

Just so that we don't miss it

*A critical view on the meaning of decision in IA*

Lyhne, Ivar; Partidário, Maria do Rosario; Kørnøv, Lone

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## **Just so that we don't miss it: A critical view on the meaning of decision in IA**

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### **Abstract**

Impact assessment (IA) tools are targeted at decisions and decision-making in theory and in practice. Often described as decision support instruments, most IA are driven by the grand purpose of providing for informed decision-making. In practice this often means IA tends to be more concerned with the information to be provided than with the outcomes of IA and its relevance to the decision(s), and decision-makers(s) to which it should be targeted. Decisions and decision-making are, however, understood in many different ways, and actors involved in decision-making may therefore act widely different with diverse results. Therefore, distinguishing which decisions, and to which decision-makers IA are targeted at, is arguably indispensable to enhance IA effectiveness. Based on an overview of decision-making theory, this paper searches for the understanding of decision and decision-making in IA by exploring how it is conceived in guidance documents. Guidance documents have a prominent role in defining IA practice, and the explicit and implicit recognition of decision-making in guidance is therefore relevant to investigate in order to understand how IA relates to decision-making. With a focus on guidance documents related to the European Union Directive on environmental assessment of plans and programmes, this paper scrutinises four guidance documents and discusses the implications of the identified understandings of decision-making to the practice of IA. The key finding of this paper is that legislation-oriented guidance documents appear to miss to reflect the different forms of decision-making, and primarily depicts decision-making as a single, often timeless and faceless moment. The implications for practice are discussed. The implications for practice are discussed including reflection on how to describe the nature of decision-making in guidance documents.

### **Highlights** - 3 to 5 bullet points (maximum 85 characters)

- Guidance documents play a key role in outlining how to engage with decision-making
- A framework for studying understandings of decision-making in IA guidance is developed
- Three of four guidance documents show limited articulation of 'decision'
- Implications are severe and may threaten IA's ability to achieve its purpose.

**Keywords** (max 6): environmental assessment, impact assessment, decision-making theory, guidance, SEA

## 1. Introduction

The conceptualisation and evolution of impact assessment (IA) instruments have been deeply associated with making decisions. Recognising various forms of IA as decision support instruments, IA has been mostly concerned with the need to provide information to decision making; however, it also has a role in shaping decisions beyond the provision of information.

Despite the key role IA plays in decisions, the concept and nature of 'decision' is not well developed in the IA literature. With notable exceptions (Kørnø and Thissen, 2000; Nilsson and Dalkmann, 2001; Nitz and Brown, 2001; Cherp et al., 2007; Lobos and Partidário, 2014), the concept and nature of 'decision' in any decision process, whether in policy-making, planning, program, or project development, are conceptualised insufficiently and with no consensus. This may in part be due to a comprehensive number of theories on decision-making, in which the nature of decision-making is still being debated. As an example Tsoukias (2010, p. 380) asks: "Is 'decision' a retrospective attribution of the observer, namely an account of a cognitive community that attempts to form a coherent view of particular organisational outcomes and the processes that led to them, or does 'decision' signify a distinct empirical event, a moment of actors' choice whereby a course of action has been purposefully committed to?"

The point of departure in this paper is that a plurality of views upon decision-making strengthens the ability to target IA to the arenas in which future options are directed or restricted. IA professionals, including authorities, consultants, and academics, need to be open to the different natures and aspects of decision(s) and decision-maker(s) in order to understand and act within decision-making processes, to ultimately gain the insight that will thrive in a more sustainable development.

In this article we explore how 'decision' and 'decision-making' are depicted in the field of IA. We do this by investigating guidance documents; however, other resources within IA, such as IA reports, legal texts, or literature, also would be relevant to explore in terms of how they depict decisions. Guidance documents are argued to play important roles in contemporary governance (Kalen, 2008, p. 657) as governments and other actors use guidance to interpret regulations and policies (Cashmore et al., 2015; Doyle et al., 2013). Although the details of how guidance impacts practice are not known due to very limited systematic evaluation (Schijf, 2011; De Montis et al., 2016), the representations of 'decision-making' in guidance are likely to influence IA practices. And, as Cashmore et al. (2015) argue, guidance documents are also relevant to investigate because they are largely taken for granted, despite their prominent role.

As important but often taken-for-granted establishers of meaning and practice in the field of IA, it is important to examine to what extent and how guidance documents depict the concept and nature of 'decisions'. Do they portray one fixed procedure of how decision-making takes place, or do they encourage practitioners to consider several ways of understanding decision-making to be aware of and promote IA in different

ways? Guidance documents can in this way guide or misguide practice by prescribing decision-making in ways that either directly or indirectly encourage practitioners to ignore, neglect, or actively approach the actual nature of decision-making taking place in the specific situation.

