

# **25 years of the UK EIA System: Strengths, Weaknesses, Opportunities and Threats**

## **1. Introduction**

It has been over a quarter of a century since the Environmental Impact Assessment (EIA) was formally introduced in the UK in 1988 through inclusion in the Town and Country Planning Regulations for England and Wales and in Environmental Assessment Regulations for Scotland and Northern Ireland. This was based on European Directive 85/337/EC. Since then the EIA practice in the country has evolved and so has its conceptual understanding, in particular through the reviews provided by a number of authors, including Glasson (1999), Wood (2000a), Arts et al (2012) and IEMA (2011a). This paper reflects on the UK EIA system using a similar approach to Glasson (1999), who conducted a Strength, Weakness, Opportunity and Threat (SWOT) analysis of the first 10 years of the EIA. Whilst Glasson discussed the prospects of the then amended EIA Directive (97/11/EC), in this paper we will focus on the changes brought about by the new EIA Directive (2014/52/EU), which will have to be adopted by 2017. Contrary to Glasson (1999) who focused on quality, the subsequent emphasis will be on effectiveness.

## **2. Methodology**

SWOT analyses were originally used for analysing business prospects. However, over the years they have also been applied elsewhere, including planning and EIA (see e.g. Vonk et al, 2007; Paliwal, 2006). In SWOT analyses, strengths and weaknesses are internal factors of a system. Opportunities and threats are external to it. Glasson's 1999 SWOT analysis of the UK EIA system is the evaluative framework against which the 2015 EIA system is reviewed (see Table 2). In this context, use is made of (1) a UK EIA survey which was conducted in 2011; (2) an interactive session organised at a 2013 workshop at the University of Liverpool on 25 years of the EU EIA Directive; and (3) a systematic literature review of relevant publications since 1999. The following sections explain the data collection further.

**2.1 EIA Survey:** This was conducted in spring 2011. It was designed to explore effectiveness as perceived by EIA stakeholders and consisted of three parts – relating to the background of the participants, their perception of the EIA system in the UK and what they thought were the attributes of an ideal EIA system. The first part of the survey established professional details as well as EIA experience of the respondent. This helped to create a basis for the subsequent interpretation and discussion of results and develop an understanding of expectations. The

survey was semi-structured and allowed participants to comment on wider issues. In total, 181 respondents contributed to the survey. Findings of the survey informed the discussion on the effectiveness of EIA in the UK. Questions from the survey also supported the SWOT analysis. Survey results were used in an earlier paper on Dutch and UK EIA experiences (Arts et al, 2012).

**2.2 Interactive EIA Session:** This was carried out during an International Association for Impact Assessment (IAIA) Ireland-UK branch workshop on ‘Celebrating 25 years of EIA in the UK’, held on the 10<sup>th</sup> of June 2013 at the Environmental Assessment and Management Research Centre of the University of Liverpool. Attended by 25 delegates including consultants, academics and students, the findings of the workshop were interpreted in the light of Glasson’s (1999) SWOT review and were presented in a conference report and later circulated amongst participants.

**2.3 Systematic Literature Review:** This was conducted for published works between 2000 and 2015 (i.e., focusing on the literature after Glasson’s 1999 review). Four key English language journals were used; a) Environmental Impact Assessment (EIA) Review; b) Impact Assessment and Project Appraisal (IAPA); c) Journal of Environmental Assessment Policy and Management (JEAPM); and d) Journal of Environmental Planning and Management (JEPM). Articles focussing on UK EIA practices were identified and evaluated. Findings from the literature review were collated to inform the arguments presented in the SWOT analysis. The review identified 48 articles across the four journals of which nine are from IAPA, 16 from EIA Review, 13 from JEPM and 10 from JEAPM (See Fig. 1). Overall, within the international literature on environmental assessment, for the UK (Fischer et al, 2015), it was found that 40% of the papers focused on EIA, 28% on Strategic Environmental Assessment (SEA) and 10% on Sustainability Appraisal (SA).

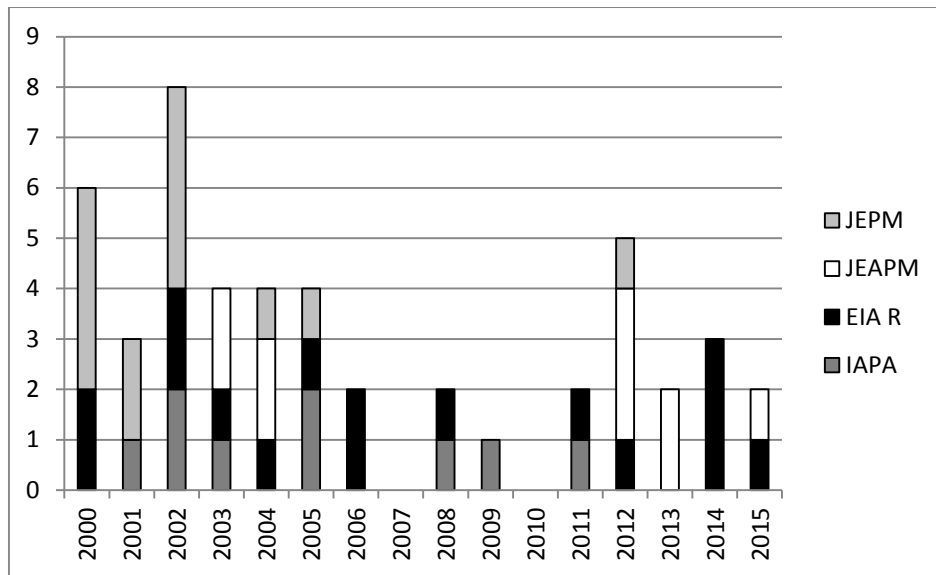


Figure 1. EIA in UK related articles published in leading Journals since 1999

### 3. EIA Effectiveness

Whilst setting the context for the review of the UK EIA system in 1999, Glasson focussed on EIA quality. Back then a total of about 300 Environmental Impact Statements (EISs) were produced every year with an annual average peak at 350. In comparison to this, since the year 2000 around 600 EIAs were undertaken each year (IEMA, 2011a), with the numbers recently reaching to about 800 annually (Fischer et al, 2015). Considering the maturity of the EIA system then, a quality review of the EISs was perhaps indicative of the progress made within the first 10 years. In Glasson’s paper (1999) itself the Council for the Protection of Rural England ((CPRE), 1991) was quoted as saying ‘that over-emphasis on the EIA, and in particular on EIS quality, has diverted attention away from the effectiveness of the overall EIA process’ (p.363).

In establishing the quality of EISs, Glasson’s discussion focussed primarily on the stakeholders’ ‘EIA knowledge, understanding and skills’ (1999, p. 363) which essentially relate to lower levels of learning in appraisal. However, as EIA has evolved and practical experience has been developed and shared, the emphasis has shifted to higher levels of learning within appraisal which focusses on learning through EIA and its outcomes. This practically translates into EIA effectiveness as was explained by Jha-Thakur et al (2009; See Table 1).

Table 1. Progressive learning in EIA (based on Bloom, 1956; Jha-Thakur et al, 2009)

<b>Levels of Learning</b>	<b>Learning in EIA</b>
Evaluation Synthesis (EIA effectiveness)	Reflecting and questioning personal, organisational or social beliefs as a result of the EIA experience <b>Learning <i>through</i> EIA</b>
Analysis Application (EIA understanding, Quality & skill Development)	Preparing or participating in the EIA process <b>Learning <i>about</i> EIA and Learning <i>through</i> EIA</b>
Comprehension Knowledge (EIA understanding & Quality)	Understanding about appraisal (legal requirements, procedures) <b>Learning <i>about</i> EIA (EIA understanding)</b>

EIA effectiveness can be sub-divided into two categories. The first is concerned with “procedural effectiveness of EIA”, looking at the extent to which formal procedures are followed. Based on what is presented in Table 1, such an approach enables us to learn about analysis and application of EIA and therefore fits somewhere in between the different learning levels of appraisal.

