

Maximizing the Policy Impacts of Public Engagement: A European Study

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1 maximizing the policy impacts of Public Engagement: A European study

2
3 Steven B. Emery, Henk A.J. Mulder, Lynn J. Frewer

4 **Abstract**

5 There is a lack of published evidence which demonstrates the impacts of public engagement (PE) in
6 science and technology policy. This might represent the failure of PE to *achieve* policy impacts, or
7 indicate a lack of effective procedures for *discerning* the uptake by policy-makers of PE-derived
8 outputs. While efforts have been made to identify and categorize different types of policy impact,
9 research has rarely attempted to link policy impact with PE procedures, political procedures, or the
10 connections between them. In this paper we propose a simple conceptual model first attempt to
11 capture this information, based on semi-structured interviewing with both policy-makers and PE
12 practitioners. A range of criteria are identified to increase the policy impact of PE. The Role of PE
13 practitioners in realizing impacts through their interactions with policy-makers in the informal ‘in-
14 between’ spaces of public engagement is emphasized. However, the potential contradictions
15 between the pursuit of policy impacts and the more traditional conceptualizations of PE
16 effectiveness are discussed. The main barrier to the identification of policy impacts from PE may lie
17 within policy processes themselves. Political institutions have responsibility to establish formalized
18 procedures for monitoring the uptake and use of evidence from PE in their decision-making
19 processes.

21 **Keywords**

22 Public engagement; policy impact; practitioners.

24 **1 Introduction**

25 There is widespread recognition in the literature of a lack of credible evidence to measure and
26 demonstrate the policy impacts of public engagement (PE) in science and technology (Abels 2007;
27 Kurath and Gisler 2009; Pidgeon and Rogers-Hayden 2007; Powell and Colin 2009; PytlikZillig and
28 Tomkins 2011; Rowe and Frewer 2000; Wathen et al. 2011; Wilsdon et al. 2005). There are various
29 reasons as to why demand for increased societal inclusion into policy processes has arisen, including,
30 *inter alia*, institutional perceptions of a general decline in societal trust in the motives of institutional
31 actors (in particular in industrial and regulatory sectors) regarding policy and policy implementation
32 (Houghton et al. 2008; Petts 2008; Wagner and Armstrong 2010). There is simultaneously increased
33 societal demand for transparency and inclusivity in decision-making processes regarding policy
34 development. In addition, the consideration of a broader range of expertise in assessing different
35 policy options might lead to better outcomes, as more evidence (lay knowledge, perceptions, and
36 preferences) is considered as part of the decision-making process (Reed 2008; Renn 2006). Without
37 substantiated evidence of policy impact, it is unclear whether the deficiency represents the *failings*
38 of PE to actualize policy impacts, or whether it simply indicates that the means for *discerning policy*
39 *impact* are poorly developed. There is certainly anecdotal evidence of policy impacts arising from

40 PE, which suggests that PE does have the potential to influence policy-making. What remains
41 limited, however, is an understanding of the causal relationships between PE and policy, as well as
42 the potential contradictions between them in their alternative quests for legitimacy. It is important
43 for both engagement practitioners and policy-makers to demonstrate policy impacts in order to
44 better evaluate the effectiveness of PE, allow monitoring and continuous improvement of
45 engagement practices and their policy connections, demonstrate the policy-worth of PE, and
46 enhance its reputation and credibility in the eyes of policy-makers and funders.

47 We review the literature on the relationship between PE and policy impacts to inform a conceptual
48 model, which is refined and substantiated using empirical evidence derived from interviews with PE
49 practitioners and policy-makers. Bringing together a range of criteria, and relating them to the
50 likelihood of impacts being realized, allows us to offer recommendations that consider the issues,
51 contexts and potential contradictions between the characteristics of PE mechanisms, of policy
52 processes and the features linking them together. We conducted semi-structured interviews with PE
53 practitioners from across Europe, as well as policy-makers, primarily from the European
54 Commission. This approach, which transcends the interface between PE practice and policy,
55 highlights interactions and relationships across these areas, which have been given insufficient
56 attention in the evaluation literature. It also allows for a critical reflection on the outstanding
57 barriers to further integration between PE and policy.

58

59 **2 The problem of policy impact**

60 The problem of identifying policy impacts arises because of the difficulty for PE practitioners and
61 evaluators to track PE outputs once they have entered the policy realm; the time lag between
62 engagement (and evaluation) activities and potential policy outcomes; the numerous direct and
63 indirect ways to realize policy impact, and; because PE impacts are not easily differentiated from a
64 plethora of other potential influences on political decision-making. This has meant that the most
65 significant focus of attention in the PE evaluation literature has been on the evaluation of PE
66 procedures and mechanisms, which may be used as surrogates for evaluating effectiveness in terms
67 of outputs (Abels 2007; Rowe and Frewer 2004).

68 The concept of policy 'resonance' rather than impact has been proposed to account for difficulties in
69 recognizing impacts and to avoid implying a linear model of engagement (Joly and Kaufmann 2008).
70 The idea of resonance recognizes a propensity to influence, as opposed to the achievement of a
71 tangible and measurable outcome. Resonance, therefore, might be a useful term for anticipating
72 the *likely* future effect of PE mechanisms in the policy realm when there is no direct means of
73 measuring that impact. However, if the remit of evaluation is to be extended into the sphere of
74 political process, if impact is employed in a way that does not imply finality or closure of an
75 engagement process, and if we are able to evaluate retrospectively – given enough time for changes
76 to be discerned – then impact remains a useful term for evaluating public engagement in terms
77 familiar to a range of different audiences.

78 Researchers in certain fields (e.g. Technology Assessment) have tried to typologize policy impacts
79 arising from societal engagement (Decker and Ladikas 2004; Hennen and Ladikas 2009). They divide
80 impacts into three principal headings: raising knowledge, forming attitudes and opinions, and

81 initiating actions. The first two are 'conceptual impacts' whereas the last encompasses 'instrumental
82 impacts' (Phillipson et al. 2012). The typologizing of policy impacts is a useful first step towards
83 monitoring and understanding them. However, without linking those impacts to the features and
84 characteristics of the realms of PE it is difficult to offer recommendations to either policy-makers or
85 practitioners for how to improve PE and maximize its policy impact.

