



Contents lists available at ScienceDirect

Environmental Impact Assessment Review

journal homepage: www.elsevier.com/locate/eiar

Food for thought: Conditions for discourse reflection in the light of environmental assessment

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ARTICLE INFO

Article history:

Received 24 March 2009

Received in revised form 27 November 2009

Accepted 1 December 2009

Available online xxxx

Keywords:

Environmental assessment

Discourse

Frame

Scheme

Reflection

Double-loop learning

ABSTRACT

People tend to take notice of what is happening around them selectively. Discourses—frames through which actors give meaning to aspects of the world—act as built-in filters that distinguish relevant from irrelevant data. Use of knowledge generated by environmental assessments (EAs) in decision-making may be understood from this perspective. Environmental knowledge that is inconsistent with dominant discourses runs the risk of being ignored. Discourses on the value of EA as a tool for decision-making may have a similar effect. Stimulating decision-makers and stakeholders to critically reflect on and reconsider their discourses in the light of EAs—also known as frame reflection or policy learning—may enhance the probability that these assessments and the knowledge that they generate impact upon decision-making. Up to now little has been written about how discourse reflection in the context of EA can be promoted. Valuable inputs are fragmented over different bodies of literature. In this paper we draw from these bodies to identify favourable conditions for discourse reflection.

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1. Introduction

The extent to which environmental assessments (EAs) are actually taken notice of, and used in decision-making depends on many factors (see for instance Ten Heuvelhof and Nauta, 1997 or Runhaar and Driessen, 2007). This subject therefore is studied from different perspectives. Discourse analysis is a relatively new perspective on the role of knowledge generated by EAs. Discourses are frames of reference through which meaning is given to social and physical realities or phenomena. Discourses reflect more than plain interests; they reflect more generally how actors perceive and understand aspects of the world. (Healey, 1997; Hajer and Versteeg, 2005).

Different authors have stressed the influence of discourses on the adequate use of outcomes of EA in decision-making. For example, Runhaar (2009) states that adequate use of EA mainly depends on the degree to which environmental knowledge fits into the dominant policy discourse at issue. Runhaar (2009) illustrates this argument with the policy decisions to forbid new gas mining with proven insignificant ecological effects and to allow mechanised cockle fisheries with proven

significant ecologically degrading effects in the Dutch Wadden Sea. These decisions were not logical in terms of EAs conducted but were understandable against the background of the dominant “Hands off the Wadden Sea!” discourse. Furthermore, Robinson and Bond (2003) discuss the importance of discourses on the organisation of EA and stakeholder participation in EA. As the authors conclude, “(...) there is potential, even where consultants design what they consider to be very good public involvement programmes, for poor acceptance from the local residents and a lack of confidence in the programme. Consultants should be aware of the range of views of stakeholders in order to develop successful public involvement programmes (p. 45)”. Finally, Valve (1999) shows how actors involved in EA may attach very different meanings to project alternatives in EA, which could negatively influence the contribution of EA to decision-making.

The recognition of the influence of discourse on EA raises the question how an effective use of EA in the case of incongruent discourses can be promoted. Runhaar (2009) suggests stimulating actors to reflect upon their discourses as a means to overcome inconsistencies between EA and discourses. The paper however concludes that still little is known about conditions favourable for discourse reflection and subsequent discourse modification in the light of EA. These conditions apply to both tactics (e.g. bring actors together to discuss EA findings) and to circumstances that stimulate or force actors to actually articulate and self-examine their discourses. The purpose of this paper is to explore such conditions in bodies of literature that deal with discourses and similar concepts, namely literature on schemes, frames, frame reflection and reframing, learning

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Table 1
Synonymous concepts for discourse and discourse reflection.

Concept	Definitions and descriptions
Scheme	• A scheme is a cognitive structure composed of expectations learned from experience and stored in memory (Downey and Brief, 1986)
Frame	• Models that help producing meaning from information to actors (Kolkman et al., 2007) • A less visible foundation—an “assumptions basis”—that lies beneath the more visible surface of language or behaviour, determining its boundaries and giving it coherence (Schön and Rein, 1994; Rein and Schön, 1996)
Reframing	• Interpretative lenses, through which each individual views and makes sense of unfolding events (Shmueli et al., 2006)
Double-loop (or fundamental or conceptual) learning	• Seeking to change the way in which parties have initially framed issues (Kaufman and Smith, 1999) • A feedback loop concerning personal or organisational values and goals; reflection upon the question whether the right things are being done (Yeo, 2007, based on Argyris and Schön, 1996) • Calling into question not only the programme design in relation to the objectives, but also the objectives themselves and even underlying problem understanding (Nilsson et al., 2009) • Reconsidering initial discourses and finding a consensus on problem perceptions and policy goals (Verbeeten, 1999)

and organisational and social psychology, and subsequently assess their relevance in the context of EA.