The second category of effectiveness is substantive in nature and looks at the extent to which EIA has actually been able to raise the level of environmental values of stakeholders (Arts et al, 2012). Furthermore, it may explore whether EIA has resulted in better decision-making with regards to incorporating environmental considerations (Fischer et al, 2009). As is illustrated in Table 1, this can lead to higher levels of learning, based on evaluation and synthesis. The various levels of learning are complementary to each other. Subsequently, when discussing effectiveness of the EIA system, the focus will be on the latter definition, i.e., in exploring the role of EIA in incorporating environmental values in the decision-making process and in raising environmental awareness of the actors involved.

### **3.1 Stakeholders’ perceptions of EIA effectiveness in the UK**

Stakeholders’ perceptions were established through the questionnaire survey. The 181 survey participants included (see also Fig. 2):

- (1) RTPI members (Royal Town Planning Institute; 35 % of the respondents);
- (2) CIWEM members (Chartered Institute of Water and Environmental Management; 25 % of respondents);

- (3) UK-Ireland Branch members of IAIA (International Association of Impact Assessment; 11 % of respondents);
- (4) IEMA members (Institute of Environmental Management and Assessment; 4% of respondents);
- (5) UKELA members (UK Environmental Law Association; 3% of respondents);
- (6) Others (22% respondents); these were targeted through individual email lists and contacts; 60% of the respondents within this group were planners.

The majority of the respondents were from consultancies (34%), followed by public developers/officials (30%). Academics constituted 11% of the sample, followed by private developers and public stakeholders, which accounted for 8% and 4%, respectively. As far as years of experience with EIA is concerned, 38% of the respondents had more than 10 years of experience, 28% had 5 to 10 years of experience, and 34% had less than 5 years of experience (Fig. 3).

In exploring perceptions of EIA effectiveness through the lens of its various actors, the following discussion is presented under two headings; (a) EIA’s effect on decision making; and (b) EIA’s contribution in enhancing environmental awareness.

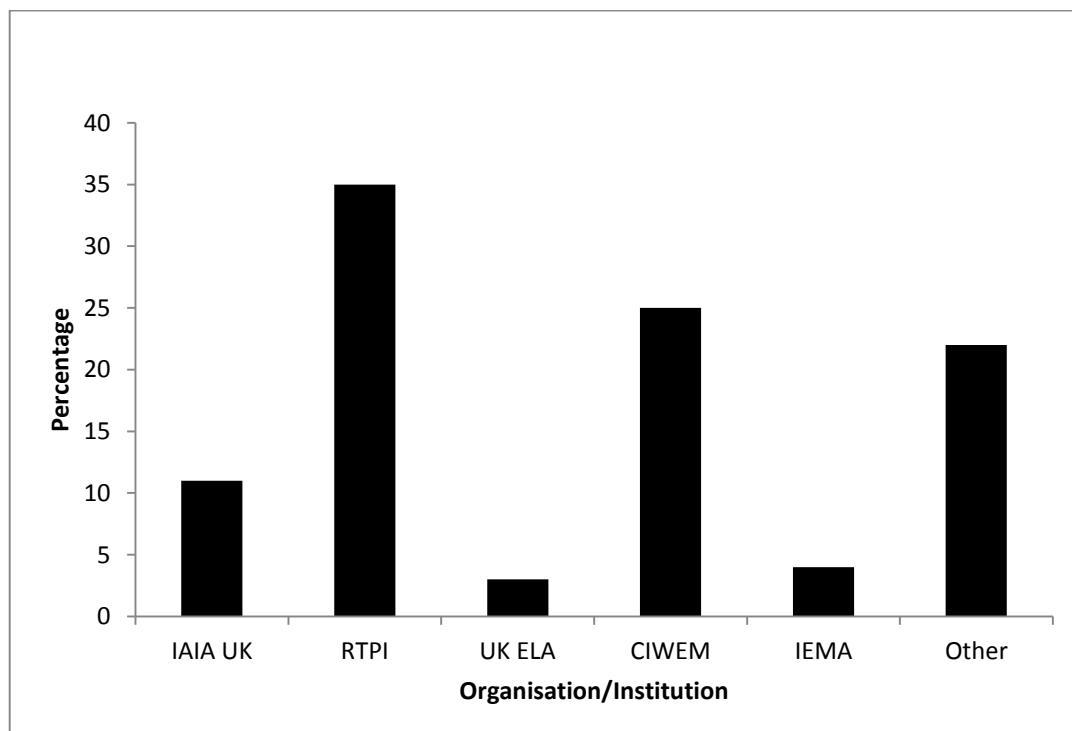


Figure 2. Organisations/Institutions respondents to the survey

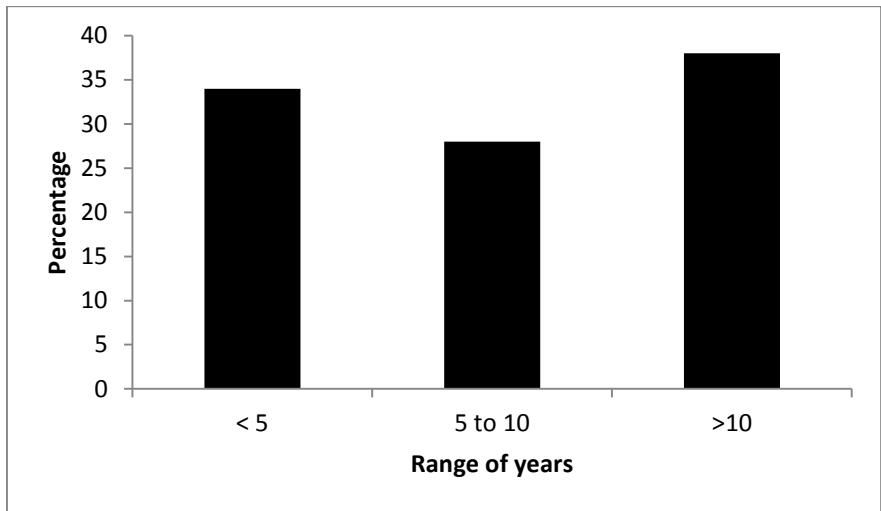


Figure 3. Experiences of Respondents within EIA

**3.2 EIA’s effect on decision-making**

Survey participants were asked to provide their opinions on the main effect EIA had on decision-making. More than a quarter of respondents stated that EIA had led to an explicit consideration of the environment in decision-making. Whilst 42% of them thought EIA had mainly led to limited changes in project planning, 13% were of the opinion that it had led to extensive changes and just over 4% suggested that EIA had led to the most environmentally friendly option being adopted within a project. Only about 2% thought EIA had no effect on a project or on decision-making (See Fig. 4).