86

87 **3 A simple conceptual model for examining and evaluating the policy impact of public engagement**

88 Notwithstanding the lack of information about the relationship between PE and policy, and
89 difficulties in studying behind-closed-door policy-making processes, the literature suggests some
90 important lessons and reflections on this relationship. To our knowledge there has been no previous
91 attempt to draw together insights embedded in the wider literature and categorize them according
92 to their spatiotemporal and causal forebears: i.e. to examine the 'wheres', the 'whens' and the
93 'whys' of PE-derived policy impacts. This lack of comparative or systematic attempts to examine the
94 relationship between procedures and impacts was also identified by Hansen and Allansdottir (2011),
95 who conducted a comparative analysis of participatory technology assessment in relation to policy
96 impact. They acknowledged, however, that they were only able to comment on the
97 presence/absence of policy impact in different contexts, rather than on the differences attributable
98 to procedural design.

99 The insights elaborated in this section are derived from the PE literature relating to policy impacts or
100 outcomes. We also acknowledge that there is a much wider literature on relevant topics beyond the
101 strict limits of PE. The purpose of retaining a focus on PE is to ensure that the criteria developed
102 remain relevant to informing the debate on the links specifically between PE and policy, as well as
103 developing a framework for examining these links. Based on our interpretation of the literature, we
104 divide the relationship between PE and policy impact into three inter-linked areas: i) the features
105 and nature of the PE mechanism; ii) the features and nature of the policy-making process, and; iii)
106 the features linking the PE mechanism with policy-making (Figure 1). We now examine the three
107 realms in more detail, according to the barriers and opportunities for PE-derived policy impacts.

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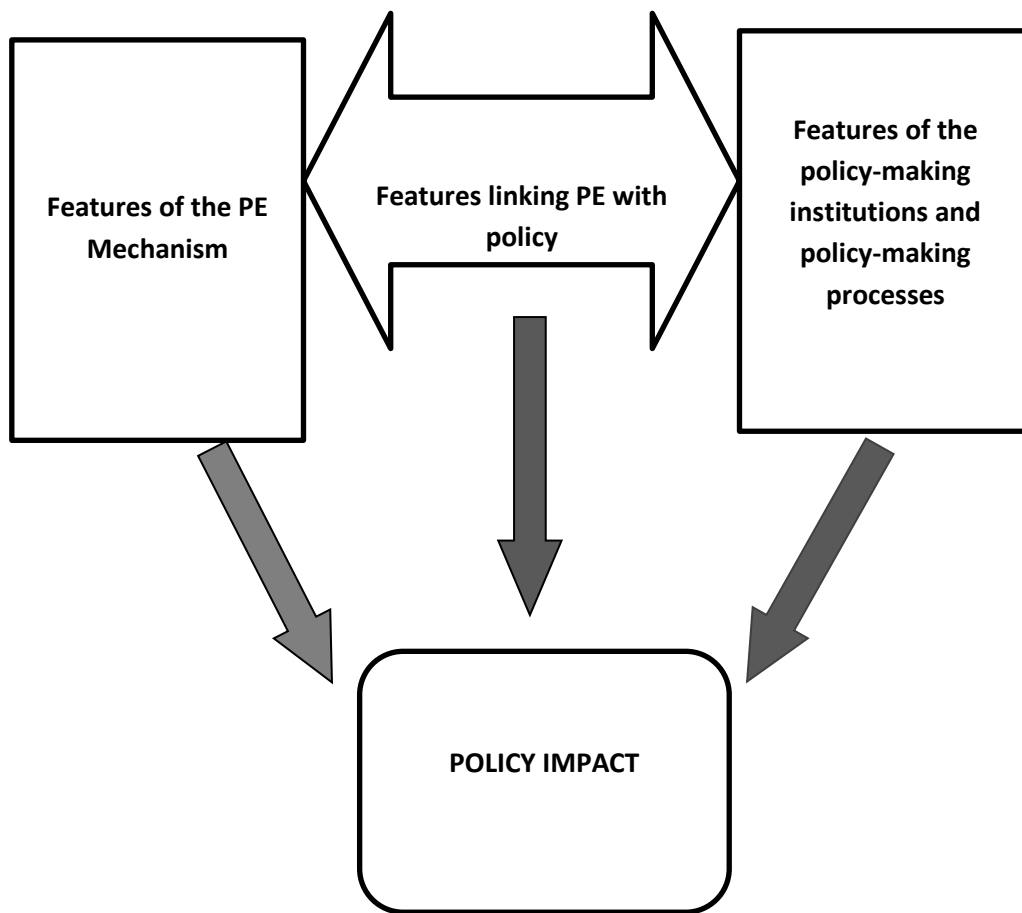


Figure 1: The three realms of PE-derived policy impact.

3.1 Features of the PE Mechanism

In Rowe and Frewer’s (2000) framework for evaluation, the most directly relevant criteria associated with PE mechanisms’ policy impact are the *criterion of influence* and the *criterion of task definition*. These criteria stipulate that realizing policy impact is more likely where there is an upfront agreement on how the outputs of PE will be used and how they will be integrated into policy-making (Chilvers 2008). Pidgeon and Rogers-Hayden (2007: 205), meanwhile, stress the importance of the comprehensibility of the recommendations arising from PE, and, in particular, their utility to policy-makers.

The classic evaluation literature also stresses the importance of the fairness, legitimacy and accountability of PE mechanisms. Such criteria relate to the central tenet of deliberative democratic processes; namely that their application should lead to better policy-outcomes. The problem for evaluators is that fairness and legitimacy are not automatically imbued on a process incorporating PE, but are correlated with the intents of the persons involved (Rowe and Frewer 2005). Moreover, even the fairest of processes in terms of representativeness and accountability may fail to translate into discernible policy impacts. Typically, legitimacy is considered in terms of the people participating in the PE process. Less attention has been paid to PE legitimacy in the eyes of policy-

146 makers, whose perceptions on legitimacy might be more likely to have a bearing on the uptake of PE
147 outputs into policy-making (see also Section 3.3). This is particularly interesting because what
148 policy-makers and publics consider as legitimate may differ or be incongruent. For instance, a PE
149 mechanism could fail to meet generally agreed upon evaluation criteria, but still have a policy
150 impact, if it was perceived as legitimate in the eyes of policy-makers. Conversely, a well-executed
151 and fair mechanism might not result in discernible policy impacts, if the policy-makers themselves do
152 not perceive it as legitimate.

153 The appropriateness of the scale, topic and timing of engagement are potentially relevant to policy-
154 making. At any particular moment there will be topics of more interest to policy-makers than
155 others. This links to the timing of engagement, and it is normally seen as most useful when
156 undertaken as early as possible in the policy-making process, although it could also be applied to the
157 selection of policy alternatives once these have been identified (König et al. 2010). It is feasible,
158 therefore, that an otherwise well-executed engagement exercise might not realize policy impacts if
159 it is mistimed (Abels 2007). For this reason, Joly and Kaufmann (2008) argue that policy resonance is
160 more likely where policy engages with society in the creation and maintenance of an on-going
161 dialogic space, as opposed to discreet, standalone engagement events. These authors also raise the
162 issue of scale. The outputs from public engagement may have a greater impact at the level of policy-
163 making appropriate to the issue in hand, which has consequences for the nature and scale of the PE
164 mechanism itself (Joly and Kaufmann 2008). For example, a local-level PE might be more likely to
165 lead to locally relevant policy outputs; it could equally give rise to regionally or nationally important
166 outputs. The focus, therefore, should be on the appropriate use of PE outputs, in terms of where
167 their impact will be most relevant.