2. Definitions

2.1. Discourses

Discourses refer the ways in which (groups of) actors give meaning to particular phenomena (e.g. a particular environmental problem) and help making sense out of what is happening in the world around us. One of the basic assumptions of discourse theory is that language in use is not a neutral reflection of (aspects of) the world, but rather plays an active role in creating and changing it. Within a particular discourse, some forms of action are logical whereas others are unthinkable (Healey, 1997; Jørgensen and Phillips, 2002).

In policy studies, discourse analysis has been employed frequently in order to analyse and understand policy controversies (Rein and Schön, 1996; Sharp and Richardson, 2001; Van Eeten, 1999). In this context, decision-making is conceptualised as a “system of competing discourse coalitions and their struggles to ‘control shared meanings’ and to gain acceptance of their framing of a policy issue” (Durning, 1995) and controversies are explained by the presence of two or more conflicting discourses and associated ‘discourse coalitions’. These discourses may relate to different aspects of policy issues: the way in which a policy problem is defined, the relevance of solving this problem, adequate solutions, anticipated (side) effects of these solutions etc., but also about what is considered a legitimate way of decision-making (Sharp and Richardson, 2001; Hajer and Versteeg, 2005). In view of this, controversies may evolve around different issues.

2.2. Synonyms of discourses and discourse reflection

The concept of discourse is also elaborated upon under the headings of ‘schemes’ and ‘frames’ in various bodies of literature, broadly covering policy and planning studies and psychology (see Table 1 for some definitions of these concepts that, similar to discourse, relate to cognitive models). Similar to the discourse literature discussed above, literature on schemes and frames often attempts to explain controversies. Discourse reflection and the reconsideration of discourses have substantial overlap with the concepts of ‘reframing’ and ‘double-loop (policy) learning’ (again, see Table 1).

2.3. Stability of discourses

Discourses—and the above synonymous concepts—help to give meaning to aspects of the world. According to cognitive psychologists, discourses (or schemes as they call it) make reality understandable, predictable and thus safe (Griffin et al., 1998). Abandoning schemes can lead to feelings of anxiety because one loses grip on reality. This

mechanism is one of the explanations for the tendency of people to focus on information that ‘fits’ within a discourse and to neglect disconfirmatory information (as for instance provided by EA). In addition, discourses can function as a justification for one’s actions and are therefore hard to change (Weick, 2001).

As a consequence of the difficulty in changing discourses, it is no surprise that discourses that produce conflicting views about issues, processes of interaction and about other actors often result in ‘intractable’ policy controversies that inhibit progress in solving problems or at least make collaboration exceedingly difficult (e.g. Gray, 2004; McKee, 2003; Rein and Schön, 1996; Saarikoski, 2006; Shmueli et al., 2006).

3. Conditions for discourse reflection: a literature review

Above we argued that discourses may act as filters distinguishing relevant from non-relevant information. Information that is not consistent with an individual’s discourse may be disregarded. In the case of EA such a situation may impede the consideration of EA outcomes in decision-making. What is needed to stimulate actors to critically reflect upon their discourses in the light of ‘inconsistent’ information, rather than simply disregarding it? In this section we discuss such conditions, as reported in the literature on schemes, frames, reframing, double-loop policy learning. This literature predominantly has a background in organisational and social psychology and policy and planning studies. In this literature three dimensions of discourse reflection emerge, namely: articulation of discourses (i.e. the process in which discourses are made explicit, in particular by or to the people who hold the discourse at issue³), critical reflection on (articulated) discourses and modification of discourses.

3.1. Insights from literature on ‘frame reflection’ and ‘reframing’

Schön and Rein (1994) and Rein and Schön (1996) provide various guidelines for articulating frames in policy issues in an unbiased way, as a first step in promoting frame reflection through dialogue. They advise mediators involved to first identify the particular rules in the policy arena concerning legitimacy of arguments and acceptability of evidence—these namely do not have to be universal. Articulation of frames is not only considered necessary for reflection on individual frames, but also for surfacing disputes and the search for a reframing that is acceptable to all actors involved. Rein and Schön state, “We know that the process [of reframing] is both exogenous and endogenous. The exogenous events provide the windows of opportunity. The endogenous events in reframing require both cooperation and reflection”

³ Although several papers have been written on methods for articulating discourses (e.g. Van Eeten, 1999; Van der Heijden, 1998; Kolkman et al., 2007; Van Kouwen, 2009; Nilsson et al., 2009), they are ignored in this paper as none of the papers that we reviewed provides empirical evidence of what actually favours (or impedes) utilisation of these methods in practice for the sake of discourse reflection.

(1996, p. 100). Actors involved in controversies should also be willing and able to “inquire into the intentions and meanings of other actors involved with them in the controversy” (Schön and Rein, 1994: 171). At the same time the authors recognise that “(...) we know very little about the anatomy of situated frame reflection” (1996, p. 95) and thus suggest learning from practice.

