeada and possible solutions with the participation of Provincial Directorate of Ministry of Food, Agriculture and L, State Hydraulic Works (DSİ), Provincial Directorate of Ministry of Culture and Tourism, and NGOs. In the SEA process, the focus was also on the identification of possible alternatives to be integrated in the Agriculture Master Plan as well as likely impacts. However, the existing draft of the Agricultural Master Plan did not elaborate any variant scenarios in terms of different development alternatives (alternative measures) that could fulfil the objectives outlined in the Agricultural Master Plan. Different alternatives were only considered at the level of specific projects - such as a conservative scenario with minimal new investment and limited development, and a development scenario with considerable level of investments and new economic activities in tourism, fisheries - that were likely to be included

in the final version of the Master Plan, but which were not yet specified. If different alternatives at the project level would have been put forth during the finalization of the Master Plan, the SEA would be evaluating environmental risks and benefits associated with different alternatives and formulate recommendations for decision-making.

A SEA team expert explained that ‘tourism and fisheries are defined as key economic activities under the development scenario’. According to development scenario, the development areas that were available according to the 1/100000 Urban Plan (2015) would be utilized for housing, hotels or other facilities. The government relocation incentives were also expected as triggering considerable population growth while agricultural activities were reducing under the development scenario. The SEA team expert noted that outlined theoretical alternatives and scenarios served as the basis of further SEA analyses. In practice, none of the sketched variants would be materializing in a pure form because actual patterns of development would depend on the private investors and interventions. However, as the SEA expert pointed out, the formulation of the theoretical alternatives and scenarios was deemed to be useful. Although political commitment and consensus on the fuller implementation of SEA was strong among the ministerial officials, present and future cumulative impacts and different probabilities of potential risks could only be evaluated to a limited extent. Despite poor data and knowledge conditions, the inclusion of sustainable strategies was strived for by the SEA team and ministerial officials.

### 3.4. Findings

Based on analyses of the environmental report and interviews with the involved parties, a comparison table (Table 2) for four SEA cases was prepared. Contextual factors and strategic

SEA elements were drawn from the analytical framework (Figure 1). According to the extent of inclusion of key strategic elements, the SEA outcomes were named as strategic or non-strategic based on qualitative criteria. ‘Strategic SEA’ implies the broader and long-term sustainability effects by the inclusion of strategic elements. The concept of ‘non-strategic SEA’ implies the outcomes when SEAs fail to adequately include strategic elements. When inclusion of the key strategic elements were supported by the focused and conducive contextual factors, as with Cases 1 and 4, strategic SEA has been the outcome. However, when the contextual factors did not support the inclusion of key strategic elements as in the Case 2 and Case 3, the outcome has been non-strategic SEA i.e. cumulative effects and alternatives have been poorly considered, if considered at all.

**Table 2.** Comparison of SEA cases as to being strategic or non-strategic SEA

<b><u>Case1:</u></b> <b><u>Regional Plan</u></b>	<b><u>Case 2: River Basin</u></b> <b><u>Plan</u></b>	<b><u>Case 3: Energy</u></b> <b><u>Zone</u></b>	<b><u>Case 4: Agriculture</u></b> <b><u>Plan</u></b>
<b>Political commitment:</b> <i>--early start to SEA</i> <i>--synchronisation of the SEA and planning processes</i> <i>--clear link between SEA and decision-making</i>	<b>Political commitment:</b> <i>--no synchronisation of the SEA and planning processes</i> <i>--unclear link between SEA and decision-making</i>	<b>Political commitment:</b> <i>--early start to SEA</i> <i>--synchronisation of the SEA and planning processes</i> <i>--unclear link between SEA and decision-making</i>	<b>Political commitment:</b> <i>--early start to SEA</i> <i>--synchronisation of the SEA and planning processes</i> <i>--unclear link between SEA and decision-making</i>
<b>Consensus on norms and values:</b>	<b>Consensus on norms and values :</b>	<b>Consensus on norms and values:</b>	<b>Consensus on norms and values:</b>