168 Two final features of the PE mechanisms relate to the practices and capacities of PE practitioners.
169 Fung (2003) argues that policy impacts are more likely if PE practitioners are actively involved in
170 monitoring those impacts. By doing so, practitioners are more likely to consider policy impact in the
171 process of designing, implementing and communicating the PE process. Powell and Colin (2009:
172 335), meanwhile, emphasize the political capacities of PE practitioners in terms of: i) their
173 understanding of the policy context; ii) their understanding of the political processes; iii) their
174 knowledge of which political actors/institutions to engage with, and iv) their ability to communicate
175 effectively.

176 **3.2 Features of the policy-making processes and institutions**

177 Little is known about the influence of political *procedures* on the uptake and use of PE derived
178 outputs in policy-making. This may be on account of the variety of procedures in place in different
179 contexts, or represent the lack of access by practitioners and researchers to the inner workings of
180 bureaucratic institutions. This tends to result in much of the focus on policy-making's role in the
181 uptake and legitimacy of PE outputs being related to policy-makers' *motives, perceptions* and
182 *attitudes*. Powell and Colin (2009), for instance, argue that engagement that is motivated by the
183 political desire to gain public acceptance of an issue does not buy into the ideals of PE and cannot,
184 therefore, lead to legitimate policy impacts.

185 Since the legitimacy of PE and its outputs in the eyes of policy-makers has not been studied as a
186 potential determinant of PE impact, it merits further discussion. . Legitimacy might relate to the
187 validity of the mechanism employed, to the societal groups represented (together with their

188 perceived interests) and to the nature of the outputs produced. This recognizes that the outputs are
189 policy appropriate, and that that policy-makers might consider it an infringement of their
190 responsibility if the recommendations arising are too prescriptive regarding subsequent actions
191 (Hennen and Ladikas 2009). Political legitimacy of PE is sometimes inferred by the impact of
192 engagement on the knowledge and attitudes of the wider public (Krabbenborg 2012).

193 Finally, there is an expectation that policy-makers will, at least to some extent, take PE outputs into
194 account in their decision-making (Fung 2003). Researchers have less frequently considered a
195 methodology for determining *if, to what extent, how* and *why* this does, or does not, happen. The
196 political or ‘organizational’ capacity of institutions engaging with PE has been highlighted as an
197 important but overlooked element in the evaluation literature (Jabbar and Abelson 2011).

198 **3.3 Features linking policy-making with public engagement**

199 Where PE is formally attached to the institutionalized political agenda, it is more likely that its
200 outputs will be assimilated into decision-making (for instance, where public
201 consultation/engagement is formally incorporated into policy-making through legislation and/or
202 adherence to agreed standards). This links in to arguments about PE needing to be seen as part of a
203 process of ongoing engagement to allow genuinely deliberative interaction between the public and
204 policy (Abels 2007; Joly and Kaufmann 2008; Wilsdon et al. 2005).

205 Krabbenborg (2012) showed the importance of treating the features *linking* PE with policy-making
206 separately. In the case of the Dutch national dialogue on nanotechnologies, the dialogue was seen as
207 legitimate by policy-makers since it was government-initiated, aimed at informing policy and
208 sponsored with 4.5 million Euros. The PE activities themselves were very diverse, organized bottom-
209 up, and received sufficient funding. However, outcomes, i.e. ethical and societal issues raised by
210 participants, were not communicated to policymakers. The organizing committee instead focused on
211 traditional outreach factors to demonstrate legitimacy (number of people reached; increased
212 knowledge and awareness). Thus the *means* by which links were formed between PE and policy-
213 makers was the primary barrier to achieving policy impact.

214 A very direct way for policy makers to be involved in knowledge production and public interaction is
215 through face-to-face participation in PE mechanisms (Rowe and Frewer 2005). This may improve
216 communication but also facilitate the development of interpersonal relationships (and trust) which
217 leads to mutual learning. Such interaction would have to be sensitively handled, however, since the
218 presence of policy-makers at PE events could be seen as imposing, preventative of open discussions
219 and leading to potentially biased outputs, as well as increasing resource requirements.

220

221 **4 Findings: perspectives of PE practitioners and policy-makers**

222 We used the framework presented in Figure 1 to direct semi-structured interviews amongst both
223 policy-makers and PE practitioners. We conducted 14 telephone interviews, lasting between 40 and
224 80 minutes and involving seven PE “practitioners” and seven “policy-makers”. The sample of
225 practitioners came from members of the PERARES project (Public Engagement in Research and
226 Research Engagement in Society) and comprised practitioners affiliated with academic institutions
227 and/or NGOs. Interviews took place between June and August of 2012. “Policy-maker” refers

228 broadly to civil servants with direct, inside experience of the policy-making process. Our sample
229 comprised predominantly of civil servants from the European Commission DG Research and
230 Innovation and one former EU and UK civil servant. This sample draws heavily on experience in PE in
231 the process of research, which must be emphasized when considering the wider relevance of the
232 findings. While respondents drew on their own experiences, they were asked during interviews to
233 comment on the relationship between PE and policy-making broadly, rather than in relation only to
234 research policy. It is also worth noting that the majority of the policy-maker respondents had prior
235 experience of working within/with other policy DGs in the European Commission.

236 The interviews were coded using thematic analysis, according to both the framework presented in
237 Section 3 and themes emerging inductively from the data itself (Boyatzis 1998). The themes were
238 developed through listening to recorded interviews, with relevant sections transcribed according to
239 their use. In the following overview of findings from the interviews we denote practitioner
240 perspectives by the prefix “PR” and policy-makers by the prefix “PO”.

241

242 **4.1 Features of PE Mechanism and Approach**

243 **4.1.1 Scale, topic and timing**

244 Participants expressed the view that the relevant scale at which PE took place should depend on the
245 particular topic under consideration and, in particular, at the scale of decision-making at which that
246 topic can be best addressed (e.g. a local topic addressed at the local level and a topic of international
247 importance at the international level). In terms of scale, both PE practitioners and policy-makers
248 emphasized that local level engagement exercises were more likely to have (local) policy impacts.
249 There was also a suggestion that the benefits would be greater since there was greater contextual
250 sensitivity and cognizance of the interaction of multiple policy-objectives at the implementation
251 coalface:

252 To build capacity like that locally, or regionally is really where you can make a difference.
253 And it's there where policies are implemented ... and ... are [often] implemented
254 together with other policies, that may even contradict each other at that particular level.
255 So engaging citizens to look at these different policies together for their region, for their
256 area, in the context in which they live, I think that's where ... public engagement could
257 have a much, much greater impact (PO3).