This article focuses on how ‘decision’ and ‘decision-making’ are described in guidance on strategic environmental assessment (SEA) as a means to understand the meaning of these terms as used in practice. Research reflects different views on decision-making in theory and in practice. It recognizes decision-making as a process involving multiple and intangible decisions, especially relevant in strategic-level decision-making (see e.g. Lyhne, 2011; van Stigt et al., 2013; Feyaerts et al., 2017). The research also discusses decision-making as a final event, performed by a single actor, as defined in the rationalist decision theory that dominated the formative years of the environmental assessments (Nitz and Brown, 2001; Cashmore et al., 2004; Lobos and Partidário, 2014). Literature on guidance for effective SEA is limited (for example Therivel et al., 2004; Noble et al., 2012; Baresi et al., 2017; Montaña and Fischer, 2019) and, with few exceptions, ‘decision’ is presented as a vague and undefined notion. Thus, there are no previous studies of how ‘decision’ and ‘decision-making’ are described in SEA guidance documents.

To study the meaning of ‘decision’ through guidance on SEA empirically, the article has its point of departure in the European Directive 2001/42 on the environmental assessment of plans and programs—also called the SEA Directive—as a key institutionalisation of SEA. The SEA Directive does not elaborate on what a decision is or may be, when and how it is made, and even who makes decisions or is involved in making decisions. We will call this generic portrayal of ‘decision’ a *timeless and faceless decision*. The generic portrayal in the SEA Directive may be purposeful to reflect the flexibility required to encompass variations in how member states conceive decision-making. Member-state guidance documents outlining and explaining how the SEA Directive should be understood in the national context, and national guidance documents, are therefore interesting to explore in terms of how they interpret and explain ‘decision’ and ‘decision-making’. Although European member-states’ guidance documents concern the implementation of the SEA Directive, they are in some cases the only national guidance document and thus, in practice, constitute a legal interpretation as well as a practice guidance. For example, this is the case in Denmark.

The aim of this article is therefore to increase attention to the importance of critically understanding the nature and meaning of ‘decision-making’ in relation to IA. In order to relate more closely to the practice of IA, we use the case of SEA guidance. We investigate how selected national guidance documents depict the nature of ‘decision’ and ‘decision-making’ and, based on that, promote a discussion of how guidance should articulate and outline ways to handle relationships between IA and decision-making. The expected audience is people interested or involved in the meaning of ‘decision’ within IA and more specifically the development of guidance. Furthermore, it might provide food for thought for practitioners and researchers within other aspects of IA. With focus on

decision-making, the investigation is related to a range of topical discussions within the field of IA such as effectiveness of EA on decision-making (e.g. Loomis and Dziedzic, 2018; Pope et al., 2018; Lyhne et al., 2017), power in decision-making (e.g. Zhang et al., 2018; Hansen et al., 2013; Richardson and Cashmore, 2011; Partidário and Sheate, 2013), and governance (e.g. Monteiro and Partidário, 2017; Meuleman, 2015).

The article is structured as follows: First, theories of decision-making are used to develop an analytical framework for studying how ‘decisions’ are depicted in national guidance documents. Second, the methodology is described including selection of cases and discourse analysis of the guidance documents. Third, the results of the analysis are presented, followed by a discussion of the findings and a concluding set of implications for IA.

## **2. Conceptions of decision-making as analytical framework**

Several aspects of the concept of ‘decision-making’ are relevant for investigation of its use in guidance documents. With the purpose of making an analytical framework for the investigation, six aspects of decision-making are briefly presented below:

- The distinction between one decision and multiple decisions
- The distinction between linear and non-linear decision-making processes
- The distinction between one decision-maker or multiple decision-makers
- The distinction between formal and informal decision-making
- The distinction between conscious and non-conscious decision-making
- The distinction between facts-based and value-based decision-making.

The six aspects are presented with the point of departure in decision-making theory. Since the purpose of the analytical framework is only for the empirical analysis, it builds on existing concepts from the literature and does not itself embed new concepts.

### *2.1 A single decision versus multiple decisions*

This distinction marks the difference between understanding a decision-making process in which one decision is made and a process where multiple decisions are made. This distinction is used by Lovallo and Sibony (2018) to understand strategic decisions. As an example, major infrastructure projects can be seen as “decided” with a signature by one or more important persons in line with a rational paradigm of decision-making. Other positions would claim that a range of decisions restricting and forming the “final decision” have been made in the preceding process. Studies have empirically documented how decision-making processes are made up of several decisions throughout the process (e.g. Partidário and Coutinho, 2011; Lyhne, 2011). Such decisions may concern the process (who to involve, when, how to communicate, etc.), as well as the substance of the plan, programme, project.

## *2.2 Linear versus non-linear decision-making*

This distinction marks the difference between understandings of decision-making as a linear process, leading from A to B, and as a non-linear, sometimes quite erratic, intricate process of back and forth (Healey, 2009). Linear decision-making is prominent in rationalist approaches to decision-making (e.g. Meyerson and Banfield, 1955; Leoveanu, 2013) presenting sequential steps leading towards a final decision.