Dudley and Richardson (1999) elaborate upon frame reflection in EU steel policy reform. For long it was debated whether a state-aid protectionist or a free-market approach should be adopted. From their paper the following conditions favourable for the observed modification of the dominant EU steel discourse can be distilled:

- All major coalitions involved should consider the situation (involving a stalemate) as unacceptable;
- The presence of commonly accepted mediators who bring conflicting discourse coalitions together and promote frame reflection by among other things suggesting new frames;
- Exogenous events triggering debate and providing ‘windows of opportunity’ for a critical examination of frames. In the steel case, exogenous events included a deep crisis in the steel market, the end of the Cold War and the reunification of Germany, the commitment to a Single European Market and changes in the political arena (dominance of socialist versus liberal parties).

Kaufman and Smith (1999) analyse a landfill dispute and identify several conditions for frame reflection. First, frames should be made explicit (i.e. articulated) requiring mediators with:

- Access to all disputants;
- The ability to track frame changes and avoiding bias due to self-reporting or second-hand data;
- Actors willing and able to formulate and share their frames.

Furthermore, they suggest the following conditions and strategies for a critical reflection upon and subsequent modification of frames:

- The search for new frames by a mediator that would otherwise be obscured by existing frames. For instance, a loss–win frame may be countered by an “enlarge the pie for all” frame;
- Counteracting frames with information;
- ‘Malleable’ frames. Previous work has shown that frames referring to personal characteristics of actors involved (aspirations, positions, loss–gain and self-characterisation) tend to be stable whereas frames referring to institutions, other stakeholders, relationships and the physical environment (i.e. substantive, process, characterisation and complexity frames) are more malleable;
- Mediators should be well aware of their own frame and possible conflicts with the frames of the actors involved when trying to solve disputes.

According to Gray (2004) reframing in long-lasting controversies is only possible with the help of a neutral third party, a mediator. Mediators particularly should try to reframe negative stereotypes of other actors by setting ground rules, helping parties to see value in treating each other with respect and the search for superordinate goals that the actors involved may share. Her case study suggests that the ability of at least some of the actors involved to consider the frames of other actors as well as related concerns and emotions is another relevant condition for reframing (i.e. the search of new, common frames).

Referring to Lewicki et al. (2003), Gray states that reframing can be much more difficult to achieve in identity-based conflicts, an unabated history of negative characterisations, disagreement about conflict management and a reliance on protest-oriented approaches to managing the conflict.

Shmueli et al. (2006) state that frames differ in the extent to which they are subject to reframing (‘malleability’ in the terminology of Kaufman and Smith), with ‘identity frames’ being the most difficult to influence. Based on several experiences, Shmueli et al. (2006) expect

mediators to be more effective in promoting reframing under the following conditions:

- They should be aware of the conflicting frames at issue;
- They should promote a critical self-examination of frames through:
 - Clarification of perceptions of disputed issues, promotion of productive information exchange and listening, and expansion of the discussion framework;
 - Awareness raising among actors involved about their interests and frames;
 - Identification of opportunities for trade-offs;
 - Identification of “deep differences that cannot be bridged and design conflict resolution processes that do not violate these deep differences” (p. 215);
- De-escalation through which actors learn to communicate directly without needing to defend current positions;
- Identification of commonalities and enabling of reframing around a smaller number of issues than those contributing to intractability.

Scholten and Van Nispen (2008) analyse a situation in which an evaluation study was conducted in order to resolve controversies around Dutch immigration policy. However, the committee in charge of the evaluation failed in building “bridges amongst the various frames involved in this intractable policy controversy” (p. 198) and the study became controversial itself. One of the explanations was the definition of immigrant integration by the committee, which was incongruent with the frames involved. Scholten and Van Nispen therefore question whether “the Blok Committee addressed the correct problem”. This ‘trap’ for mediators was also discussed by Rein and Schön (see above).

3.2. Insights from literature on ‘policy learning’

Verbeeten (1999) in a study on Dutch Wadden Sea policies focuses on conceptual policy learning where actors not only reconsider their discourses, but also find a consensus on problem perceptions and policy goals (comparable with the concept of ‘reframing’). She suggests the following conditions for such learning:

- Stakeholders should experience mutual dependency;
- Stakeholders should have a constructive and open attitude towards alternative discourses;
- Conflicts should be managed, but not per se be solved, as they often act as a good start of a change process. Participants however should continue a dialogue;
- A continuous provision of new and consistent information that is subject to open dialogue;
- Commitment of stakeholders to the process;
- Opportunities to combine interests and realise a compromise in which everybody gains something.

Pahl-Wostl and Hare (2004) report on a Swiss case study on learning in the development of new urban water management techniques and found the following conditions for learning:

- Awareness of each other’s sometimes different goals and perspectives;
- Understanding of the actors’ interdependence;
- Understanding of the complexity of the management system;
- Learning to work together;
- Trust;
- The creation of informal as well as formal relationships;
- A direct link to the formal political decision-making process for creating commitment (although the lack of it in their case study was found to contribute to openness and the discussion of alternative options).