258 They did not suggest, however, that engagement at other scales could not deliver policy impacts.
259 Indeed, policy-makers from the European Commission stressed that for engagement to directly
260 affect policy-making at the EU level, it needed to be pan-European in nature. This suggests that the
261 appropriateness of the scale of engagement for the issue in hand, rather than the scale *per se* is the
262 decisive factor regarding impact. Policy-makers also stressed that it was easier to *discern* policy
263 impacts at the local level but this did not mean that Europe-wide engagement activities did not have
264 impact.

265 Several participants emphasized the importance of conducting engagement across different scales,
266 to maximize the quality and impact of the process. For that reason a number of the interviewees
267 praised the PERARES project for addressing scalar problems by integrating Science Shop style

268 engagement at the local level with online debates at the international level.¹ The participants
269 highlighted that engagement that dealt with controversial topics already under public scrutiny are
270 more likely to influence policy-makers. It was also argued that this type of issue should probably
271 have been addressed by public engagement earlier in the policy-process to prevent the escalation of
272 controversy in the first place. The interviewees stressed that how a topic is *framed* is important for
273 ensuring policy impact (PR7; PO2). PE practitioners therefore have the most responsibility
274 to communicate the relevance of their PE work in a manner that is relevant to the policy context.

275 Respondents also pointed out that the timing of engagement in relation to the cycle of policy
276 development is critical (PR2; PO3). They highlighted that longer-term engagement activities are
277 more likely to lead to policy impacts through a slower process, as ‘numerous small interventions’
278 lead to a critical mass of PE-derived evidence. The short-term nature of project-style PE was
279 recognized, particularly by policy-makers, as an impediment to this (PO2; PO5), which supports the
280 need for engagement to be seen as part of a continuous process.

281 There are various ways in which the topic, scale and timing of engagement interact that can have a
282 bearing on policy impact. Ultimately policy impact will be heightened when the topic, scale and
283 timing of engagement are optimized on the basis of the policy-contextual awareness of those
284 commissioning and undertaking the PE.

285 **4.1.2 Monitoring and evaluation**

286 Policy-makers and PE practitioners both suggested that there need to be better tools (quantitative
287 and qualitative) for PE practitioners to monitor the policy impacts of their activities (PR2; PR7; PO4).
288 One PE practitioner pointed out that although they had seen a discernible policy change following a
289 recent public engagement, they had absolutely no way of knowing to what extent *their* activities had
290 led to this policy change (PR4). This concern gets to the heart of the evaluation problem.
291 Practitioners need to trace their outputs for policy impact, and monitor and evaluate of the use of
292 information derived from PE once it has entered the policy realm. Access to this realm for PE
293 practitioners remains a considerable problem and highlights the need for greater transparency and
294 monitoring within policy-making institutions themselves (see Section 4.3).

295 **4.1.3 Approach to public engagement and perceived legitimacy**

296 The interviewees did not agree that one approach or mechanism adopted to undertake PE was any
297 more likely to have a policy impact than another. They stressed, however, that the perceived
298 credibility of the approach in the eyes of policy-makers had an important bearing on the uptake of
299 PE-derived evidence (PO2). Furthermore, there was a sense from the policy-makers that the
300 limitations of PE outputs are not sufficiently communicated to allow them to make a judgement on
301 its credibility as a source of information (PO1; PO7):

¹ Face to face and online dialogues are coordinated to articulate research questions that influence research policy at the institutional level (by forwarding research questions to Science Shops) and at the national/European level (by forwarding research agenda issues to science policy-makers). Simultaneously, the approach will inform *Science in Society* policy-making.

302 There is [sic] so many uncertainties in the way it is done, in the methodologies, in the
303 who is doing it, and the how, that it is very hard to have real legitimacy of such processes
304 (PO7).

305 Policy-makers recognize a need to be able to assess the reliability of opinion-based evidence
306 alongside other sources of information they use to make policy-decisions. PE practitioners need to
307 communicate the limitations of their work better. Policy-makers will then be able to judge it's the
308 reliability and representativeness of PE as sources of 'evidence'. One way in which the credibility of
309 PE can be enhanced in the eyes of policy-makers is through its integration into a research program.
310 The PE outputs will then be research outputs.

311 If we as researchers say something [like]'this is the result of our research, which is an EU
312 FP7 research', then the local decision-makers cannot just simply say you are stupid, you
313 are dumb and value-driven, and so on, which they like to say to activists, so yeah,
314 research has, in this sense ... social power, or policy-forming power (PR4).

315 The PERARES project explicitly seeks to increase the engagement of the public and CSOs in the
316 setting of research agendas, and so this finding may not be surprising. Nevertheless, those
317 interviewed had varied backgrounds and experiences with different forms of PE. There was also
318 wide support for PE through research amongst the policy-makers, who viewed it as a potentially
319 more legitimate – and hence policy-appropriate – form of engagement (PO1; PO3; PO6; PO7).

320 **4.1.4 Practitioner skills and attributes**

321 Policy-maker PO3 highlighted the enormous diversity in the approaches to PE adopted, the outputs
322 produced and the resources committed to engagement activities commissioned by the EU. She
323 suggested that this appeared to be largely dictated by who was responsible for undertaking the PE.
324 Furthermore, there appeared to be no standards for consistently undertaking PE or for generating
325 outputs from it. This was supported by policy-maker PO1 who argued that PE practitioners need to
326 be trained experts to make the process more 'efficient' and credible in the eyes of policy-makers
327 (see also Section 4.1.3). The issue of perceived legitimacy was also raised by a practitioner who
328 pointed out that, because his organization was associated with an oppositional political party in his
329 country, the outputs of his engagement were overlooked by the ruling party (PR4). There was some
330 acknowledgement of the importance of skilled practitioners from the PE practitioner community;
331 although they pointed out that effective PE can potentially involve a vast array of different skills that
332 any one person might not possess (PR2). Another practitioner expressed caution at the idea of
333 professionalizing PE practice through regulation, standards and qualifications since she felt this
334 would lead to a loss of the more innate personal qualities and genuineness of motive of PE
335 practitioners that are also important qualities for successful PE (PR7).