Literature on non-linear decision-making depicts decision-making as “diffuse” process (Lynn, 1987) and as “apparent disorder” (Lindblom, 1968). It also comprises studies that acknowledge the importance of emerging strategies that may influence decision-making processes in a direction other than intended (Mintzberg and Waters, 1985). The extreme model of non-linear decision-making is the Garbage Can Model (Cohen et al., 1972). In this model, decisions are made when independent streams of problems, solutions, and participants collide in choice opportunities. A less extreme understanding of the non-linear activities in decision-making is found in Witte (1972), who empirically mapped “a constant relationship between the activities of ‘information gathering’, ‘development of alternatives’, ‘evaluation of alternatives’, and ‘choices’ over the total time period” (p. 180).

Later studies have emphasised the non-linearity of decision-making by emphasising the cyclic character of steps in decision-making (Eisenhardt and Zbaracki, 1992) and by outlining decision-making as processes that “typically jumps from one partial decision to another, each of them being ‘locked into place’ for a shorter or longer period” (de Bruijn and ten Heuvelhof, 1999).

## *2.3 One decision-maker versus multiple decision-makers*

This distinction marks the difference between conceiving decisions as made by one actor, which may consist of one or more individuals, and decisions made by multiple, separate actors. Legislation, for instance, typically focuses on the final decision made by a competent authority, such as a city council or a minister—a single actor comprised by one or more individuals.

Scharpf et al. (1978) point at the multiple decision-makers, “policy formation and policy implementation are inevitably the result of interactions among a plurality of separate actors with separate interests, goals, and strategies” (p. 346). March (1994, p. ix) adds to this perspective by proposing focus on the interaction between actors: “Is it possible to describe decisions as resulting from the intentions, identities, and interests of independent actors? Or is it necessary to emphasise the ways in which individual actors, organisations, and societies fit together?”

## *2.4 Formal versus informal decision-making*

This distinction highlights that decision-making is influenced by and takes place within “the formal organisational structure (explicated rules, division of responsibility, and competence) and the informal structure of more psychological character (attitudes, norms, traditions, etc.).” (Kørnøv and Dalkman, 2011, p. 502; see also March, 1997, p. 11). Several studies have pointed at the importance of looking at both formal and informal decision-making (e.g. Heisenberg, 2005; Reh et al., 2011 and Helmke and Levitsky, 2004). Some of the arguments are that decisions “are frequently negotiated outside the context of explicit decision processes...” (March, 1994, p. 226) and that “careful attention to informal institutions is critical to understanding the incentives that enable and constrain political behavior.” (Helmke and Levitsky, 2004, p. 726).

## *2.5 Conscious versus non-conscious decision-making*

This distinction emphasises that some actions in decision-making are deliberate and conscious, whereas others are non-conscious actions that we are unaware of.

In the 1950s, Herbert Simon presented the notion of bounded rationality as a critique of the rational man central to the economic theory of decision-making (Simon, 1955; 1960). According to Simon, bounded rational agents experience limits in formulating and solving complex problems and in processing information. Some of these human limits are compensated by non-conscious activities. The non-conscious decision-making can, in part, be explained by automatic reactions in routines and habits that allow decision-makers to “reduce the difficulty of dealing with a complicated, uncertain and threatening world” (Cyert and March, 1963, p. 197). Intuition can also be part of the non-conscious decision-making, and studies have proven a main role for intuition in managerial decision-making (e.g. Dane and Pratt, 2007).

Non-conscious decision-making is to some extent in line with the view of decision-making presented by socio-psychological theories emphasising the process of sense-making over decision-making (e.g. Weick, 1995). Here the focus is on how actors—consciously or non-consciously—notice and enable cues in order to make a plausible story of what is going on. Decisions are seen as retrospective interpretations of what is taking place as part of the sense-making. Meaning is established and modified in “intricate ways out of awareness via assimilation of subtle cues over time” (Gioia and Mehra, 1996, p. 1229).

## *2.6 Fact-based versus value-based decision-making*

Simon (1957) proposed a distinction between fact-based and value-based decision-making: The premises of fact-based decision-making are falsifiable, while those of value-based decision-making are not. In addition value-based premises may be less explicit.

He correlates fact-based decision-making to administrators being allowed to test whether alternative policy proposals produce the expected outcomes or not, whereas the judgments in value-based decision-making are the arena of political leadership. Later writings have argued that all decision-making more or less directly includes values and preferences and that these are dynamic throughout decision-making (e.g. March, 1987). The distinction also correlates to the rationalist dogma of making decisions based on neutral and objective knowledge (Leoveanu, 2013). Values may relate to the process of decision-making (e.g. transparency and openness) as well as substantive trade-offs.

## *2.7 Towards an analytical framework on decisions*

The overview of literature on strategic decision-making demonstrates a need to acknowledge different aspects of decision-making. The six aspects discussed above are summarised in Table 1 and establish an analytical framework for the review of guidance documents in the next sections.