<p>--consensus on goal setting</p> <p>--consensus on criteria for cum. impacts</p> <p>--consensus on alternative selection</p> <p><b>Administ. capacity:</b></p> <p>--organization success in effective public meetings</p> <p>--employment of experts</p> <p>--good reporting and monitoring</p>	<p>--no strong consensus seeking for SEA scoping stage with participation of stakeholders</p> <p><b>Administ. capacity:</b></p> <p>--lack of experts and coordination</p> <p>--insufficient data and information gathering</p>	<p>--consensus on goal setting for SEA stages</p> <p>--consensus on environmental impact identification</p> <p>--no consensus for alternatives</p> <p><b>Administ. capacity:</b></p> <p>--organization of public consultation meetings</p> <p>employment of experts</p> <p>--lack of experts on birds and bird migration</p>	<p>--consensus on goal setting for SEA stages</p> <p>--consensus on criteria for cum. impacts</p> <p>--consensus on alternative</p> <p><b>Administ. capacity:</b></p> <p>--organization of public consultation meetings</p> <p>--employment of experts</p> <p>--good reporting and monitoring</p>
<p><b>Assessment of cum. impacts:</b></p> <p>*consideration of present and future cumulative impacts</p> <p>*analyzing uncertainty for future decisions and predictions</p> <p>* method selection for better assessment of cumulative impacts</p> <p><b>Alternative valuation</b></p>	<p><b>Assessment of cum. impacts:</b></p> <p>* consideration of insufficient impacts</p> <p>*no detailed analysis of uncertainty for future decisions</p> <p>*no selected method for cum. impact assess.</p> <p><b>Alternative evaluation</b></p>	<p><b>Assessment of cum. impacts:</b></p> <p>*consideration of insufficient impacts</p> <p>*no consideration of present and future cumulative impacts</p> <p>*no detailed analysis of uncertainty</p> <p>*no selected method for cum. impact assess.</p> <p><b>Alternative evaluation</b></p>	<p><b>Assessment of cum. impacts:</b></p> <p>*consideration of present and future cumulative impacts</p> <p>* method selection for better assessment of environmental and social impacts</p> <p><b>Alternative evaluation</b></p> <p>* two alternative scenarios</p>

<i>* three alternative scenarios</i>	<i>*no alternatives identified and evaluated</i>	<i>*no alternative development options except location alternatives</i>	<i>*criteria setting for selection of the best alternative</i>
<i>*criteria setting for the best alternative</i>			
↓	↓	↓	↓
<i>strategic SEA</i>	<i>non-strategic SEA</i>	<i>non-strategic SEA</i>	<i>strategic SEA</i>

Source: The authors

Interpreting the variables has required care during the analysis of four SEA cases. For the interviews, giving an early start to SEA within the plan-making process, synchronisation of the SEA and planning processes, and clear links between SEA and decision-making have been treated as criteria to understand whether there is political commitment to implement a fuller SEA or not. Experiences with the SEA implementation have shown us that a fuller SEA with adequate inclusion of cumulative impact assessment and evaluation of alternatives is challenging and unlikely without political commitment, because the Turkish SEA Directive does not provide guidance on how to assess the impacts in practice and make the evaluation of alternatives mandatory. Likewise, consensus on goal setting, criteria for impact assessment and alternative selection is closely linked to identification and evaluation of cumulative impacts and alternatives. Administrative capacity has been a determinant contextual factor in considering and evaluating cumulative impacts and alternatives that has differed for the cases depending on the level of qualified data, knowledge and expertise, and flexible and adaptive managerial skills in each case.

Analysis of the four cases has addressed the governance role of the plan to deal with the varying issues and problems under the guidance of the National SEA Directive. The Directive allows different levels of attention to the strategic elements and does not make them



mandatory. Therefore, there have been different levels of political commitment, administrative capacities and approaches in the SEA implementation for the land use plans (Case 1 and Case 4), river basin management plan (Case 2) and solar energy zoning plan (Case 3). The levels of political commitment and administrative capacity have been higher in the cases of land use plans (Case 1 and Case 4) than basin management and energy plans, particularly under uncertainty conditions where there was not enough data to assess cumulative impacts.

Findings from the SEA cases revealed that outcome of SEA application might result in strategic or non-strategic SEA depending on the contextual factors for individual cases, even though each individual case has to follow the same -National SEA- Directive. The SEA practitioners in Case 1 and Case 4 have developed methods and criteria to evaluate the impacts and alternatives. Thus, flexibility and adaptive managerial skills of the practitioners have helped them find ways to include strategic elements. In this regard, discretionary power of practitioners play an important role in assessment of cumulative impacts and evaluation of potential alternatives as well as contextual factors -political commitment, consensus of norms and values or sufficient.

#### **4. Conclusions**

There have been many studies critically analysing inputs, processes and outcomes of SEA systems and practices for different country contexts. Some of these studies have addressed the role of decision-making contexts to include strategic elements in SEA implementation. However, studies focusing on the inclusion of strategic elements in SEA processes are very

limited in the literature. If full advantage of SEA tools is to be exploited to help promote sustainability, we need to better understand how and why the level of attention for the inclusion of strategic elements vary under different contexts.

This study's findings have contributed to our understanding of why SEAs fail on strategy under certain decision-making contexts, regardless of the country's context in general or legislative arrangements.