336 **4.2 Features Linking PE with Policy Making**

337 **4.2.1 Integration of policy-makers and policy-making into PE**

338 Both practitioners and policy-makers emphasized the need for explicit integration between PE and
339 policy-making if the policy impact of PE was to be maximized (PR1; PR2; PR3; PR6; PO1; PO2; PO4;
340 PO6). Policy-commissioned or policy-driven PE exercises were identified as the most likely to lead to
341 discernible policy impacts as policy-makers would have a known and direct interest in the outcome

342 of the research, and the engagement would have been framed according to the policy context.
343 Practitioners tended to suggest that it was important for PE to be policy *driven* (PR2; PR6), whereas
344 policy-makers stressed the importance of PE being policy *initiated*. In other words, policy-makers
345 appeared to be more likely to take heed of the outputs of an engagement exercise that had been
346 undertaken at their request, and at an appropriate time to fit into the policy-making cycle associated
347 with a specific issue. One policy-maker, for instance, suggested that even if PE had already been
348 undertaken about a particular issue, it would be likely that the EU would want to commission its own
349 PE, according to its own terms if it was deemed necessary for the policy process (PO1).

350 The direct involvement of policy-makers within the PE activity itself was identified as a way for policy
351 and PE to be better integrated. This could be through direct face-to-face involvement with the
352 public during an event (depending on the PE approach taken), or through involvement in an advisory
353 or steering-group to ensure the relevance of the PE to the policy process. Both practitioners and
354 policy-makers were generally supportive of this idea in principle, though the practical limitations (for
355 example, in terms of time commitment or other resources) were identified by policy-makers as
356 potentially problematic. One practitioner, who conducts Science Shops² which involve municipal
357 policy-makers on a support committee, emphasized that it was important to involve policy-makers
358 who are positive about the benefits of public engagement:

359 You mainly get the ones who are interested in public engagement, and the ones who are
360 not interested – I'd rather leave them out. You need people who are interested or
361 enthusiastic about this and then they can try to make the others in their own
362 organization interested; it's [easier] for them, than for me to do that (PR3).

363 Policy-maker PO4 provided an example of an engagement process that directly involved policy-
364 makers in order to have a meaningful impact on policy. The project involved face-to-face interaction
365 between a range of stakeholders and policy-makers and, as well as directly influencing policy, it
366 succeeded in creating a common interest between disparate stakeholders, and established
367 relationships between stakeholders and policy-makers that would outlast the project. This is
368 particularly important given the problems identified with the finiteness of the 'project' approach to
369 PE (See Section 4.1.1).

370 **4.2.2 The informal interaction of PE practitioners with policy-makers**

371 Respondents suggested that informal interaction between policy-makers and PE is potentially more
372 influential than formal interaction. They identified the ability of PE practitioners to engage with

² A Science Shop provides independent, participatory research support in response to concerns experienced by civil society. Science Shops are not "shops" in the traditional sense of the word. They are small entities that carry out or mediate research in a wide range of disciplines – usually free of charge – on behalf of groups of citizens and civil society organizations. The fact that Science Shops respond to civil society's needs for expertise and knowledge is a key element that distinguishes them from other knowledge transfer mechanisms. Science Shops are often, but not always, linked to or based in universities, where research is done by students as part of their curriculum – under the supervision of the Science Shop and other associated (university) staff (www.scienceshops.org).

373 policy-makers, forge relationships and communicate with them in an appropriate fashion as
374 important.

375 Practitioner PR7 drew attention to what she called ‘the soft end of public engagement’ which, as a
376 practitioner, ‘you can’t necessarily put in your annual targets ... and be evaluated against’. For her,
377 this entailed interacting with policy-makers in informal settings where it is possible to ‘capture
378 hearts and minds’ rather than putting something on their agenda. She emphasized the importance
379 of the practitioner acknowledging such activities and making time to engage in them:

380 The [PE] initiatives that were more successful often were where they placed slightly more
381 of a priority on doing that informal policy-work, and ... I think it’s one of those things too,
382 that if you don’t ... properly build it in and believe in your own mind that it is genuinely a
383 part of the work, ... you get caught up with something else and you ... don’t go along to
384 that conference or you don’t go along to that meet and greet, or ... *you miss the spaces*
385 *where you could be doing that work* (PR7, emphasis added).

386 She also reflected that such practices might be more important than having a formal interaction that
387 was not on the terms of the policy-maker, or might not be the best moment to influence them:

388 You could fire a policy maker into those kinds of things [a PE event] and if they were the
389 right person that would be grand and it could be somebody else who felt that they just
390 had to be there, and ..., you know, has three things on their desk that they’re trying to
391 finish and they’ve been deputized and sent there by somebody and ... they’re not in the
392 right frame of mind. Whereas actually if you went along to an event that they were
393 running and just happened to have a conversation with them for two minutes you might
394 actually get more out of that than looking at something for a full day that you were
395 running (PR7).

396 Policy-maker PO2 stressed that personal relationships can be built-up with policy-makers, which also
397 facilitates the building of trust and likelihood of PE practitioners ‘being listened to’:

398 I’ve always said ... really what it needs is the [practitioners] to actually find a way of
399 talking to the policy-people in the departments, ... so getting to know them, talk to them,
400 find out how they do things and then ... if there’s somebody you know and you’ve got a
401 question: you for example, if I’m working in a government department and you know me
402 ... you can say to me ‘look, I’ve got this idea, have you ever thought about this’, and while
403 they’re doing this consultation I might think ‘oh that’s a good idea’ – but if I didn’t know
404 you I probably wouldn’t – so its contacts (PO2).

405 Moreover, practitioners can also more quickly and better understand how the outcomes of PE need
406 to be translated and communicated in an appropriate fashion for their assimilation into policy-
407 making by building personal relationships with policy-makers. This is because by being in their
408 ‘midst ... you can pick these things up much more easily’:

409 I mean for policy things it’s got to be pretty brief normally ... if you can summarize
410 something – almost like an abstract but a bit more punchy, then that’s a good way of
411 presenting it, and that’s the way it tends to get across but *it always works better if you’ve*

412 *got personal contacts to do it with*, I think because otherwise you send a report to a
413 government department and it goes straight on a shelf (PO2, emphasis added).

414 The informal interactions between practitioners and policy-makers need to be given greater
415 attention by PE practitioners. The need for PE practitioners to be more politically aware and
416 networked-in to facilitate the communication of PE outputs into a policy useable and trusted format
417 is also emphasized by these observations.