<b>Key dualities of decision-making</b>	<b>Keywords based on literature</b>
Single versus multiple decisions	Single, multiple
Linear versus non-linear decision-making	Linear, sequential, cyclical processes, iterations, unpredictability of the process, influential emergent issues
One decision-maker versus multiple decision-makers	Actors, single and multiple decision-makers
Formal versus informal decision-making	Formal-informal, explicit-implicit, arenas, negotiations
Conscious versus non-conscious decision-making	Automatized actions, routines, sense-making out of awareness,
Fact-based versus value-based decision-making	Facts, evidence, values, preferences

*Table 1: Key aspects of decision-making and related search keywords.*

## **3. Methodology**

The investigation of national guidance documents is a critical discourse analysis based upon a text-oriented analysis. The case selection and the analytical procedure are explained in the following sections.



### *3.1 Selection of cases*

Guidance documents on strategic environmental assessments are the empirical basis in this paper for reasons provided above: the multiple and often less-tangible decisions associated with strategic levels of decision-making. Guidance documents are seen as an obvious place for investigating the understanding of decision-making, as the guidance documents aim at guiding actors involved in decision-making processes. Guidance documents therefore ought to communicate how decision-making takes place, who is involved in the decision-making, and how to provide information to this process. Finally, guidance documents are formal and institutionalised governance mechanisms (see Cashmore et al., 2015), and therefore important elements to investigate in terms of conceptions of decision-making.

The national guidance documents were selected through a set of criteria: A) The guidance must be interpreting national legislation on the EU Directive 2001/42, B) The guidance must be adopted by a national authority, and C) the guidance must be written in a language of which the authors are native speakers. Furthermore, guidance documents differ in terms of their purpose, as some are primarily legal interpretations of the Directive, whereas others have a purpose of communicating good practice. The selection of cases includes both categories.

In addition to the EU Commission's guidance document (2001), the selected three national cases are as follows:

- The UK guidance "A Practical Guide to the Strategic Environmental Assessment Directive" (2005)
- The Portuguese guidance "Strategic Environmental Assessment Better Practice Guide. Methodological guidance for strategic thinking in SEA" (2012)
- The Danish guidance "Guidance on act on environmental assessment of plans and programmes and on specific projects (EIA). 1 part: Plans and programmes", draft (2018)

The primary purpose of the Danish and the EU Commission guidance is providing legal interpretations of the Directive, whereas the purpose of the British and the Portuguese guidance is providing orientations for good practice in applying national legislation.

### *3.2 Discourse analysis: The guidance as discourse*

The use of discourse analysis to investigate conceptions of 'decision-making' assumes that the guidance text is written according to patterns or specific understandings of decision-making. Discourse is defined in several ways; this article follows Jørgensen and Phillips' definition of discourse: "a given way to talk about the world and its scope" (2002, p, 17). The SEA guidance texts comprise social meanings of 'decision' and 'decision-making' in a certain context. The discourse analysis, through text analysis, is thus aimed at finding the different meanings given to 'decision' and 'decision-making'

and critically discuss what consequences these meanings might have for SEA actors and action.

Approaches to an analysis of discourse are on a social constructionist basis. The authors share Fairclough's view of the relationship between discourse and the social world—that “discourses do not just reflect or represent social entities and relations, they construct or 'constitute' them....” (Fairclough, 1992a, p. 3). Following the theory by Fairclough, texts, here in the form as SEA guidance, can potentially change practice: “...texts can bring about changes in our knowledge (we can learn things from them), our belief, our attitudes, values and so forth” and can “...have causal effects upon, and contribute to changes in, people (beliefs, attitudes, etc.), actions, social relations, and the material world” (Fairclough, 1992a, p. 8). So theoretically, we can expect processes of social change to start from a change in discourse and changes to the specific text of the SEA guidance.

The main concern in the analysis is to examine and analyse how the meanings of ‘decision’ and ‘decision-making’ are represented in national guidance on SEA. In order to analyse the discourses as part of a social practice, we follow Fairclough's three-step analytical model in which language usage has three dimensions: Text, discursive practice, and social practice (Fairclough, 1995; 2003).

*Text.* In this article, texts are investigated through a text analysis with the following three themes: Nodal points, word chain, and connotations. The nodal points are the building blocks in a discourse, since the exact meaning of the nodal points is important for the rest of the meaning that is built in the discourse (Jørgensen and Phillips, 2002). The nodal points refer to how the central terms ‘decision’ and ‘decision-making’ are defined in the guidance. Based on the conceptual overview in Section 2, the nodal points include other words for decisions, namely ‘choice’, ‘approve’, and ‘adopt’. The assignment of meaning follows in the analysis by looking for terms/words in connection to the nodal points (chain of words). Then an analysis of the connotation of the ‘chain words’ follows.

*Discursive practice.* The discourse analysis includes the analysis of texts, which are “the material manifestations of discourse” (Chalaby, 1996, p. 688). The discursive practice is the link between text and social practice, as the text that is produced and interpreted is characterised by factors in social practice. This interpretative part of the discourse analysis is guided by the following question: How is the guidance related to other texts? (Intertextuality). The intertextual analysis, according to Fairclough “...shows how texts selectively draw upon orders of discourse—the particular configuration of conventionalised practices...” (1992b, p. 194). The intertextuality hereby becomes a sign of the guidance's reference to other texts or spoken words by others and can include, for example, the inclusion/reference to research results within the field of SEA and/or decision-making. Thus, in the assessment of intertextuality, it can be seen whether the text wording reveals other discursive tracks than those included in the text's own discourse.