Karl et al. (2007) focus on the use of science in controversial policy issues, which in particular in these situations, is not self-evident. The authors discuss learning within the context of ‘joint fact finding’ (JFF): the joint determination of knowledge gaps, research designs

and interpretations of research findings. Conditions for JFF (and hence learning as part of JFF) include:

- Representation of the main actors involved;
- Neutral process management, selected by the participants;
- Written agreement of the mediator to be accountable;
- Trust among participants and scientists;
- Early recognition of conflicts.

There are also some publications that address the concept of learning in relation to EA. Peterlin et al. (2008) for instance show how the provision of environmental information during an EIA process has resulted in a change in public perceptions of environmental issues, which can be considered a form of learning. Yet the process that led to these changes, as well as favourable conditions, are not discussed. Sinclair et al. (2008) analyse double-loop learning through EA, reflecting upon 16 Canadian EA studies. From their paper we derived the following conditions favourable for learning:

- Sufficient (financial) resources for participation, technical assistance, etc.;
- Access to information flows (without overwhelming actors);
- Clear mandate of actors involved in participatory EA;
- A clear connection between EA and political decisions;
- A broad range of participants;
- Adequate preparation of meetings and qualified panellists;
- No questions should be remained unanswered;
- Transparency.

3.3. Insights from organisational and social psychology

Organisational psychologists pay attention to the way people make sense of situations and the major role it plays in behaviour in general and change processes and organisational learning specifically (e.g. Argyris, 1999; Schein, 1985; Weick, 2001). Based on cognitive psychological theories, organisational psychologists state that people tend to hold on to existing schemes unless they are forced to change or see the advantage of it. This happens for example when people are confronted with unexpected and negative consequences of their actions, which force them to reflect on the theory that underlies their action (Argyris, 1996). Also, confrontation with totally new situations can force people to reflect upon and modify their schemes, as these are often insufficient to cope with new situations (Stanwick, 1996).

Social psychologists state that reflection on own views is more likely to occur in situations where people perceive interdependence with others concerning achieving their goals. The more people perceive that their own goal attainment depends on the goal attainment of others, the more they are tended to integrate ideas (Deutsch, 1973), share views and try to understand the other's scheme and reflect on one's own (e.g. Tjosvold, 1998).

Although consensus exists in literature that behavioural changes (such as a change in policy) are always accompanied by changes in worldviews, the question remains whether or not changes in worldviews automatically lead to behavioural changes. Organisational and social psychologists state that behavioural change is always a function of individual factors (like the fear of losing grip on reality we mentioned before) and situational characteristics (such as interdependence or social norms) (see for example Aizen and Fishbein, 1980).

3.4. Conclusions from the literature review

The literature discussed in this section yielded a long list of conditions favourable for discourse reflection as found in empirical studies. Some conditions are only incidentally mentioned in the literature whereas others are recognised in multiple papers. This suggests that the relevance of these conditions for discourse reflection is at least in part context-specific. The conditions can be classified into

four groups: conditions related to the discourses at issue, to the actors involved, to the mediator involved (the presence of which appears to be a precondition for discourse reflection) and to events that are exogenous to the process of discourse reflection.

4. Promoting discourse reflection in the context of EA: a case study

4.1. Introduction

In this section we will illustrate how the overview of conditions from the previous section helps explaining empirical manifestations of discourse reflection. For this purpose we will take a second look at the process of discourse reflection in the Dutch Wadden Sea decision-making, discussed in Runhaar (2009). In that paper a shift in the dominant policy discourse on the economic exploitation of the Dutch Wadden Sea was analysed. For a long time the discourse labelled "Hands off the Wadden Sea!" had impeded new gas mining activities. Large-scale industrial activities were considered inappropriate in what was considered one of the last real wildernesses in the Netherlands, despite the fact that various scientific studies had shown that no adverse ecological impacts of gas mining could be expected. At the same time politicians and stakeholders refused to take notice of growing scientific evidence of the negative ecological effects of mechanical cockle fisheries that ploughed up the seabed. The paper explained the shift towards a new dominant discourse underlying decision-making on the exploitation of the Wadden Sea, labelled "Human activities within ecological limits", in which gas mining was allowed under the condition that part of the revenues were used for investing in nature development and the buy-out of cockle fishermen. Important explanations appeared the sentence of the European Court of Justice that concluded that the practice of cockle fisheries was not in line with the Bird and Habitat Directive (BHD) guidelines that applied to the Wadden Sea and the active role of a mediator.