418

419 **4.3 Features of Policy-Making**

420 **4.3.1 The Nature of policy-making and the political procedures dealing with public engagement**

421 Many of the interviewees argued that the nature of decision-making, the nature of political
422 institutions, and the nature of political procedures represent a barrier to both realizing PE impacts
423 and to being able to delineate and monitor those impacts (PR3, PR4, PR7, PO1, PO2, PO3, PO6). It
424 was pointed out, for example, that decision-making is based on so many different factors that it is
425 difficult to know and monitor the extent to which a PE process has influenced decisions:

426 Policy-makers at the end of the day will make a political decision, of which scientific
427 evidence is one factor, public opinion is another factor, economics are another factor,
428 pure politics is another factor ... and so on. And so there's all those things and you can
429 see it in different situations there comes a judgment as to which is most important (PO2).

430 Furthermore, policy-makers often operate under incredible pressure with insufficient resources to
431 utilize all of the information that is available to them. Even if the political will to undertake PE exists,
432 insufficient resources could limit the actual influence of PE outputs (PR7, PO3). The temporal nature
433 of much policy-making, as well as the turnover of policy staff were also identified as potential
434 barriers to the realization of policy impacts. The respondents argued, that much policy-making is
435 still reactive and conducted in a short time frame, which may prohibit application of PE in the time
436 available before policy decisions are needed (PO1). This also means that PE which is not policy-
437 commissioned needs to be well-timed in order to coincide with a relatively short window in which
438 information is assessed in advance of a policy decision (See 4.1.1). In contrast, where policy-making
439 is a longer term and iterative process, the relatively rapid turnover of staff in policy-making
440 institutions may lead to a lack of continuity in the relationship between PE and policy-makers, and
441 make it difficult to track the impact of PE outputs when various different policy-makers have been
442 responsible for policy development (PO3). This also relates to the involvement of many different
443 people, with different roles and perspectives, in the decision-making process (See Section 4.3.3).

444

445 **4.3.2 Policy-maker attitudes and motives**

446 Several interviewees highlighted that realizing policy impacts from PE can be inhibited by the
447 motives and attitudes of individual policy-makers. In view of the diversity of evidence that policy-
448 makers must consider, they suggested that in many cases policy-makers simply pick-and-choose
449 what they want to take from the evidence available (PO2) and an individual, therefore, can be very

450 influential in terms of the evidence that gets used in policy (PR6). Within the European Commission
451 one policy-maker argued that:

452 The mainstream thinking is that public engagement can hamper scientific excellence ... or
453 could hamper innovation (PO4).

454 She went on to argue that such thinking is changing and, in particular the work of the Science in
455 Society work program in DG Research and Innovation argues vehemently for a view of PE as one
456 which “enriches excellence” and “promotes innovation”. In other situations, however, several
457 practitioners and policy-makers argued that public opinion often outweighs the evidence provided
458 by science.

459 Although differences in individual attitudes toward PE are important, the interviewees suggested
460 that their significance in light of other issues is not over-riding. One policy-maker from the EU
461 Commission argued that the attitudes of policy-makers is less important now, since the requirement
462 for PE is built into European legislation (PO1). Both practitioners and policy-makers in the Science in
463 Society work program of DG Research argued that they were seeing a genuine and positive shift in
464 attitudes towards PE. This suggests that it is the practical constraints placed on policy-makers
465 (4.3.1) and the need to engage with them in the right way and at the right time (4.2.2) are more
466 important than policy maker attitudes *per se*. There is still a lack of consistency across different
467 policy areas in the triggers for, and methods and means of, assimilating evidence from public
468 engagement. This suggests that greater consistency and procedural standardization within policy
469 processes might be more important than differences in attitude between individual policy-makers.

470

471 **4.3.3 Auditing and monitoring of PE-derived evidence in political institutions**

472 The lack of institutional procedures to monitor and report on the use of various evidences in the
473 decision-making process may be important (PO1, PO2, PO3, PO5, PO6, PO7). One policy-maker
474 argued that that this is partly because there is no record of how evidence gets used and re-
475 interpreted as it passes from individual to individual and between different policy realms and
476 institutions:

477 The Commission is only part of the story ... the minute that a policy document enters the
478 inter-institutional context – with the Parliament and with the Council – then ... it’s
479 nothing but a black box ... it’s very difficult to trace then, why were certain words
480 changed or why were certain sentences dropped or replaced with others and there’s very
481 little traceability and that’s, the traceability of the evidence is something that I think we
482 really need to work on (PO3).

483 Policy maker PO3 also suggested there is a lack of upfront accountability on the use of evidence in
484 the assessment of policy. She pointed out, that the policy impact assessment process used by the
485 EU is the place where the evidence used should be clearly “on display”, but a review she undertook
486 found that, in most cases no reference was made to the evidence used to make decisions. Another
487 European policy-maker suggested that the impact assessment itself was not the problem for
488 evaluating the use of evidence, but the timing of the impact assessment. He argued that the impact
489 assessment is usually required so early in the policy-making process that it does not account for the

490 changes that take place during subsequent policy development (PO7). Moreover, he pointed out
491 there was no system in place for retrospectively looking at past policies, and how evidence was, or
492 was not, integrated into these. . Even if information from PE was considered, but not taken up by
493 policy-makers, then, this does not preclude that PE from having had a policy impact. In the interests
494 of fairness and legitimacy, however, it is essential that (what might be justifiable) reasons for not
495 using the evidence from PE in policy making are made transparent

496 These findings suggest that there is a need for better mechanisms to identify the use of evidence in
497 policy formation in the first place (e.g. at the impact assessment stage); better traceability of how
498 evidence is used/dropped as it moves through the policy-making process, and; greater attention to
499 retrospective analysis of the use of PE in previous policy developments.