This influences the perceptive capacity of what the guidance communicates. However, the reception of the guidance by the SEA actors is not part of this analysis, and would require other methods than textual analysis.

*Social practice.* In this third level of analysis, the textual level and the discursive practice are linked to the social practice (represented by theoretical decision perspectives). The social practice is determined by “...sets of conventions associated with social institutions” (Fairclough, 1989, p. 17). In order to explain why the text is produced as it is, the article couples the discourse analysis with another theoretical framework. The framework is explained in section 2 with opposites in decision-making theory and is used as the basis for the interpretation of the analysis in the article.

In summary, the analytical framework for the discourse analysis is presented in Table 2.

Dimension	Themes for analysis	Focus in the analysis
Text	Nodal point	The central terms ‘decision’, ‘decision-making’, ‘choice’, ‘approve’, and ‘adopt’ in the texts as verbs and nouns.
	Word chain	Other terms/words mentioned in connection to the nodal points.
	Connotations	The specific word choices/connotations and what meaning they give to the nodal points.
Discursive practice	Intertextuality	References to other texts concerning ‘decision’ or ‘decision-making’, including potential different discourses
Social practice	Decision discourses	Interpretation of the decision discourses in relation to social practice, here represented by decision theories.

*Table 2: Analytical framework for the discourse analysis of guidance documents with themes and focus in the analysis.*

In the analysis and interpretation, the authors are concerned with the fact that guidance can include discourses of how decisions have to be made/are made as well as ‘imaginaries’—for example ideas/visions of how decision might or could be made. These meanings reflect what Cashmore and Kørnø (2013) define as normative, descriptive, and prescriptive decision theories.

### *3.3 Analytical procedure*

The analysis of the guidance documents is a grounded theory approach in which the discourse analysis provides insight in how decisions are conceptualised. The analytical procedure comprises two major elements. First, the analysis outlines how decision-

making is articulated as a phenomenon in each guidance document. In practical terms, this involves listing all word chains mentioning the nodal points 'decision', 'decision-making', 'choice', 'approve' , and 'adopt' including conjugations of the terms. Second, each word chain is interpreted in terms of connotations. As a quality assurance mechanism, additional searches were made in the guidance documents using the nodal points' keywords, as listed in Table 1, to make sure that all mentions of the nodal points were included in the analysis. The synthesis of the analysis is presented in the results section.

The analytical procedure may not capture all articulations of decision-making in the guidance documents, as decision-making may be indirectly articulated, or other words may be used. The procedure is, however, expected to include the vast majority of the relevant word chains, and thus provide a valid representation of how decision-making is conceived in the documents.

## 4. Results

In order to illustrate how the six different aspects are addressed in the reviewed guidance, table 3 presents examples of word chains on ‘decision’ in legislation-oriented guidance (represented by the EU guidance) and good-practice guidance (represented by the Portuguese guidance).

Key dualities of decision-making	EU guidance	Portuguese guidance
Single versus multiple decisions	<p>“consultation have to be taken into account when <b>the</b> decision is being made” (p. 35)</p> <p>“<b>a</b> decision is taken on the scope and level of detail of the information” (p. 27)</p> <p>“<b>decisions</b> on the site of a project, or on the choice of alternatives, may already have been taken” (p. 1)</p>	<p>“ensuring strong interaction and frequent iteration from earliest <b>decision moments</b>, and following <b>decision cycles</b>” (p. 11)</p> <p>“<b>critical decision moments during the planning process.</b>” (p. 29)</p>
Linear versus non-linear decision-making	<p>“performed at a <b>later stage</b> of the decision making” (p. 50)</p>	<p>“Strategic actions are generated through <b>decision cycles</b>” (p. 28)</p>
One decision-maker versus multiple decision-makers	<p>“in the end a plan or programme would always be formally adopted by <b>an authority</b>” (p. 8)</p> <p>“require <b>the developer</b> to provide [...] the main reasons for his choice” (p. 25)</p>	<p>“<b>Integrated decisions</b> in relation to the array of relevant points of view” (p. 12)</p>
Formal versus informal decision-making	<p>[no explicit quote, we assume all is formal decision-making since it is legislation oriented]</p>	<p>“<b>Formal rules</b> relate to established levels of responsibilities [...]. Very important, and often determinant, are the <b>informal rules</b>, how things normally happen...” (p. 30)</p>
Conscious versus non-conscious decision-making	<p>“<b>The decision on the adoption</b> of the plan” (p. 61).</p>	<p>“<b>deciding on how to link SEA</b> and the planning process” (p. 19)</p> <p>“<b>Change minds</b> and create a strategic culture in decision-making” (p. 12)</p>
Fact versus value-based decision-making	<p>“inclusion of <b>relevant environmental information</b> into decision making” (p. 4)</p> <p>“The statement summarising how <b>environmental considerations</b> have been integrated” (p. 52)</p>	<p>“The root causes relate to what influences decisions: <b>society values, cultural contexts, mind-sets, sustainability values</b>” (p. 23)</p> <p>“trend analysis is the collection of <b>facts</b>, based on indicators” (p. 52)</p>

*Table 3: Illustration of decision word chain analysis in guidance documents (authors’ highlights).*

A synthesis of the findings of the analysis on the concept of the word ‘decision’ in the four guidance documents, illustrated in Table 3, are presented in Table 4.