In this section we will explore explanations for the presence and absence of discourse modifications of *individual* stakeholders, in contrast to the paper referred to above that focussed on the modification of the dominant *policy* discourse. For this purpose we will use the insights gained in the previous section. Our analysis has focused on discourses of individual actors and whether or not these have been modified in the course of the Wadden Sea debates. In this context we subsequently assessed the importance of the theoretical conditions for discourse reflection as discussed in the previous section. Explicit attention was paid to the activities of the actor who acted as a mediator in this process. Our analysis was conducted in the following way. We first reconstructed a timeline of events between 2000 and 2004 regarding decision-making on cockle fisheries and gas mining in the Wadden Sea and identified the key actors involved. Data sources used included earlier research by the first author (Runhaar, 2009), which was based on interviews with various key stakeholders, scientific literature (e.g. Swart and Van Aniel, 2008; Turnhout et al., 2008), 'grey' literature (e.g. a detailed timeline provided by Van der Linde, 2008, who based her analysis in part on interviews with over 50 stakeholders) and newspaper articles. In addition we drew from the study by Van Nieuwaal (2010) on gas mining and cockle fisheries in the Wadden Sea (from an institutional perspective) and discussed our event analysis with him. Events of interest related to decisions made, research conducted, meetings between decision-makers and other stakeholders and other events where cockle fisheries and gas mining were subject to debate. From the data sources mentioned above we analysed the discourses the main actors adhered to (in terms of the discourses mentioned above and reconstructed earlier in the study by Runhaar, 2009). We subsequently analysed which actors had adhered to the discourse that for long was dominant (i.e. the "Hands off the Wadden Sea" discourse) and which actors had switched to the new "Human activities within ecological limits" discourse. The next step

was to (qualitatively) assess the importance of the conditions we identified in Section 3. We based this analysis on observations of the third author of this paper, who was actively involved in the process as an employee of the organisation mediating in the Wadden Sea debates. His observations were validated by what we knew from the data sources mentioned above and by discussions between the third author and the two other authors of this paper.

4.2. Starting up the process of discourse reflection: the role of mediator IMSA

For a long time the debate on new gas mining in the Dutch Wadden Sea had been in a deadlock situation until in 2000 the director of the environmental research and consultancy company IMSA (also member of the Club of Rome and one of the founding fathers of the Dutch environmental movement) started contesting the policy arrangement in the Wadden Sea. This person opposed to the, in his eyes, inconsistent situation with respect to the Wadden Sea. He observed declining ecological values of the Wadden Sea (which was acknowledged by scientists), while policy decisions on which activities were allowed seemed to lack scientific consistency: shellfish fisheries that were considered to have significant ecologically degrading effects were allowed, while gas mining with proven insignificant ecological effects was forbidden.

He and his colleagues from IMSA contacted individual representatives from the main organisations involved—governmental bodies, nature and environmental NGOs (NE-NGOs), gas mining companies and shellfish fishermen—and discussed with them the situation in the Wadden Sea. Actors were identified through the personal network of the director of IMSA, active in the Wadden Sea area for a long time, and through ‘snowballing’: asking persons for additional actors with an interest in the Wadden Sea. IMSA invested in building relationships with the main stakeholders and in understanding their discourses and concerns regarding the Wadden Sea. IMSA started from three hypotheses: one, that changing the dominant policy discourse required not simply convincing political decision-makers but convincing all actors involved; two, that all stakeholders in one way or the other had an interest in the Wadden Sea ecology; and three, that personal relations were a precondition for future discussions on individual discourses. After some initial discussions, IMSA found that most of the stakeholders agreed upon the ecological importance of the Wadden Sea and that apparently policy-makers and other stakeholders involved were not able to stop the process of ecological deterioration. Only shellfish fishermen disagreed as in their eyes there was no problem (there still were enough cockles and mussels). In this way IMSA made a first start to reframe the debate on the Wadden Sea by not debating what should not be done (i.e. gas mining), but by debating what had to be done to restore ecological values.

After these initial discussions IMSA proposed gas mining company NAM to sponsor the continuation of the process of opening the debate on the Wadden Sea. IMSA labelled the project “Win-win and the Wadden Sea”, aimed at finding solutions that were acceptable to all actors. At first instance the NAM was reluctant as it argued that compensation was not necessary since gas mining had no significant ecological impacts. Eventually however the board of the NAM agreed, as their efforts to get a permit for gas mining had proven unsuccessful and IMSA seemed to be able to help them, although IMSA did not give any guarantees on a success.

4.3. Continuing the process of discourse reflection

During several years, IMSA had individual meetings with many politicians (Members of Parliament, Ministers, Secretaries of State, etc.), representatives of governmental agencies, scientists and stakeholders. IMSA in addition organised seven meetings in which they brought these actors together to discuss discourses and (new)

scientific insights regarding the Wadden Sea ecology and its main threats. The meetings were often hosted by one of the stakeholders or scientific institutes, but behind the scenes were organised by IMSA. These meetings helped building relationships between stakeholders and confronting them with scientific knowledge (in particular on the ecological effects of cockle fisheries and gas mining). However, not all stakeholders attended these meetings; some attended a few of them whereas cockle fishermen were completely absent. IMSA also met resistance from particularly NE-NGOs because of ‘interference’ with what they considered their responsibility and the fact that IMSA was sponsored by the NAM. Apparently IMSA was not accepted as a neutral mediator to all actors involved.