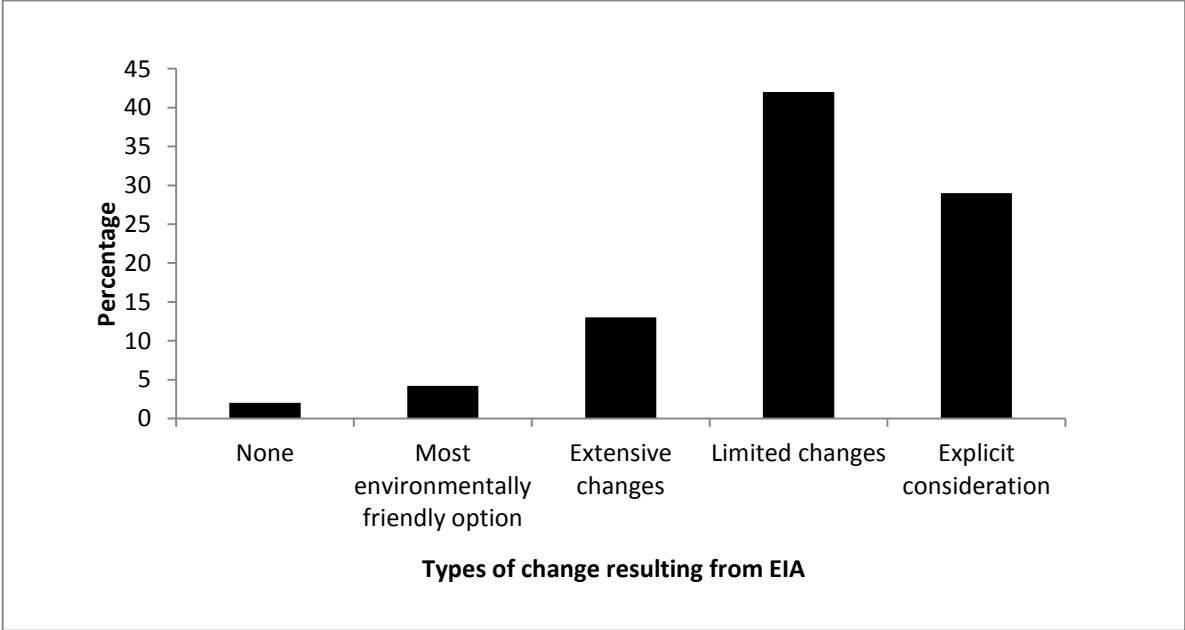


Figure 4. EIA’s effect on decision-making

Survey participants were also asked whether EIA had an impact during the early stages of the decision-making process due to the initiators' anticipation that it was needed, i.e. whether it had a prevention effect. 10% stated that EIA always impacted the early stages of decision-making, with a similar proportion stating it never had a prevention impact. Nearly a third of respondents indicated it often had this impact. Whilst just over 10% think EIA hardly ever had any impact on the early stages of decision-making, 38% thought it had impact at least sometimes (Fig. 5).

When considering years of experience, the most experienced respondents were slightly more pessimistic than the other two groups about the effectiveness of EIA (See Fig. 6 & 7). Furthermore, stakeholders who were based in organisations related to the natural environment were also optimistic with regards to EIA's influence at the early stages of decision-making. As is evident from Fig. 8, majority disagreed with the statement that 'EIA hardly has any influence on controversial decisions', therefore suggesting that EIA influences controversial projects, as well. The most experienced respondents were more confident about EIA's influence in controversial decisions (Fig. 8).

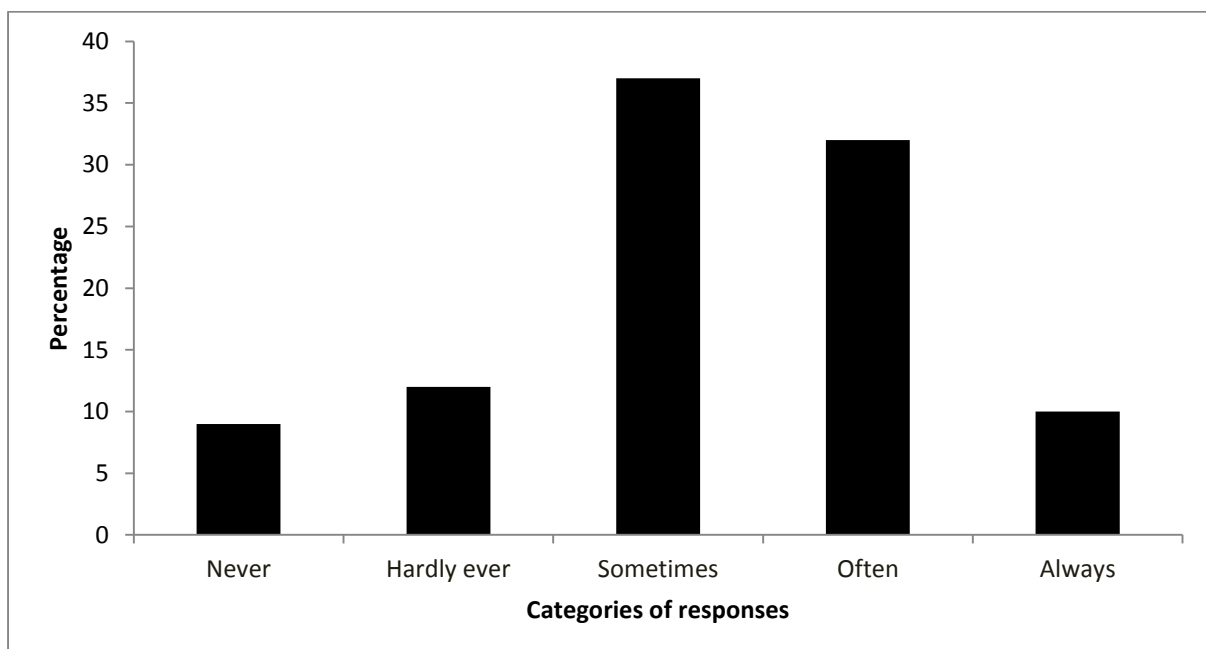


Figure 5. EIA's effect during early stages of decision-making

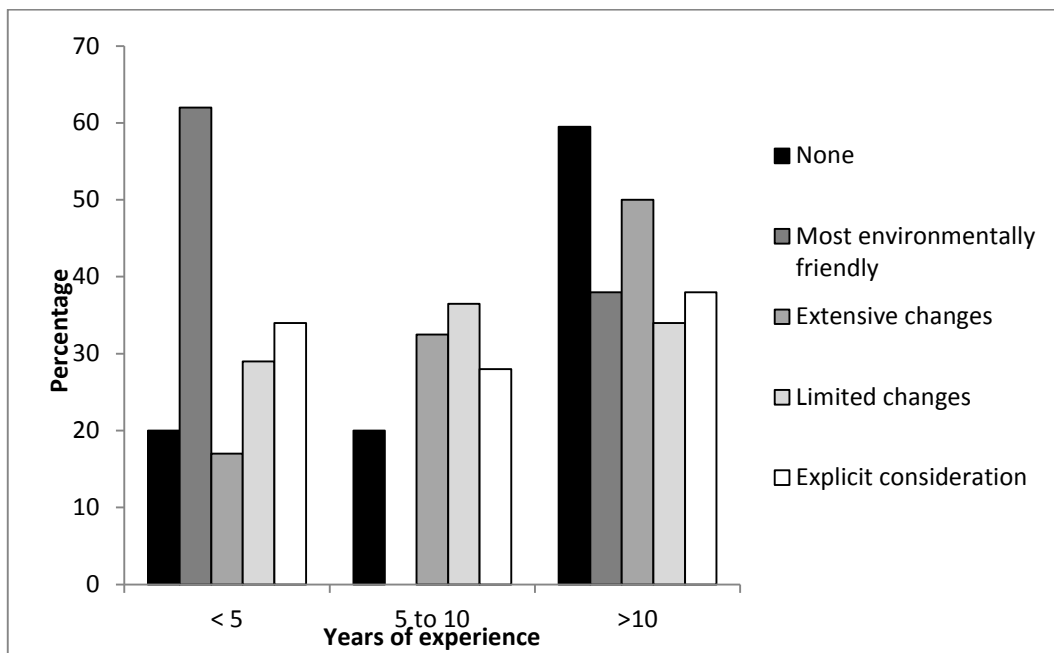


Figure 6. Perception of EIA's effect on decision-making depending on respondents' experiences