	Single vs. multiple decisions	Linear vs. non-linear process	One vs. multiple decision-makers	Formal vs. informal decision-making	Conscious vs. non-conscious decision-making	Fact vs. value-based
<b>EU guidance</b>	Decision formulated as singular as well as plural.	Decision-making is presented as a linear process with distinct stages or reference/ reflection upon non-linearity. Decisions are made in a hierarchy.	Final adoption by authority as single decision-makers. Other decision-makers mentioned.	Formal only, and strong emphasis on legal decision-making.	Distinction is not mentioned.	Decisions are based on facts. Values are not mentioned in relation to decisions.
<b>UK guidance</b>			Decision-makers are sometimes single, sometimes plural.		Distinction is not mentioned. The guidance articulates decision-making as a deliberative act.	
<b>Danish guidance</b>			Emphasis on single decision maker. Multiple decision-makers in the case of transboundary impacts.		Distinction is not mentioned.	
<b>Portuguese guidance</b>	Multiple decisions are recognised. The formal decision is acknowledged as a single decision.	Cyclical nature is highlighted.	Indirect recognition of multiple decision-makers in multiple decision windows.	Both formal and informal. Emphasising the importance of the latter.	With emphasis on cultures and mind-set, non-conscious decision-making is recognised.	Both facts and values are seen as important elements in decision-making.

*Table 4: Conceptions of aspects of decision-making in four guidance documents.*

The guidance documents vary in terms of the duality between single versus multiple decisions. The two guidance documents focusing on legal aspects are not clear or consistent in terms of the number or variety of decisions. When articulated, the singular form of 'decision' primarily relates to the formal and final adoption of a plan or consent decision, whereas the plural form is seldom specified and relates to either the EA process or the planning process. In the Portuguese good-practice guidance, decisions are well described and presented as multiple decisions taking place in decision windows and decision moments. The UK guidance seem to indirectly recognise multiple decisions in recommending treating SEA as a "flexible process" (Office of the Deputy Prime Minister, et al., 2006, p. 23); however, no further descriptions of how to understand decisions are given.

A similar division on the two types of guidance are identified in terms of the linear versus non-linear duality: The legislation-oriented guidance documents describe linear processes in hierarchies, whereas the Portuguese good-practice guidance describes how strategic actions "are generated through decision cycles" (Partidário, 2012, p. 28), and emphasises the unpredictable nature of decision-making processes. The UK guidance, however, is in line with the legislation-oriented guidance in depicting decision-making as linear.

The guidance documents mention some categories of decision-makers, such as the authorities adopting plans and developers making choices on alternatives (e.g. European Commission, 2006, p. 25). Except for the Portuguese guidance, decision-makers other than authorities are not clearly acknowledged in the guidance documents. This may be due to a myriad of different setups of decision-makers in national contexts; however, it is generally unclear if others besides authorities and developers can and do make decisions.

Not surprisingly, formal decision-making is the focus in the legislation-oriented guidance documents. They describe decision-making as a deliberative act that includes taking considerations and information into account. The Portuguese good-practice guidance recognises both formal and informal decision-making and highlights the importance of the latter: "Very important, and often determinant, are the informal rules, how things normally happen, and the extent of informal cooperation and voluntary initiatives" (Partidário, 2012, p. 30).

The two legislative guidance documents and the UK good-practice guidance do not mention nor reflect on the existence of non-conscious decision-making. They prescribe decision-making as a deliberative act. In contrast, the Portuguese good-practice guidance mention how "society values, cultural contexts, mind-sets, sustainability values" (Partidário, 2012, p. 23) directly influence decision-making and thereby acknowledges non-conscious decision-making.

All guidance documents emphasise information-based decision-making with the aim to "produce decisions that are better informed" (e.g. European Commission, 2006, p. 1).

The Portuguese good-practice guidance balances this information-based orientation with the importance of values and other aspects.

In addition to the analytical parameters, the analysis showed an unclear relation between decisions and choices. In the UK guidance, as an example, 'choices' are made on methods, team composition and alternatives, whereas scope, measures and consent are 'decided,' and SEA is 'approved'. What information to collect is a decision, however, when information is problematic, then choices are to be made on its use. The Portuguese guidance is, in a sense, the opposite as it uses a wide vocabulary to describe nature of decisions, which includes 'decision timing', 'decision moments', 'decision window', 'decision nature', 'decision levels', 'decision problem', 'decision sensitive issue', and 'decision factors'.