In-between the meetings, IMSA monitored public statements and activities by what they considered the main stakeholders, in order to track possible changes in discourses and openings for new discourses. In addition IMSA developed a model for identifying and ranking ecological risks in the Wadden Sea, based on existing scientific knowledge. 40 Wadden Sea experts validated the model and its outcomes. The main threats to the Wadden Sea ecology appeared to be cockle fisheries, mussel fisheries, climate change, calamities with vessels and biological invaders; the ecological impacts of gas mining again appeared to be low.

Although it seems IMSA succeeded in bringing most stakeholders together and in facilitating dialogues, many held on to their own discourses. However there were also persons who appeared to be open to the scientific evidence that was brought in during the meetings IMSA organised, and who seem to have accepted the insights concerning the ecological effects of in particular cockle fisheries and gas mining. These persons included Members of Parliament, key persons working for NE-NGOs and for the DANF. Yet, these persons often did not publicly defend their changes in opinions. Resistance from the part of their organisations seems to be an important explanation. Apart from persons who were involved for a long time, also new persons entering the policy arena were open to the scientific insights regarding the Wadden Sea. One of these persons was the new director of the NE-NGO the Wadden Society. This NE-NGO had lost some of its influence, as the number of members had declined and their political partner, the socialist party, was no longer represented in the cabinet. The new director also acknowledged that gas mining could not be stopped in the long term, due to their reduced political influence and the large economic gains involved. He therefore agreed upon a more pragmatic approach, which would provide opportunities for ecological restoration of the Wadden Sea, but had to overcome large resistance within the Wadden Society—resistance from people who defended the “Hands off the Wadden Sea!” discourse. He tried to mobilise support from outside by publishing a letter in a Dutch newspaper just before the coalition negotiations in order to convince politicians to allow gas mining and invest part of the revenues in a more sustainable shellfishery sector.

4.4. The change of the dominant policy discourse on exploitation of the Dutch Wadden Sea

Early 2003 IMSA published a report in which they advised the political parties that were at that time negotiating upon a coalition agreement to allow gas mining; invest part of the revenues in the restoration of the Wadden Sea ecology; commission research on the ecological impacts of cockle fisheries and prepare decision-making on the continuation of this activity; and install a Commission to advise on these issues. The advice was taken over and in September 2003 the ‘Meijer Commission’ (named after its chair) was installed. The third author of this paper, working for IMSA, was part of this commission’s staff. In 2004 the commission delivered its advice, which said that the Wadden Sea should be considered primarily a nature area; that economic activities should be allowed within natural limits and on a non-discriminatory basis; that the government should invest in

nature conservation and restoration; that cockle and mussel fisheries could only operate within the limits of the BHD if they would transform their activities and that they should be given at most seven years for realising this; and that gas mining without ecological damage was deemed possible.

A second key event was the European Court of Justice sentence about cockle fisheries in the Wadden Sea in the light of the BHD in 2004 and in which the Court judged that in the Wadden Sea the precautionary principle applied: cockle fishers should prove that their activities would not have significant ecological effects before they could get a permit. This meant a reversal of the burden of proof and made it easier for NE-NGOs to successfully proceed against permits for cockle fisheries, but also mussel fisheries.

Eventually late 2004 the Dutch cabinet and Parliament decided to take over most of the Meijer Commission advice, except for that the cockle fishermen would be bought out and less money would be made available for nature conservation and research. This meant a replacement of the dominant “Hands off” discourse by the “Human activities within ecological limits” discourse.

4.5. Changes in individual discourses on gas mining and other economic activities in the Dutch Wadden Sea

The change in the formal discourse did not mean that all stakeholders involved adopted the new discourse. In particular many persons active at NE-NGOs but also politicians still opposed to new gas mining in the Wadden Sea. Deep values connected to the “Hands off” discourse impeded the abandonment of this discourse. In the eyes of various persons, restoring the Wadden Sea ecology was a goal in itself and should not be made subject to bargaining (i.e. allow gas mining in return). In addition, these persons often considered any human activities inappropriate in a nature area like the Wadden Sea. The data available do not make clear to what extent a reluctance to change discourses was based on fears to lose grip on reality (see Section 2.3).

Yet, after the Court sentence, some key persons from NE-NGOs had to admit publicly that the “Hands off” discourse they had adhered to was not based on recent scientific insights. This ‘confession’ however was in part based on pragmatic considerations: the legitimacy of NE-NGOs would be endangered if scientific evidence of the ecological effects of cockle fisheries and gas mining would still be ignored whereas it was also felt that NE-NGOs could better use their energy for other issues threatening Dutch ecosystems. Apparently this actor saw the advantage of changing his discourse.

Cockle fishermen held on to their discourse that their activities would have no, or only temporal, ecological consequences. They relied on their lobby at the DANF and did not feel a strong dependence with other actors.

Politicians from the socialist party abandoned the “Hands off” discourse after they realised that there were no more legal possibilities to stop gas mining on the basis of ecological arguments. When they entered a new cabinet they stopped opposing to new gas mining.