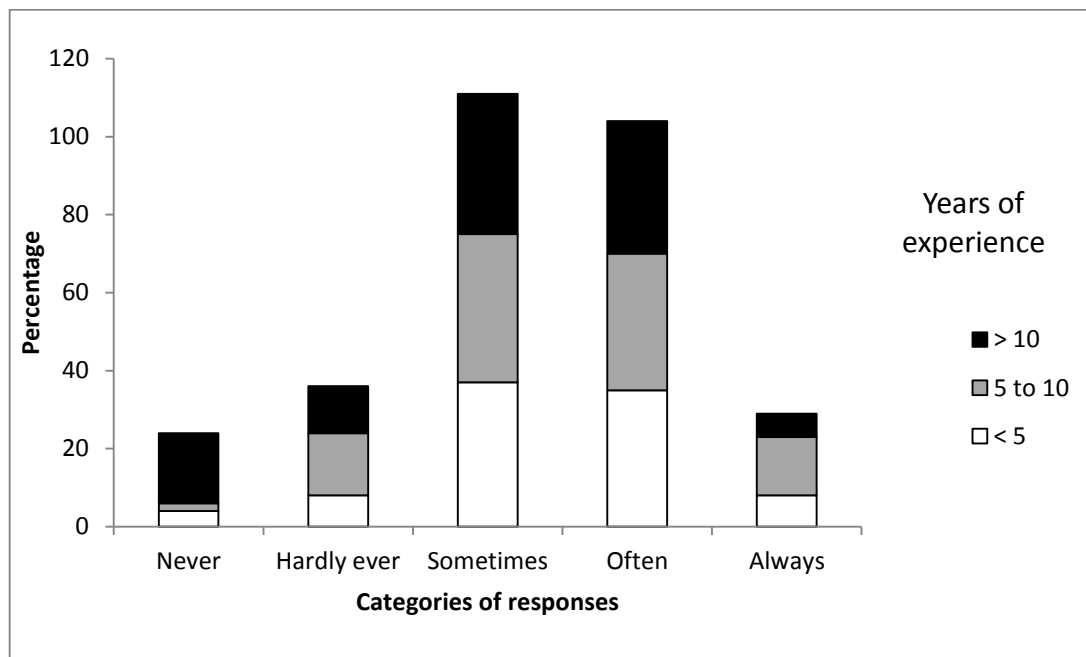


Figure 7. Experience-wise EIA's effect during early stages of decision-making



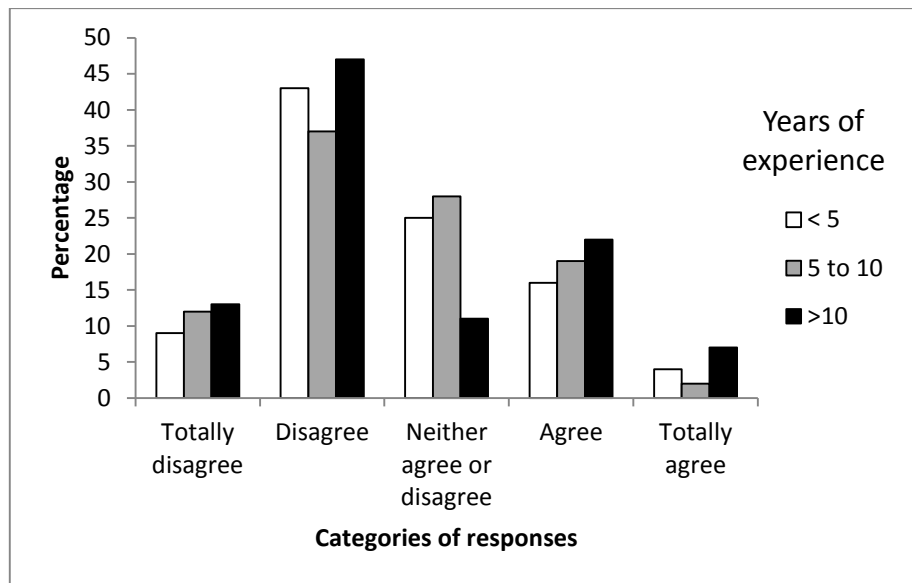


Figure 8. Experience-wise response to statement ‘EIA hardly has any influence on controversial decisions’

### 3.3 EIA as legal obligation and its contribution to enhancing environmental awareness

The questionnaire survey also explored perceptions of respondents on whether EIA was merely viewed as a legal obligation or as more than that. Here, less experienced participants were more optimistic. The ‘less than 5 years of experience’ group was the only one that suggested EIA was ‘never’ perceived as being merely a legal requirement (12%). Furthermore, those with more than 10 years of experience were mostly thinking that this was ‘often’ or ‘always’ the case, with only 1% from this category suggesting this was ‘hardly ever’ the case.

The survey also identified the extent to which EIA contributed to the environmental awareness of competent authorities and project initiators (Fig. 9a & 9b). An overall positive trend was noticed with most respondents suggesting that EIA ‘often’ contributed to environmental awareness of both. Nearly 50% of the respondents thought that EIA often contributed to the initiator’s environmental awareness (Fig. 9a), whilst 42% thought it often contributed to the competent authority’s environmental awareness as well (Fig. 9b). Overall, perceptions of EIA’s effectiveness are rather positive and based on the responses it appears

that EIA has been playing an important role in enhancing environmental awareness and in influencing the decision-making process.