In terms of the discursive practice, the analyses show limited intertextuality in the legislation-oriented guidance documents in regards to the understanding of decision-making. Besides the reference to the EU Directive 2001/42 that imposes a timeless and faceless understanding of decision-making, the legislation-oriented guidance documents make few references. As an example, the Danish guidance refers to the two EU court cases C-567/10 and C-290/15 in terms of what constitute a decision. The UK good-practice guidance refers to handbooks with certain understandings of decision-making, but it is not clearly related to descriptions of decisions. The Portuguese good-guidance document refers to Clark (2000) on levels of decision-making and to Mintzberg (1994), Kørnøv and Thissen (2000), Nilsson and Dalkmann (2001) and Cherp et al. (2007) on the strategic nature of decision-making, as well as to the three latter for how to influence decision-making through SEA.

## **5. Discussion of how decision is depicted**

With this paper, our purpose has been to investigate the various meanings associated to the use of the word 'decision' in different types of SEA guidance (both legislative-oriented and good-practice guidance). Our intension was not to criticise different types of SEA guidance, but to promote a discussion of how guidance should articulate and outline ways to handle relations between IA and decision-making. Therefore, our questions are: Should 'decision' be defined and explicated in these types of guidance or not? Or is it sufficient to have just a timeless and faceless decision? And to what extent has the good-practice guidance affected practitioners?

It can be argued that IA has largely been more concerned with the information to be provided than with the decisions and decision-makers to which the information should be targeted. This may be the reason why the concept of 'decision' remains abstract in the IA guidance. Our point is that if 'decision' keeps being timeless and faceless, we run the risk of missing the aim of IA, here exemplified by the SEA Directive "to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans, programmes with a view to promoting sustainable development" (the EU Directive 2001/42,



article 1), which inherently involves influencing decision-making but without explicit identification of who will provide for that level of environmental protection. For that reason, we need to acknowledge that 'decision' is not an abstract concept, and that IA is not only about informing decision-making, whatever it might be, but it is more broadly about influencing it, and therefore recognizing and targeting decision-making.

In this paper we recognise and acknowledge the multiple dimensions of decision-making in relation to the following six main aspects:

- 1) There are multiple decisions in a decision process, some being informal decisions as a consequence of choices
- 2) Decision processes are non-linear, even when linearly designed
- 3) Multiple decision-makers contribute to decisions taken in multiple moments of decision-making
- 4) Many decisions are informal decisions yet they are likely to shape subsequent formal decisions
- 5) Non-conscious decisions are often taken by formal and informal decision-makers, influencing choices and subsequent decisions
- 6) Decisions are driven by values, which should not be kept hidden behind facts

Our expression of *timeless and faceless decision* relates to the relevance we associate to the timing of multiple decisions often unconsciously made by multiple actors in non-linear, informal, and values-based processes. From practice, we recognize a great variety of actors, and their decision roles, that we can illustrate as follows:

- Authorities make the formal decision about consent and decisions on legal compliance; however, they also make several informal decisions, e.g. on their position in preceding dialogues with developers, forms of engaging the public, etc.
- Consultants make several decisions on the assessment, e.g. what geographic and time scale, significance, what methods, what mitigation measures, etc.
- Proponents make decisions on the design of the plan, thereunder implementation of mitigation measures, on indicators in monitoring, on follow-up studies, etc.
- NGOs make decisions on their positions in relation to the IA, when choosing specific priorities for making pressure, and the type of pressure (legal, political, public opinion, etc).
- The public makes decisions when accepting or not accepting a given proposal and when deciding to participate or not.

We used guidance to explore to what extent both the multiple timings of decisions and the decisions made by different actors were recognized. Especially the legal oriented guidance documents are very clear on information and procedures, but do not depict the multiple dimensions of decision-making. 'Decision' is mostly limited to a terminal notion, not acknowledging other aspects of decision-making. The selected guidance documents mention decisions to be made, especially in terms of procedural aspects, but only to a limited extent do they discuss the nature of such decisions. The literature on

SEA guidance likewise generally does not discuss the concept of decision-making, but generally follows the same lines as in the guidance documents. Our findings on understanding of decision-making in the reviewed guidance documents may have implications for IA practice as follows.

In terms of the duality between single and multiple decisions, the unclear descriptions in the legislation-oriented guidance and the UK good-practice guidance documents may mean that the role decisions play throughout the process, with a potentially huge influence on the assessment, may be ignored in practice. De Bruijn and ten Heuvelhof (1999) argue that “[t]he idea that research can be restricted to a single moment in the decision-making process ignores the unpredictable nature of decision-making, which makes it uncertain whether sufficient time will be available for the research required” (p. 183). Lack of clarity in guidance documents on the nature of decision and decision-making may sustain a prevailing rational notion of using several months making comprehensive studies of consequences of alternatives, regardless of the risk of not being appropriate or relevant for a given decision-context. The Portuguese good-practice guidance document provides frameworks for understanding multiple decisions, and practice adhering to this guidance may therefore alert participants to the role and influence of decisions throughout policy and planning processes.