A growing feeling of interdependency stimulated changes in individual discourses as well. Most stakeholders realised that an exclusive focus on own interests and an active lobby in politics was no longer sufficient and that support from stakeholders was important for the continuity of their activities. For instance, after the cabinet decision in 2004, the NAM and the mussel fishermen have involved NE-NGOs in monitoring the ecological impacts of gas mining and in plans for more sustainable mussel fisheries.

4.6. Discourse reflection of Wadden Sea stakeholders compared to theory on discourse reflection

Fig. 1 summarises conditions that according to the literature reviewed in Section 3 are favourable for discourse reflection. An asterisk (*) indicates whether or not these conditions were present in

the Wadden Sea case. At the level of *discourse involved* the malleability of discourses seems to be explanatory for the (absence of) discourse modifications. In the previous Section we discussed how for several actors the “Hands off!” discourse was based on deep values and convictions. At the same time IMSA had found an opportunity to combine discourse to one that was acceptable to all stakeholders, namely a discourse on how the Wadden Sea ecology could be restored and in what way economic exploitation could be possible.

Considering the *actors involved*, most of them acknowledged that the dispute was caused by conflicting discourses and agreed that the situation was unacceptable, as the Wadden Sea ecology deteriorated and apparently it could not be stopped. Gradually the main stakeholders (i.e. the NAM, mussel fishermen and NE-NGOs) felt that they were mutually dependent for turning the ecological deterioration, but also the promotion of their own interests. The cockle fishermen again were an exception. During the process and in particular during the meetings, stakeholders opened up to what were first considered ‘enemies’ and started dialogues and building personal relationships.

The Court sentence and cabinet decision in 2004 were important *exogenous factors* that forced various stakeholders to reconsider their discourse and to continue the dialogues. As was stated above, various persons from NE-NGOs could no longer ignore scientific evidence on gas mining and cockle fishery, if they were to remain trustworthy to the public and other stakeholders. In addition the cabinet decision meant a change in the playing field; in view of the BHD guidelines both the NAM and the mussel fishermen simply needed to cooperate with the NE-NGOs if they wanted to prevent legal problems. The continuous provision of scientific evidence of the impacts of cockle fisheries and gas mining was another *exogenous factor* that stimulated actors involved to reflect upon their discourses.

The *mediator involved* seems to have played an important role as well. IMSA brought together scientific insights and developed an overview of the main threats to the Wadden Sea ecology that was accepted by relevant scientists. In addition, IMSA succeeded in bringing stakeholders together and in promoting dialogues and building relationships. However they also succeeded in reframing the conflicting discourses into a discourse that was acceptable to all but the cockle fishermen. Another important factor was that in particular the director of IMSA had direct access to political actors and used these contacts to ask for attention to the Wadden Sea at important events, such as coalition negotiations. IMSA tried to make their activities transparent to stakeholders by publishing their activities and information about the meetings on their website and by building close relationships with stakeholders. Sufficient resources were guaranteed by the sponsoring of the project by the NAM. Behind the scenes IMSA followed public statements and activities of the stakeholders involved to track changes in discourses and tried to influence in particular politicians by asking for media attention. However, IMSA also appeared to have had an important impact on what we labelled *exogenous factors*: they did not only advice the cabinet to install the Meijer commission, but also played an important role in that commission well, and they mobilised scientific knowledge available and acted as an interface between science and the Wadden Sea stakeholders.

Summarising, many of the conditions for discourse reflections and modifications identified in Section 3 applied to the Wadden Sea case. We identified a few new conditions, accentuated with ** and written in *Italic* in Fig. 1, as well:

- Contacts of the mediator with (political) stakeholders (i.e. related to the *mediator*),
- Pressure from within organisations of which individual persons are part of *not* to publicly make discourse modifications known (which can be considered an *exogenous factor*);
- Pressure from outside to make such modifications known (ditto).