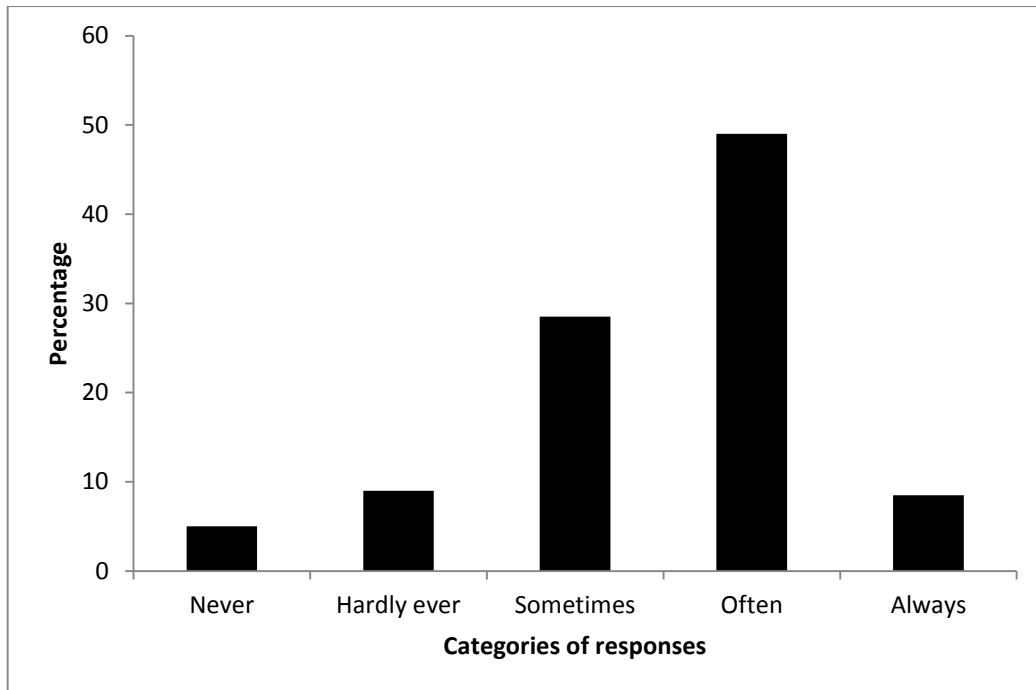


Figure 9a. EIA's effect in increasing environmental awareness of initiator

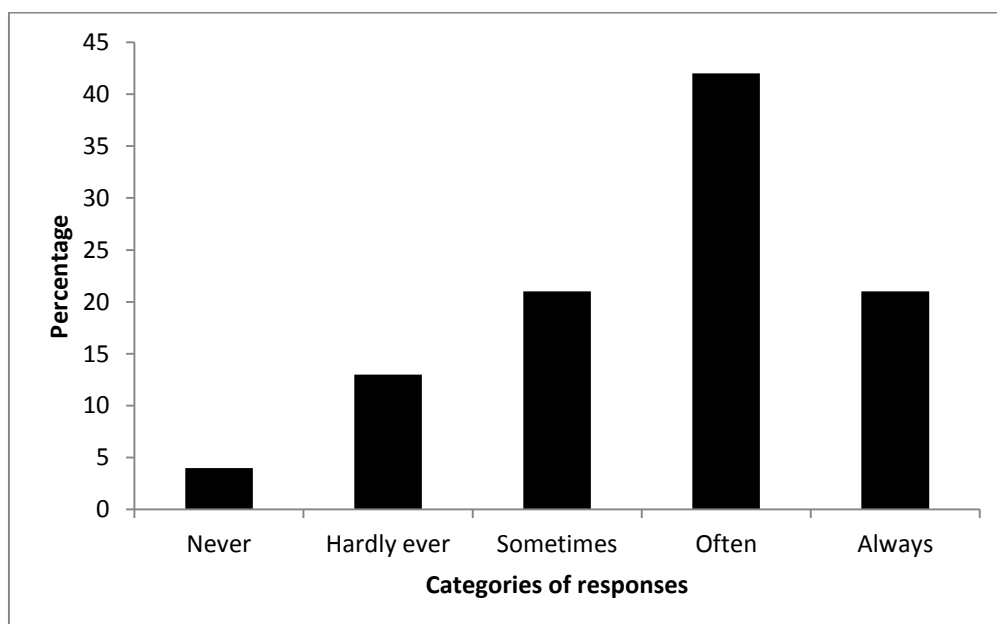


Figure 9b. EIA's effect in increasing environmental awareness of Competent Authority

## 4. The UK EIA System - A 'SWOT' Analysis

Table 2 summarises the SWOT analysis for EIA in the UK up to 2015. The first 10 years are based on Glasson (1999), whilst the remainder has been extended on the basis of the findings discussed above. The table also elaborates the source of information provided. Subsequently, we will reflect on the main points of the analysis.

### 4.1 Strengths

The European EIA Directive (85/337/EEC) amended three times in 1997, 2003 and 2009 and consolidated in 2011 forms the basis of the EIA practice in the UK (EC, 2009; IEMA 2011a). In 2014, a new Directive was published which will have to be implemented by 2017. The EIA Directive continues to play a pivotal role in enhancing EIA's evolution in the UK (Arts et al, 2012). EIA practitioners in the UK look up to the EIA Directive for inspiration to improve practices (IEMA, 2011a; Tinker et al, 2005). Liverpool workshop participants stressed that in the current political climate the Directive has shielded the UK EIA system from further dilution or even perhaps from being completely abolished. Whilst overall the Directive is therefore seen as strength, there are also threats associated with it, owing to the EU being perceived as 'politically difficult'<sup>1</sup>.

The second strength identified in 1999 was that the UK EIA system was not overly technical. However, after 25 years there are indications that this has changed. Participants of the 2013 Liverpool workshop thought that EIA was suffering from what they termed as 'technical obesity'<sup>2</sup>. Furthermore, they thought that the EIA system in the UK suffered from the problem of non-proportionality (in particular too lengthy documentation) and this is partly owing to the planning context within which it is practiced (Arts et al, 2012).

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<sup>1</sup> Currently, both, UK and EU relation is engulfed in complexities and uncertainty with regards to UK's position within the EU. This further instils scepticism in how EU is being perceived in the UK. Therefore, too much dependency on EU Directives in strengthening and shaping EIA in UK is not necessarily welcome by all.

<sup>2</sup> The term technical obesity used by workshop participants indicates that EIAs have become overly technical.

Table 2. 25 Years of EIA in the UK: A SWOT analysis based on Glasson (1999)

SWOT	After 10 years of EIA in the UK	After 25 years of EIA in the UK		
	Glasson's SWOT results	Survey	Interactive session	Literature Review
<b>Strengths</b>	Underpinned by EU legislation	---	◐	○
	Has not become over technical	---	●	---
	Capacity building: guidance documents; training programmes	○	◐	○
	General acceptance of utility of EIA from all 'actors' in the process	○	○	◐
	Some widening (e.g. environmental appraisal of development plans)	○	○	○
	i.e. a fast 'learning curve'	◐	◐	◐
<b>Weaknesses</b>	multiple and fragmented legislation and links (e.g. to IPC)	◐	◐	○
	little consideration of alternatives	---	○	○
	little monitoring and auditing	---	○	○
	bio-physical perspective on environment	◐	○	○
	little consideration of cumulative impacts	---	◐	◐
	100s of competent authorities; weak quality control	○	○	○
	Perceived problem of developer/consultant management of the EIA process	○	○	○
	Lack of effective public participation; too little too late	◐	◐	◐
<b>Opportunities</b>	Environmental politics/pressures (e.g. Local Agenda 21)	---	●	●
	Pressures from environmental liability/insurers	---	◐	◐
	Amended EU Directive; new Directives	◐	◐	◐
	More projects subject to EIA; more stages of project life cycle	---	●	◐
	Widening scope-SIA, etc.	●	●	●
	Tiered assessment-SEA, etc.	◐	◐	◐
	Use of IT (GIS, Experts Systems, etc.)	---	○	○
<b>Threats</b>	Deregulation/privatisation (more one-offs; less continuity)	◐	●	◐
	Fast-tracking/routinisations/cost reduction (more with less)	---	◐	---
	Continuing perceived bias; inequity of process	○	○	○
	Perceived threats to/from competitive procedures (e.g. IPPS)	◐	◐	◐

Key: ○ Same as 1999; ● opposite to what it was in 1999; ◐ partially same as 1999; --- Information not available;

The third strength identified by Glasson was ‘capacity building, guidance documents and training programmes’. Central Government has made little effort to advance EIA and has failed to update guidance, provide advice or build capacity. On the other hand, the Institute of Environmental Management and Assessment (IEMA) and the Environment Agency have played important roles in the development of the instrument (Bond and Stewart, 2002; IEMA, 2011b; Fischer et al, 2015). In fact, 2011 survey results indicate that 43% of participants did not think that existing guidance was clear enough with only 36% thinking it was. Participants of the 2013 Liverpool workshop also suggested that current guidance was actually limiting and holding back progress, owing to a ‘stick to what we know attitude’. In addition, the literature review suggests that guidance may be seen as overly prescriptive, even though they are not meant to be so (Bond and Stewart, 2002).