In terms of the linear conception of decision-making in three of the guidance documents, Kørnøv and Thissen (2000, p. 198) have previously warned, “... impact assessors can only deal effectively with the dynamics and unpredictability of decision processes if they adopt a flexible, adaptive and learning approach themselves. If they do not, they run the risk of writing a thorough report based on an initial but fixed problem formulation, only to find out after a while that the policy agenda and issues have changed significantly in the meantime, as a consequence of which a well-researched report remains unused and ineffective”. This presumes the need to recognise that decision processes are all but linear, and that flexibility and adaptation are needed to allow learning to be built into the decision process.

The lack of clarity on who is making decisions and the focus on formal decision-making does not promote attention to the important social processes of “a range of mixed forces operating in many fronts [with] different social values” (Partidário, 2000, p. 654). Furthermore, it ignores the importance of street-level bureaucrats (here the people involved in making the assessment) and their agency power (see Kørnøv et al., 2015). It may also mean that IA practice, adhering to these guidance documents, does not notice the many arenas in which power can be exercised informally (see Hansen et al., 2013).

Similarly, the lack of recognition of non-conscious decision-making may mean that IA practice is not alert to the many choices being made without being perceived as consequent decisions. This applies to compositions of teams, choice of reviewers, choice of methods, etc. all ultimately influencing assessment outcomes.

With the exception of the Portuguese guidance, the limited explicit recognition to values in decision-making in the explored guidance documents is worrying in the sense that values play an important role in defining what is significant in the assessment and what is important in the decision-making. This limited recognition concerns both values related to the process (e.g. transparency, openness, democratic character, and legitimacy) and values related to substantive tradeoffs (e.g. between environmental impacts, health, and economy), although mentions of the latter category are seldom. In general, IA practice has been characterised by 'data comfort' in a continuous demand for more facts (Partidário, 2007), and the review undertaken suggests that the understanding of decision-making in the guidance documents is supporting this type of facts-driven and information-based approach rather than supporting a more values-driven approach. This is a critical aspect that calls for further study.

## **6. Implications for impact assessment**

Decision-making is the core of IA practice and it is therefore crucial that IA literature and practice are attentive to the nature of decision-making. The example of the EU Directive 2001/42 shows its focus on the decision as the focal point of SEA practice, with SEA being essentially a decision-support instrument. But in our view, the Directive depicts 'decision' as a *timeless and faceless decision*. This can be generalised to other IA instruments and other legislative frameworks in other parts of the world. Whereas the EU Directive has a general nature, the Member State guidance documents have better opportunities for clarifying and explaining decision-making. As important, taken-for-granted establishers of meaning and practice, guidance documents have a considerable influence on the value and understanding of IA in society. Yet the six aspects of decision-making explored in this paper appear to gain little recognition in legislative-oriented guidance.

The study of selected guidance documents shows that the two cases of legislation-oriented guidance and the UK good-practice guidance have very little explanation of what is meant by 'decision' and 'decision-making', and several important aspects of decision-making are not recognised. The Portuguese good-practice guidance document, on the other hand, recognises the many facets of decision-making and highlights the importance an active accommodating of IA (SEA in this case) to the nature of decision-making.

As guidance documents are among the establishers of practice, the implications of the limited attention to the facets of decision-making in the guidance documents are severe for IA practitioners: The guidance documents do not help practice being alert to the importance of multiple decisions in non-linear processes, to the recognition of more informal decision-makers, to the interplay between multiple decision-makers, to the relevance of informal and unconscious decisions, and ultimately to the importance of values in addition to facts, as values are a way to explain, or understand, the relevance

of facts. In summary, non-recognition of these six aspects of decision-making, considered crucial in the decision-making literature towards effective decisions, may mean that any IA and SEA that do not recognise these aspects will be hampered in their purpose of contributing to the effective integration of environmental considerations into the preparation and adoption of plans and programmes, and in their role in transitions for sustainability.

As a multidisciplinary IA community, we have a responsibility to make sure that the legal discipline's dominance of how 'decision' should be conceived and articulated in guidance documents are supplemented with a broader explanation of the many important aspects of decision-making. The Portuguese example demonstrates that it is possible through good-practice guidance. The European Commission's formal acknowledgement of this guidance on their webpage is a welcomed invitation to adapt it to specific national contexts.

In this paper, SEA guidance served only as a resource for investigating the meaning of 'decision' in the field of IA. The findings of our research aim to encourage a call for greater attention to the description of the nature of decision-making in the field of IA. We invite A) studies in other contexts to gain a larger and more varied sample on how key IA documents, such as guidance documents, depict 'decision' and 'decision-making', B) empirical studies of how such depictions are reflected in practice with a focus on what implication specific descriptions of 'decision' and 'decision-making' might have, and C) studies exploring relevant ways to depict 'decision' and 'decision-making' as used in IA related material, such as guidance and other key documents, in order to help IA practice to better understand, be targeted to, and support decision-making.

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