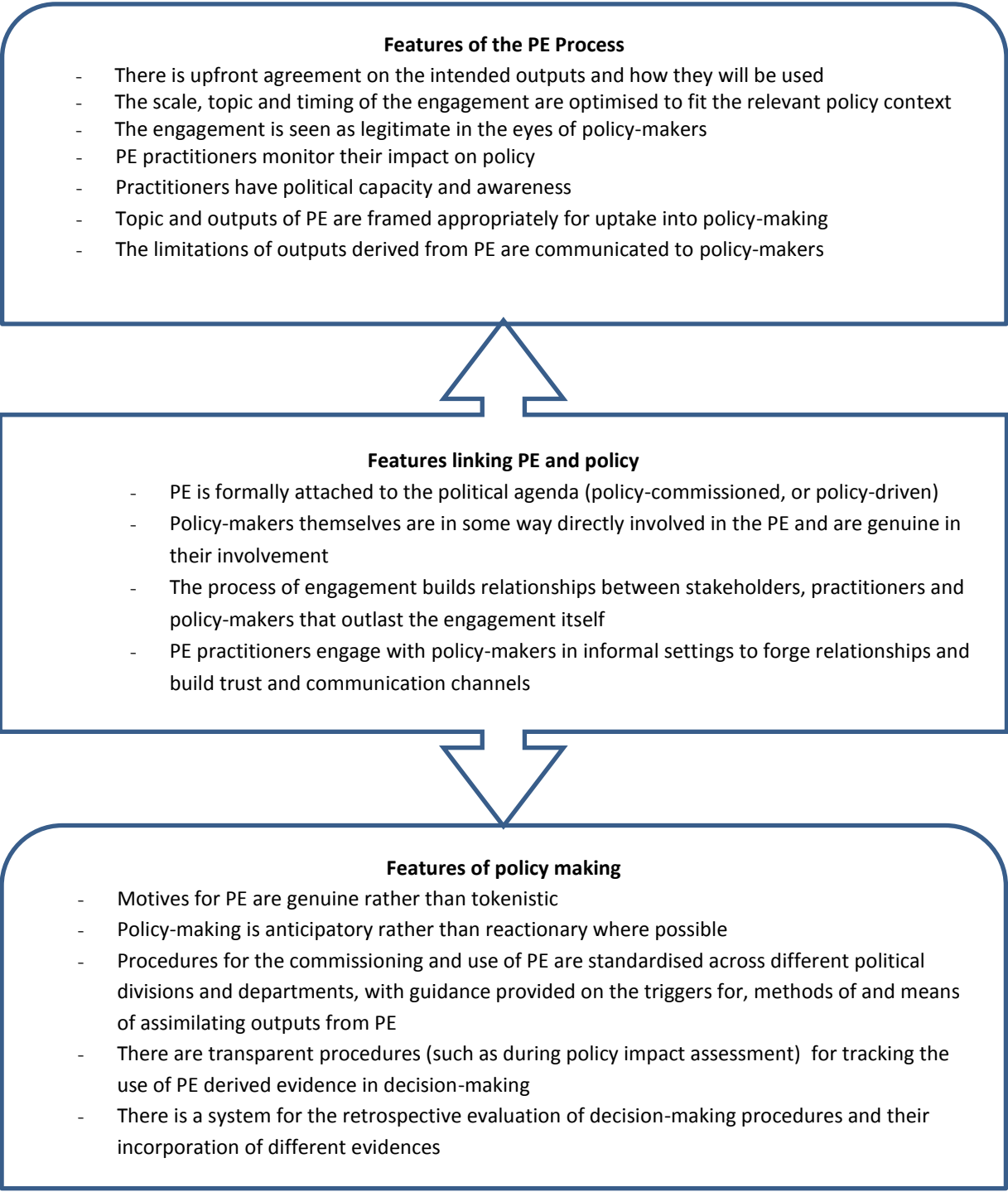
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501 **5 Discussion and conclusions**

502 Figure 2 provides a summary of the key features of PE mechanisms, of policy process and the links
503 between them that the review of the literature, and the above interview responses suggest will be
504 important if the impacts of PE on policy-making are to be maximized. We recognize that this does
505 not present a comprehensive set of criteria for evaluating engagement exercises and, indeed, there
506 will be different types of engagement and different reasons for undertaking engagement that will
507 place a greater or lesser degree of significance on the attainment of policy impacts. The features we
508 present in Figure 2, however, principally include those features that have been identified as
509 increasing the *likelihood* of impacts arising. In practice, policy impact will depend on a combination
510 of these factors, with some factors being more important in some situations than others. Equally,
511 there may well be a range of other issues over which PE practitioners, and even policy-makers, might
512 not have control. A focus on 'likelihood' recognizes this uncertainty and suggests that making public
513 engagement 'policy resonant' - inasmuch as it attempts to pre-empt likely future outcomes – may be
514 a more realistic objective. However, included within the list of features in Figure 2 is a range of
515 measures that would facilitate the capturing of information on discernible policy impacts that are
516 absent or lacking from current methods and procedures. While emphasis has been placed on the
517 attitudes and motives of policy-makers in realizing impacts from PE, we suggest that this detracts
518 attention from the lack of appropriate measures in place to monitor and evaluate use and uptake of
519 PE derived evidence within the policy realm. Attitudes toward PE amongst policy-makers may be
520 less significant now than they were ten to twenty years ago, and in the first instance, there is a need
521 to pay greater attention to the means of tracking and evaluating impacts in the policy realm.

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545 **Figure 2: Features to maximise and/or monitor the impact of public engagement on policy-**
546 **making**

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548 The lack of attention paid to political procedures has focused attention on individual attitudes
549 among policy-makers .In contrast, the emphasis on procedures within the evaluation of approaches

550 to PE has downplayed the significance of the role of individual practitioners in facilitating the
551 relevance of PE to policy-making. We have highlighted the importance of the informal work of PE
552 practitioners in the “in-between spaces” of engagement: that is, the efforts of practitioners to
553 establish relationships, build trust and open communication channels with policy makers. This has
554 several inter-related benefits. . These include: enhancing trust and perceived legitimacy between
555 the parties; enhanced awareness of the policy processes and constraints on the part of the
556 practitioner; a route to track outputs from PE within the policy realm, and; to help establish PE as
557 part of a long-term engagement with policy. In building lasting relationships with and between
558 policy-makers and the public it is clear that the skills and abilities of practitioners to engage and
559 interact informally are as important as their skills at organizing formal PE procedures. These more
560 informal skills have tended to be overlooked. The findings from this research point to a need for
561 greater recognition of the role of practitioners and for further research on their work in the more
562 hidden, in-between zones of public engagement.

563 As mentioned, the factors presented in Figure 2 cannot be taken as a formulaic set of ingredients,
564 which will automatically give rise to greater policy impact. There is a fundamental question raised
565 regarding the extent to which greater policy resonance equates with ‘better’ PE. Possible
566 incompatibilities between ‘traditional’ measures of PE effectiveness (Rowe and Frewer, 2004) and
567 the imperative to seek policy impacts need to be considered. . Legitimacy in the eyes of policy-
568 makers is likely to enhance PE’s impact on policy-making. However, it is essential that striving for
569 policy legitimacy is not at odds with the aims of the PE itself. PE practitioners have a duty to ensure
570 the legitimacy of the PE in terms of its representativeness and political neutrality. Deliberative
571 democracy has not taken the politics out of politics, but it is important that its proponents ensure
572 that PE does not become a political tool. The achievement of policy impacts, therefore, is not a
573 criterion that can simply be tacked-on to existing evaluation approaches. Instead it needs to be
574 judged in its own right and weighed up against existing and validated criteria to assess the
575 effectiveness of PE. This also means that the capacity of PE practitioners to affect change in the
576 policy realm has to be recognized as limited. It is conceivable, for example, that a practitioner could
577 operationalize all of the factors in Figure 2 that are within his or her remit, and have no bearing on
578 policy outcomes.