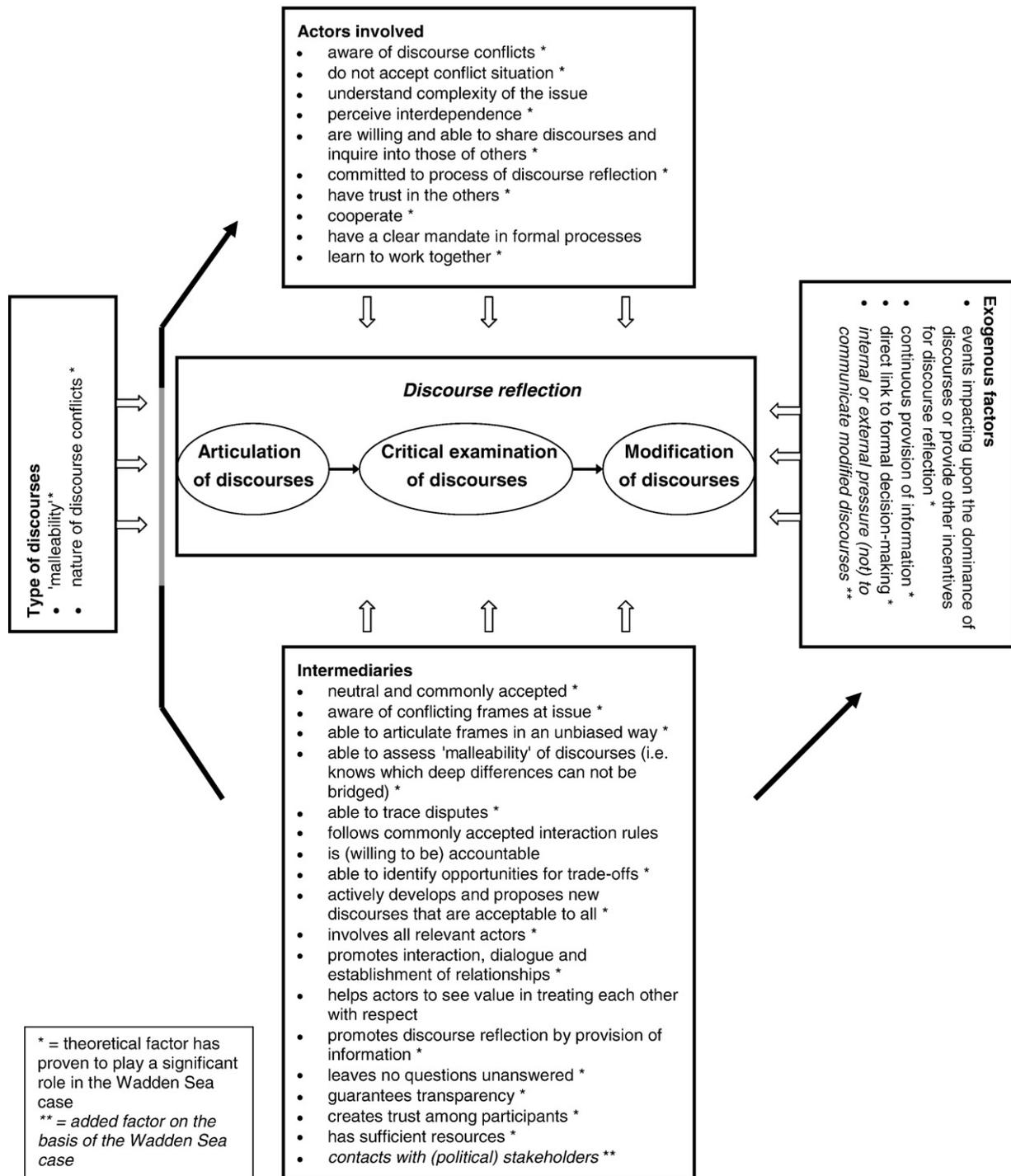


Fig. 1. Presence of theoretical conditions favourable for discourse reflection in the Wadden Sea case.

The case also shows that between the four explanatory groups of conditions interrelations can be identified.

5. Conclusions and reflections

In this paper we argued that the risk of EA not being used to inform and underpin decision-making will probably increase in the case of discourses incongruent with EA outcomes, the EA process or on the value of EA as a decision-support tool. Encouraging actors to critically reflect upon their discourses in the light of EA may promote a modification of discourses into ones that are more susceptible to EA. Based on empirical evidence in scientific papers from various disciplines, we explored a

variety of conditions favourable for such discourse reflection. Our case study on Wadden Sea decision-making processes during which multiple EAs were conducted shows how the conditions identified allow for a more systematic analysis of conditions for discourse reflection in concrete situations and the identification of new ones. In view of the growing body of literature on factors influencing the contribution of EA to decision-making, we realise that promoting discourse reflection in the context of EA is only one of the foci that scientists can employ in analysing specific EA practices. Yet, in particular in the case of controversies we expect it to yield additional insights.

What can EA practitioners learn from the insights provided this paper? Looking back at the case study, we see that initially scientists

had unsuccessfully tried to convince politicians, NE-NGOs and other stakeholders about the ecological impacts of gas mining and cockle fisheries as reported in various EAs. A mediator however succeeded, with the help of favourable exogenous conditions. Why? As our analysis of the case shows, an important explanation is in the way in which the mediator put the debate in a wider perspective and in this way attempted to 'reframe' original discourses into one that was acceptable to almost all actors. EA practitioners may follow this strategy or start coalitions with mediators, who are accepted as neutral third parties by the actors involved. For this purpose EA practitioners need to become aware of discourses in the arena they are active in and that relate to the policy subject to EA and to the role EA is intended to play (i.e. a tool for the explicit consideration of environmental concerns in decision-making, rather than an administrative burden). In this way they can identify possible incongruencies in an early stage and try to overcome them. The latter can be achieved by promoting discourse reflection among stakeholders, but also by discourse reflection at the part of EA practitioners. The Brent Spar controversy briefly discussed in Runhaar (2009) for instance shows how EA practitioners may assess ecological impacts in a way that is one-sided and incomplete in the eyes of important stakeholders (in the Brent Spar case, Greenpeace), resulting in EA becoming controversial itself. And that is something that most probably will not be favourable for EA to positively contribute to decision-making.

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