As far as EIA related training/capacity building is concerned, Liverpool workshop participants suggested that a drop of funding by Central Government was a weakness. However, they also thought that this opened up opportunities for growth amongst practitioners who were developing EIA related training. In 2014, the professional body IEMA had about 15,000 members and was actively engaged in developing professional standards such as the voluntary accreditation scheme for consultancies ‘EIA Quality Mark’ and certified training (Fischer and Fothergill, 2015). With regards to University training, EIA related master programmes have been steadily increasing in numbers over the past decade (Fischer et al, 2008; Fischer and Jha-Thakur, 2013).

Currently, EIA related research scholars in the UK are primarily based in only four institutions, including the University of East Anglia, Oxford Brookes University, Imperial College London and University of Liverpool (Fischer et al, 2015). An encouraging and much needed initiative that has been recognised in the UK is fostering links between academia and practice. This is exemplified by the ‘IEMA for Education’ partnerships being developed by IEMA in collaboration with several universities (IEMA, 2015).

Overall, survey results suggest that EIA is now widely accepted as an instrument that enhances environmental awareness. Furthermore, it is perceived as an instrument that influences decision-making processes to become more environmentally sustainable. This perception was supported by Liverpool workshop participants, in particular by the practitioners. It was suggested that EIA was increasingly successful in influencing project design. However, there is evidence in the literature to suggest that ‘there is a culture of resistance and disownment’ amongst some who are responsible for implementing EIA

(Weston, 2011, p.97; Gray and Edward-Jones, 2003). The planning context within which EIA functions in the UK is not perceived to be supportive of the instrument with planners viewing EIA as a burden (Weston, 2011; Tinker et al, 2005). In this context, it is of importance that in the UK, the ES submitted along with planning applications merely serves as material evidence. Furthermore, EIA contributed to only 0.1% of all planning applications (Tinker et al, 2005). Also, in 2015, the UK Government had been reducing EIA requirements by raising the thresholds above which EIA is required (e.g. for new housing developments from 0.5 ha to 5 ha). Therefore, currently the context within which EIA is being practiced is undermining its strengths.

Since Glasson's 1999 review, SEA was introduced in the UK through the EU SEA Directive (001/42/EC) for programmes and plans. However, 2013 Liverpool workshop participants suggested that the abolition of regional planning in 2010 had a negative impact on the ability to consider environmental impacts. It was also noted that the devolved Scottish government is taking an active lead in the development of SEA in the country. Apart from extending EA to higher tiers, EIA's scope has also broadened with regards to the number of themes covered. When asked whether 'EIA is focussing on too many different themes' a third of the participants agreed that this was the case. 40% disagreed with the statement whilst a similar percentage was undecided.

## **4.2 Weaknesses**

Glasson (1999) suggested that the regulatory framework within which EIA was implemented in the UK was complicated and that many perceived it as being confusing. The 2011 regulations introduced in Scotland and later in England and Wales helped in consolidating and updating the EIA regime (Arts et al, 2012). However, there are still over 20 relevant pieces of legislation for EIA, which means the system is far from simple. Liverpool workshop participants agreed that the great number of different types of permits and legislation made EIA complex. However, they also suggested that this was not necessarily a weakness. There was a suggestion that 'EIA acts as a catchall for anything that doesn't fit elsewhere'. For example, EIA is increasingly required to embrace additional topics such as carbon emissions and other material considerations.

When it comes to the clarity of EIA regulations, Fig. 10 shows that less experienced survey respondents were more inclined in thinking that the regulations lacked clarity whilst those that were more experienced often found this to be less problematic. Consultants in particular thought that EIA regulations lacked clarity. This is hardly surprising as they need to make sure legal requirements are met in the reports they prepare (Arts et al, 2012). Overall, based on these findings and also as provided by earlier evidence in the professional literature (Badr et al, 2004; Petts, 2003), it is probably fair to say that fragmentation of regulations continue to be a weakness for EIA in the UK.

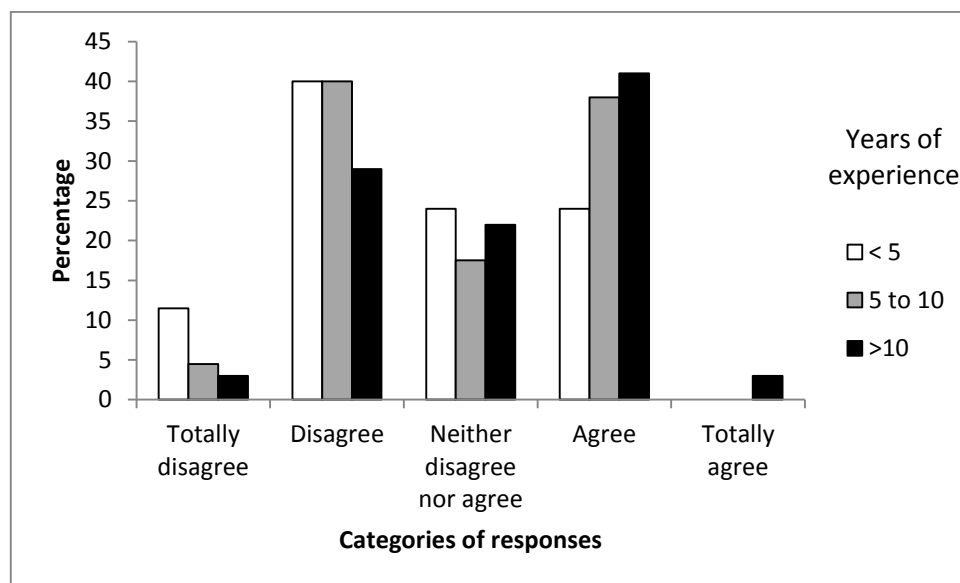


Figure 10. Experience-wise response to the statement that EIA regulations in the UK are clear and easy to understand

A further weakness identified by Glasson (1999) was an inadequate consideration of alternatives. This has remained unchanged (Badr et al, 2004; Bassi et al, 2012). However, as suggested by 2013 Liverpool workshop participants, with the introduction of SEA, some alternatives have been now considered at strategic levels. In this context, the merit of considering alternatives during EIA was questioned by workshop participants, based on the fact that site-specific decisions were usually already made when EIA was applied. The Planning Act (2008) has further weakened this stage within EIA.

Monitoring was also identified as a weakness by Glasson (1999) and the need to improve it was subsequently emphasised by various authors (Wood, 2000b; Marshall, 2001; Gray and Edward-Jones, 2003; Tinker et al, 2005; Jones and Fischer, 2016). Examples for monitoring have been introduced in the EIA literature, emphasising the role of environmental

management plans (EMP) in delivering mitigation and management of unwanted environmental impacts (Tinker et al, 2005; Marshall, 2002).

During the SWOT session conducted at the Liverpool workshop, participants suggested that this continued to be a weakness. This is connected with the trend for project teams to change over time, which leads to monitoring processes losing their continuity. Overall, workshop participants felt that planning obligations and habitat regulations needed to emphasise the importance of monitoring.