Although there is a wider political framing to what can happen in individual decision-making context (reflected somewhat in the legal/regulatory requirements to address alternatives or cumulative effects), consideration of strategic elements can differ for each SEA case. Contrarily, the contextual factors and their influence on the key strategic elements vary depending on multi-variable processes of individual SEA cases.

The study findings highlight the role of framing the problem and the governance of the PPPs. Established SEA regulations and measures are not sufficient to sustain effective SEA application. The level of political commitment and administrative capacity of the SEA practitioners have an important influence on the inclusion of strategic SEA elements. Together with the formal instruments, ad-hoc adaptive measures undertaken by SEA practitioners can help deliver the assessment of cumulative impacts and alternatives, even in inauspicious conditions. Particularly in cases of poor data and expertise, flexible and adaptive managerial skills of SEA practitioners play significant role in responding to inputs from stakeholders and integrating strategic dimensions in the SEA process. Even surrounded by institutional reality, discretion power of practitioners can be a significant factor for the inclusion of key SEA strategic elements. Although outwith the research presented here, it would be valuable to

investigate whether – but also in what kind of conditions – such adaptive activity within SEA on strategic elements helps to re-shape political commitment, values and administrative capacity. **Appendix 1: Entry into Force (ARTICLE 17)**

(1) This By-law shall enter into as the day of its publication.

(2) This By-law is implemented on the date of entering in force on the plans and programmes (except modifications and revisions) subject to SEA and prepared in agriculture, water management, tourism, urban and rural spatial planning or land-use sectors and at country/region/basin levels,

(3) This By-law is implemented on 01.01.2019 on the plans and programmes (except modifications and revisions) subject to SEA and prepared in agriculture, forestry, fishery, waste management, water management, tourism, urban and rural spatial planning or land-use sectors and at country/region/basin/province/local levels.

(4) This By-law is implemented on 01.01.2020 on the plans and programmes subject to SEA and prepared in agriculture, forestry, fishery, energy, industry, transportation, waste management, water management, telecommunication, tourism, urban ve rural spatial planning or land-use sectors and at country/region/basin/province/local levels, and on their modifications/revisions subject to SEA.

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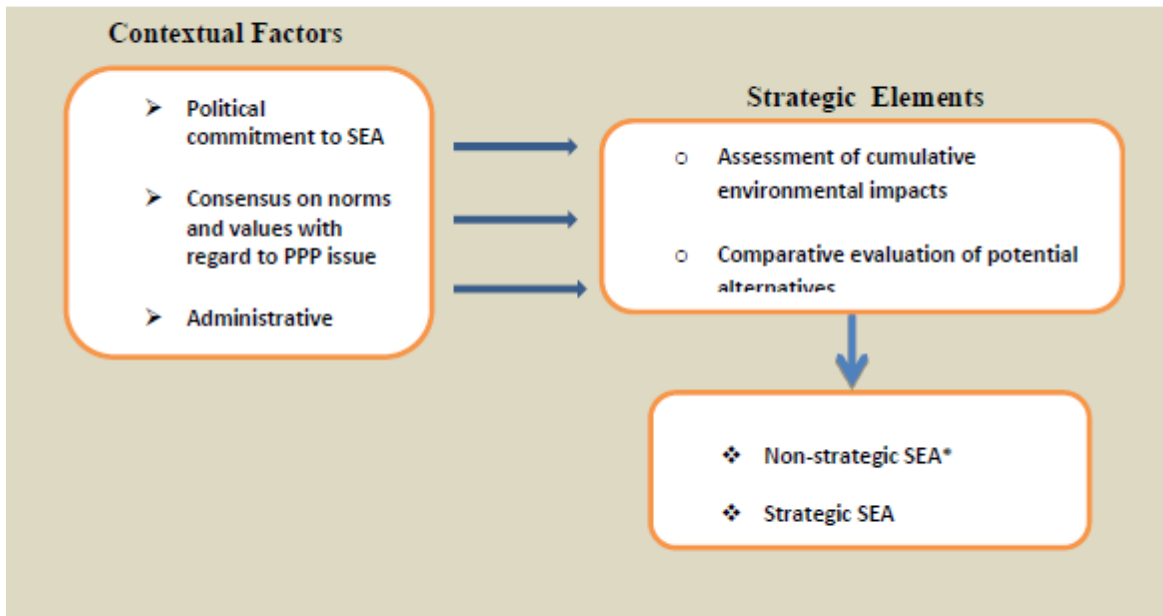
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**Figure 1.** Outcomes of relationships between contextual factors and key strategic elements in a SEA process



Source: The authors

Notes: Non-strategic SEA\* means that strategic elements are not adequately included in SEA process