579 We suggest that the onus of responsibility for maximizing the policy impact of PE rests with political
580 institutions. This requires the implementation of the necessary procedures within policy-making to
581 increase the transparency of decisions.

582 For a long time PE mechanisms have incorporated well-established and formalized evaluation
583 criteria and methods, but political processes have not. There is a gap between ‘policy impact’
584 procedures which typically take place early in the policy formulation process, and policy evaluations
585 which typically occur after a policy has been implemented. What is missing is an audit of the final
586 decision-making process (a decision audit); a process which often goes unreported, involving last-
587 minute modifications and compromises. . Such an audit would provide accountability in terms of
588 how decisions are made, under what circumstances evidence is, or is not, taken up and used. This
589 offers greater potential for identifying more concrete relationships between PE practices and policy.
590 Whilst this may be associated with political sensitivity ground, and will require additional resources,
591 the benefits include greater accountability in the eyes of the public, and the provision of a means to

592 evaluate and improve PE processes to maximize their benefits. PE will then lead to better political
593 decisions.

594

595 **References**

596 Abels, G. 2007. Citizen Involvement in Public Policy-making: Does it Improve Democratic Legitimacy
597 and Accountability? The Case of pTA. *Interdisciplinary Information Sciences* 13: 103-116.

598 Boyatzis, R.E. 1998. *Transforming qualitative information: Thematic analysis and code development*.
599 California: Sage Publications.

600 Chilvers, J. 2008. Deliberating Competence. *Science, Technology & Human Values* 33: 155-185.

601 Decker, M. and M. Ladikas 2004. Bridges between science, society and policy. Technology
602 assessment - method and impacts. In Bridges between science, society and policy. Technology
603 assessment - method and impacts. Berlin: Springer.

604 Fung, A. 2003. Survey Article: Recipes for Public Spheres: Eight Institutional Design Choices and Their
605 Consequences. *Journal of Political Philosophy* 11: 338-367.

606 Hansen, J. and A. Allansdottir 2011. Assessing the impacts of citizen participation in science
607 governance: exploring new roads in comparative analysis. *Science and Public Policy* 38: 609-617.

608 Hennen, L. and M. Ladikas 2009. Embedding society in European science and technology policy
609 advice. In *Embedding society in science and technology policy: European and Chinese perspectives*,
610 ed. M. Ladikas, 39-64. Luxembourg: Office for official publications of the European Communities.

611 Houghton, J.R., G. Rowe, L.J. Frewer, E. Van Kleef, G. Chryssochoidis, O. Kehagia, S. Korzen-Bohr, J.
612 Lassen, U. Pfenning and A. Strada 2008. The quality of food risk management in Europe: Perspectives
613 and priorities. *Food Policy* 33: 13-26.

614 Jabbar, A.M. and J. Abelson 2011. Development of a framework for effective community
615 engagement in Ontario, Canada. *Health Policy* 101: 59-69.

616 Joly, P.-B. and A. Kaufmann 2008. Lost in Translation? The Need for 'Upstream Engagement' with
617 Nanotechnology on Trial. *Science as Culture* 17: 225-247.

618 König, A., H.A. Kuiper, H.J.P. Marvin, P.E. Boon, L. Busk, F. Cnudde, S. Cope, H.V. Davies, M. Dreyer,
619 L.J. Frewer, M. Kaiser, G.A. Kleter, I. Knudsen, G. Pascal, A. Prandini, O. Renn, M.R. Smith, B.W. Traill,
620 H.v.d. Voet, H.v. Trijp, E. Vos and M.T.A. Wentholt 2010. The SAFE FOODS framework for improved
621 risk analysis of foods. *Food Control* 21: 1566-1587.

622 Krabbenborg, L. 2012. The Potential of National Public Engagement Exercises: Evaluating the Case of
623 the Recent Dutch Societal Dialogue on Nanotechnology. *International Journal of Emerging
624 Technologies and Society* 10: 27-44.

625 Kurath, M. and P. Gisler 2009. Informing, involving or engaging? Science communication, in the ages
626 of atom-, bio- and nanotechnology. *Public Understanding of Science* 18: 559-573.

627 Petts, J. 2008. Public engagement to build trust: false hopes? *Journal of Risk Research* 11: 821-835.

- 628 Phillipson, J., P. Lowe, A. Proctor and E. Ruto 2012. Stakeholder engagement and knowledge
629 exchange in environmental research. *Journal of Environmental Management* 95: 56-65.
- 630 Pidgeon, N. and T. Rogers-Hayden 2007. Opening up nanotechnology dialogue with the publics: Risk
631 communication or 'upstream engagement'? *Health, Risk and Society* 9: 191-210.
- 632 Powell, M.C. and M. Colin 2009. Participatory Paradoxes. *Bulletin of Science, Technology & Society*
633 29: 325-342.
- 634 PytlikZillig, L.M. and A.J. Tomkins 2011. Public Engagement for Informing Science and Technology
635 Policy: What Do We Know, What Do We Need to Know, and How Will We Get There? *Review of*
636 *Policy Research* 28: 197-217.
- 637 Reed, M.S. 2008. Stakeholder participation for environmental management: A literature review.
638 *Biological Conservation* 141: 2417-2431.
- 639 Renn, O. 2006. Participatory processes for designing environmental policies. *Land Use Policy* 23: 34-
640 43.
- 641 Rowe, G. and L.J. Frewer 2004. Evaluating Public-Participation Exercises: A Research Agenda. *Science,*
642 *Technology & Human Values* 29: 512-556.
- 643 Rowe, G. and L.J. Frewer 2000. Public Participation Methods: A Framework for Evaluation. *Science,*
644 *Technology & Human Values* 25: 3-29.
- 645 Rowe, G. and L.J. Frewer 2005. A Typology of Public Engagement Mechanisms. *Science, Technology*
646 *& Human Values* 30: 251-290.
- 647 Wagner, J. and K. Armstrong 2010. Managing environmental and social risks in international oil and
648 gas projects: Perspectives on compliance. *The journal of world energy law & business* 3: 140-165.
- 649 Wathen, C.N., S.L. Sibbald, S.M. Jack and H.L. MacMillan 2011. Talk, trust and time: a longitudinal
650 study evaluating knowledge translation and exchange processes for research on violence against
651 women. *Implementation Science* 6.
- 652 Wilsdon, J., B. Wynne and J. Stilgoe 2005. *We need to infuse the culture and practice of science with*
653 *a new set of social possibilities*. London: Demos.
- 654
- 655