Limited consideration of socio-economic and cumulative impacts was identified as a further weakness of EIA in 1999, which was also confirmed by Cooper and Sheate (2002), Fuller and Sadler (1999) and Pritchard (1993). Current publications suggest that this continues to be a weakness (Coleby et al, 2012; Glasson and Cozens, 2011; Jarvis and Younger, 2000). In 1999, the bio-physical perspective of the environment was at the heart of EIA and all the evidence suggests that this continues to be so. However, Badr et al, (2004) also suggested that within certain areas like water management, impact assessments ‘practices are not as problematic as research indicates’ ‘for ecological, socio-economic and cumulative impact assessments’ (p.19-20). This was confirmed for wind-farms by Phylip-Jones and Fischer (2013). Liverpool workshop participants also thought that new developments such as the ecosystem services can be expected to improve this to some extent.

The importance of strengthening public participation within EIA has been highlighted by a number of authors (next to Glasson, 1999 for example by Jarvis and Younger, 2000). Here, Liverpool workshop participants thought that this had improved but continued to be patchy. The Aarhus Convention had strengthened the public participation component within EIA earlier, however, this improvement was impaired by how ‘early’ and ‘effective’ public participation was interpreted in the UK (Hartley and Wood, 2005).

According to workshop participants, the Planning Act (2008) was further perceived to strengthen public participation in the UK. Although a weakness, this has been steadily improving (Bassi et al, 2012), partly due to the pressures of international and national legal obligations and partly due to the broadening scope of socio-economic impacts within EIA in the UK (Glasson and Cozens, 2011).

### **4.3 Opportunities**

The approach taken to environmental policy of the former Labour Government was seen as an opportunity for EIA in 1999. The Conservative government, on the other hand is clearly a



threat to the EIA system and ‘the current Conservative [...] government is not showing any interest in the development of EIA and SEA’ (Fischer et al, 2015). The opinions expressed during the 2013 workshop were in line with this. The discussions also hinted at an ‘overly politicised process’. Furthermore, it was felt that Local Agenda (LA) 21 had failed to have an impact and often new assessment tools were being sought instead. So far pressures on the basis of environmental liability have not necessarily manifested themselves and even though this has not had a major impact, it was still seen to be an opportunity in the future.

Based on the evidence provided in the professional literature and the 2013 Liverpool workshop, the new EIA Directive (2014/52/EU) is viewed as an opportunity for EIA. Overall, the various amendments received some widespread attention in the UK (Smart et al, 2014). Liverpool workshop participants viewed the Directive as suitable in offering flexibility in changing times. However, it was also felt that the increase in the number of environmental directives was leading to a duplication of efforts.

Covering more stages of the project life-cycle, planning decommissioning was viewed as an opportunity by Glasson in 1999. This is still relevant today particularly for e.g. ex-post follow-up stages. Nevertheless, some also see this as a threat as this causes a focus on procedural compliance rather than on design. Furthermore, the widening scope of EIA was seen as an opportunity by Glasson but was perceived as a remaining weakness by Liverpool workshop participants.

Tiered assessment was seen as yet another opportunity for EIA in 1999. Here, in the meantime, the introduction of SEA has led to a better consideration of alternatives at strategic levels. However, Liverpool workshop participants also argued that ‘SEA was too procedurally focused’ and ‘difficult to achieve’. Furthermore, the use of information technology, which was identified as an opportunity for EIA, continues to be one. This is yet to be realised, though (Coleby et al, 2012), in particular as lack of funds and training poses problems for a more widespread use of GIS. Finally, research indicates ‘a significant GIS under capacity’ amongst various local authorities in England (Riddlesden et al, 2012).

#### 4.4 Threats

Based on the EC EIA Directive, EIAs are prepared in the UK both, by public bodies and private developers. The trend to privatise and deregulate was perceived to be a threat in the 1999 SWOT analysis. This was expected to lead to a lack of continuity in the process whilst increasing competition was perceived to lead to a culture of reluctance in engaging the public effectively. Reflecting on this threat, the participants of the Liverpool workshop thought that privatisation had happened and was no longer a threat for the EIA system.

Glasson (1999) further discussed how this would result in smaller players gaining less experience compared to their bigger counterparts, limiting their experience and learning. This threat seems to have manifested itself in the current EIA system, which was reflected in the survey results. Workshop participants were asked whether they thought small public and private bodies had problems using EIA appropriately. Amongst the respondents, 63% of them agreed that small companies had constraints in using EIA appropriately, whilst 16.7% thought they did not experience any such constraints. Furthermore, 71% thought public and private bodies with more experience performed better with regards to EIA and were better able to use EIA (see Fig. 11 and 12). This discrepancy based on size and experience, which to some extent is a result of deregulation and privatisation is now a weakness of the EIA system in UK.

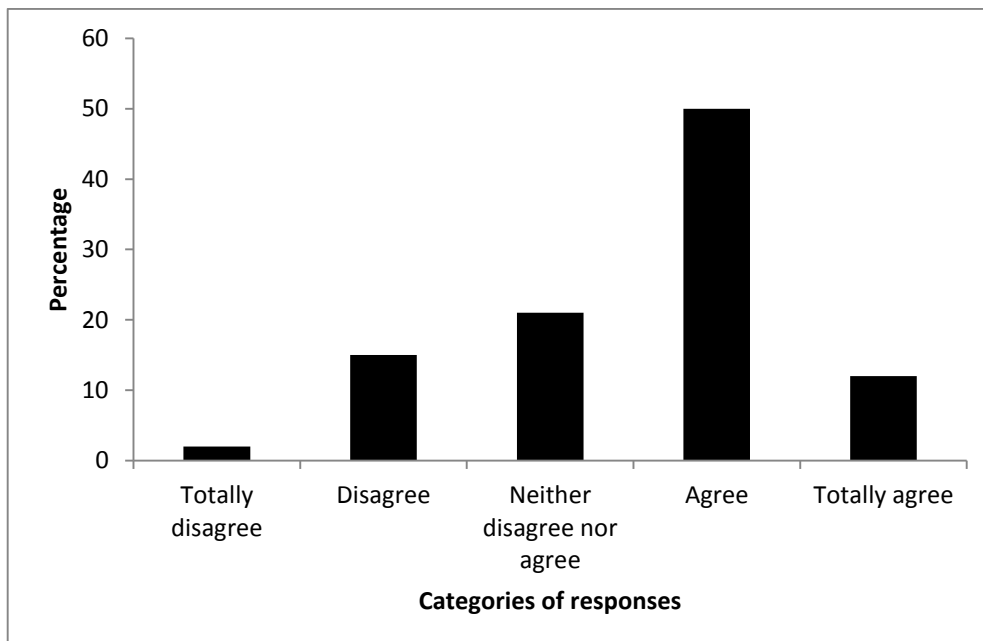


Figure. 11 Small/public bodies have problems using EIA appropriately

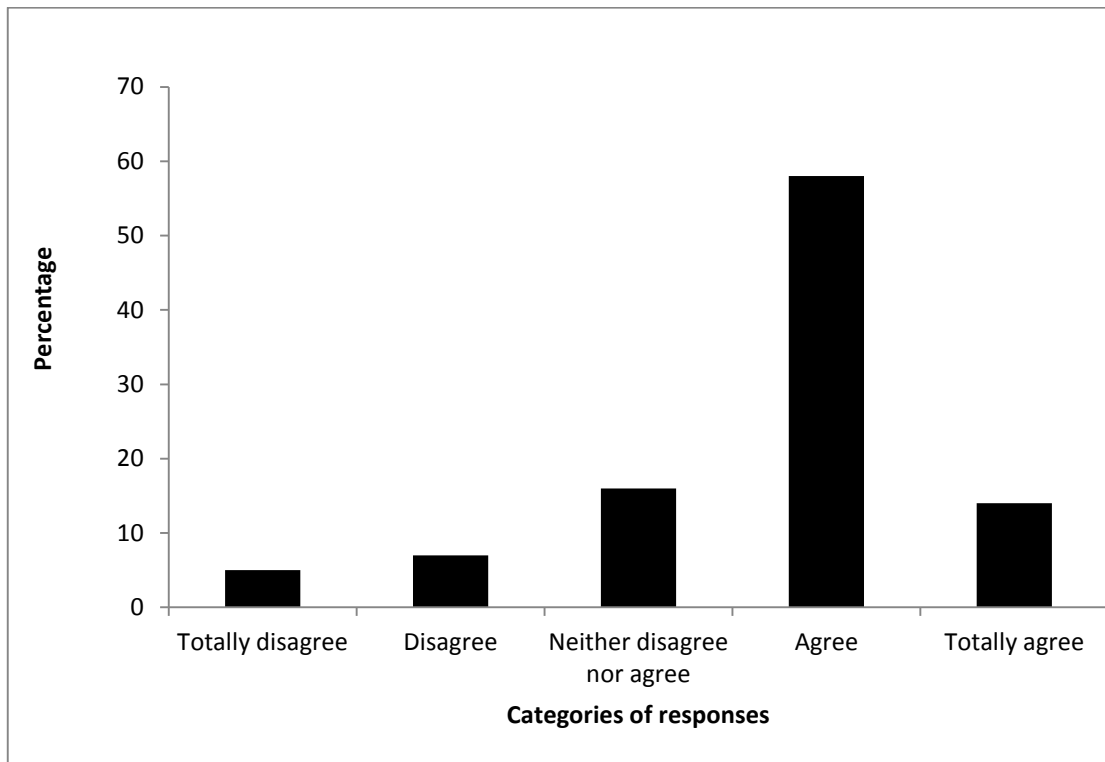


Figure. 12 Private/public bodies with more EIA experience are more capable of using EIA appropriately

Further discrepancies were observed across sectors and it was also suggested that EIA regulations were applied inconsistently (Coleby et al, 2012). In addition, as Weston reported (2002), legal requirements are not always properly understood. This lack of understanding about EIA by key stakeholders within the system after so many years of practice is clearly of some concern and therefore considered a weakness. Differences in the way in which EIA is implemented, based on size, experience, role, sectors and also personal judgement (Weston, 2002; Robinson and Bond, 2003) continue to lead to inequities of the process and is a perceived bias, all of which were actually identified as threats by Glasson in 1999. Therefore, although privatisation has already happened, the EIA system continues to experience its effects.

We believe that EIA is now experiencing what could be called a ‘mid-life crisis’. We have already noted that experience can influence perception towards EIA. This was also found in a comparative survey conducted by Fischer and He (2009, p.483), looking at perception towards towards SEA in the UK and China. Here it was suggested that ‘overall, there was a more positive perception of many Chinese respondents regarding SEA’s potential to lead to

more effective decision making, greater efficiency of tiered decision making and an ability to enable more effective involvement'. At the time, China had less experience and was going through lower levels of learning with SEA (See Table 1), but Chinese respondents were feeling more positive about the instrument than their UK colleagues. We see the diminishing enthusiasm and expectation from EIA as a threat.

The last point raised by Glasson (1999) was in relation to perceived threats from competitive procedures. Neither the 2011 survey nor 2013 workshop participants suggested that EIA was being replaced by other actors or instruments. Perhaps the Integrated Pollution Prevention and Control (IPPC) Directive is the only instrument which to some extent 'limits the added value of EIA for energy and industry projects' (Arts et al, 2012, p.29).

## **5. Prospects under the new EIA Directive**

A new EIA Directive in Europe (2014/52/EU) was introduced in 2014. This will lead to a number of changes to existing practices. Importantly, in the future, at least two alternatives should be assessed, including the proposed project (i.e. the preferred option) along with the zero (i.e. no action) alternative.

Secondly, climate change will now need to be explicitly addressed both, in terms of carbon emissions associated with the proposed project (mitigation), as well as adaptation to a changing climate (see Fischer and Sykes, 2009; Fischer et al, 2011; Jiricka et al, 2015). The vulnerability of a proposed project (exposure and resilience) to any accidents and natural disasters will also have to be taken into account (Tajima et al, 2014) and projects connected with responses to civil emergencies will need to be screened for potential EIA application (Swain and Therivel, 2014).

Furthermore, the consideration of heritage aspects, both historical and cultural, (Bond et al, 2004) is strengthened and for the first time in EU EIA history, the new Directive will require an 'adequate qualification and competency of those involved in the preparation of EIA'. From a UK perspective, this should not pose any major problems, based on the voluntary accreditation currently provided through IEMA's EIA quality mark (Fischer and Fothergill, 2015). Finally, an easily accessible central portal will need to be set up in EU member states, listing all EIAs and the consideration of human health will require strengthening in future EIA practices.

There are a few changes with regards to the EIA process. To start with, EIA screening will have to consider the ecological health of the seas and will have to be completed within a maximum of 90 days, which is already happening in the UK. Furthermore, screening will now need to include the preparation of an initial environmental report. Importantly, in the future, EIA and Habitats Regulation Assessment (HRA) will require full integration and tiering with other assessment procedures including SEA. The authority responsible for EIA will have to provide for some reasoned conclusions in which the content of EIA will need to be justified, and finally, monitoring is strengthened with a requirement to clearly outline measures for avoiding, mitigating and/or compensating impacts.

## **6. Conclusions**

The comparison of results of a SWOT analysis of EIA in the UK in 2015 (see Table 2) with those provided by Glasson in 1999 reveals that the internal factors (i.e. strengths and weaknesses) of the EIA system have not changed much over 15 years. Changes are more apparent for external factors, especially with regards to opportunities. Since EIA offers itself as a ‘sensitive barometer of environmental values in a complex environmental society’ (O’ Riordan, 1990 in Glasson, 1999), the influences we see on it through the changes in the external factors are reflective of the changing values and priorities of society. For example, over the past few years, environmental pressure groups appear to have had a weakening impact, but the consideration of socio-economic aspects in EIA has increased (Glasson and Cozens, 2011).

With the financial crisis and associated austerity, it is not surprising that the context within which EIA is applied has become more challenging. Regardless, it can be concluded that overall EIA has maintained and on occasion even strengthened its role in influencing the decision-making process and changing values of stakeholders. It can therefore be said to have been successful in delivering higher levels of learning (see Table 1). This achievement is often underrated within the EA community, perhaps owing to increased expectations which lead to depleting motivations. We refer to this as a ‘mid-life crisis’ in EIA.

Based on what is found in this paper we believe that the focus of the EIA community should be on enhancing existing strengths and tackling known weaknesses of EIA. Monitoring continues to be a poor element of EIA practice and the current emphasis on pre-decision analysis in statutory procedures means that EIA is failing to maximise its potential to “learn from experience” (Wood, 2000b). Furthermore, EIA regulations are often misunderstood and

misinterpreted. These inadequacies and gaps should be addressed through a collaborative approach amongst practitioners and academics, which should further reduce gaps and enhance EIA related education and practice (Fischer and Jha-Thakur, 2013).

The variations in perspectives and views amongst stakeholders (Robinson and Bond, 2003) will remain an inherent component in EIA. However, this is not necessarily a weakness or a threat to EIA. Rather, it constitutes a basic feature of the tool, which allows it to be flexible and adaptable enabling it to reflect as well as to influence environmental values of a changing society.

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