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Focus Article			
Thomas B. Fischer, Riki Therivel, Alan Bond, Josh Fothergill & Ross Marshall	The revised EIA Directive – possible implications for practice in England Die UVP-Änderungs-Richtlinie – mögliche Auswirkungen auf die Praxis in England		
Abstract	Whilst environmental impact assessment (EIA) in England overall can be said to be of a good to satisfactory quality, we believe that the revised EIA Directive will be able to strengthen it further by addressing gaps with regards to the consideration of alternatives, climate change mitigation and adaptation, the consideration of accidents and disasters along with human health, land and biodiversity. Some challenges, however, are likely to remain, for example, with regards to penalties for non-compliance and a scoping stage that will remain optional. The biggest unknown at the time of writing this article however is whether or not the UK will remain in the EU, giving rise to some considerable uncertainties.		
Zusammenfassung	Insgesamt ist die Umweltveräglichkeitsprüfung UVP in England von guter bis befriedigender Qua- lität. Trotzdem glauben die Autoren, dass die UVP-Änderungs-Richtlinie dazu beitragen wird, die UVP weiter zu stärken, indem Lücken bezüglich der Berücksichtigung von Alternativen, der Klima- wandelanpassung, der Berücksichtigung von Unfällen und Katastrophen sowie bei menschlicher Ge- sundheit, Fläche und biologischer Vielfalt geschlossen werden. Es gibt aber auch einige Herausfor- derungen, die wahrscheinlich bestehen bleiben werden: zum Beispiel die fehlenden Konsequenzen bei Verstößen und das immer noch nicht verbindliche Scoping. Das größte Fragezeichen bei Arti- kelerstellung ist aber, ob das Vereinigte Königreich überhaupt in der Europäischen Union bleibt. Dies hinterlässt erhebliche Unsicherheit.		
Keywords	England; Environmental impact assessment; EU law; Envi	ronmental law	
Schlagworte	England: Projekt-Umweltverträglichkeitsprüfung: EU-Recht: Umweltrecht		
unkt	I ntroduction The revised EIA Directive has come at a time of significant challenge and uncertainty for environmental policy and impact assessment in the UK. At the time of writing this paper, the EU referendum was looming large on the horizon for the UK, ¹ and with it the future of much of the UK's environmental legislation, including environmental impact assessment (EIA) (Fischer 2010). What exactly a 'British Exit from the EU' (or Brexit) would mean for this portfolio is uncertain and predictions are difficult to make. What is clear, though, is that it would neither result in a total withdrawal from existing regulations (which many Brexit supporters ap-	government is not a particularly keen advocate of EIA as a non-market based regulatory tool, as preference is given to market based instruments and self-regulation, and the main planning paradigms are connected with a core belief of the Conservative party in keeping (state) regulation to a minimum (see e.g. UK Parliament 2014; Bond et al. 2014; Bähr 2010). In line with this, the gov- ernment has looked at decreasing the need for EIA. Tak- ing land use planning as an example (of all sectors sub- ject to most EIAs in the UK – approximately 70 %, Glas- son et al. 2012), screening thresholds were raised in 2015 through amendment of the Town and Country Planning (Environmental Assessment) regulations. This	
Schwerpu	pear to think should happen), nor in business as usual. In this context, it is revealing to take a look at non-EU countries in Europe, including the European Free Trade Association (which the UK would presumably join) mem- bers Norway, Iceland or Switzerland. Despite them not being EU members they still apply many EU regulations and directives, mainly in order to minimise the re- strictions on trading goods and services with EU mem- ber states. Nevertheless, leaving the EU would no doubt create a tremendous amount of uncertainty. What is also clear is that the current Conservative UK	resulted in the thresholds for compulsory EIA for e.g. new housing development going from 0.5 ha to 5 ha. Associated with the government's attempts to reduce the need for EIA, there is some evidence that ambitions to carry out best practice may be declining, and a more minimalist approach towards EIA is developing. In par- ticular, changes to Town & Country Planning policies seem to encourage an attitude where 'doing as little as is necessary to fulfill minimum requirements' may be- come more acceptable than has been the case to date. In addition, central government budget cuts to local au-	

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thorities (on average by 40 %) are adding to a difficult context which has impacted on the ability of local authorities to fulfill all their obligations with regards to the application of best practice approaches (see e.g. LGA 2014).

It is against this challenging backdrop that we discuss what the revised EIA Directive may mean for practices in the UK. Devolved administrations (i.e. Scotland, Wales and Northern Ireland) have their own sets of EIA regulations and guidelines. This adds an additional layer of complexity and our subsequent focus will therefore be mainly on practices in England. Here, central government based regulations and associated guidelines are exclusively applicable.

The remainder of this paper is divided into four main sections. First, we will reflect on some existing achievements and problems of EIA in England. We then look at the anticipated procedural changes to the EIA process arising from the revised Directive. This is followed by an evaluation of changes to the consideration of specific substantive and other issues. Finally, we draw some conclusions and provide recommendations for practices in England.

Achievements and problems of EIA in England

EIA in the UK has a long history, and initial experimenting with the instrument started in the 1970s. At the time most of this was connected with Scottish oil extraction activities (Clark et al. 1976). Whilst practice started to expand to other sectors, overall, the government's approach to EIA initially was described as being 'from the outset grudging and minimalist' (CPRE 1991) coupled with widespread resistance from within the UK Town & Country Planning community to the concept. EIA only became a systematic practice after implementation of the EIA Directive 85/337/EEC in 1988.

Whilst in some EU member states, EIA regulations were put under the broad remit of nature conservation, in England, requirements were duplicated across many sectors including e.g. transport, energy, waste, mineral extraction and many others (Glasson et al. 1997), with the majority of practice being focussed on the planning system (Glasson & Bellanger 2003). This means that over 20 sets of regulations and associated guidelines apply to EIA in the UK, including those of devolved administrations. EIA is associated with development consent procedures, rather than an environmental licence or licence to operate, which is counter to the practice in many other EU member states.

EIA practice in the UK is characterised by both significant achievement and ongoing challenges. These have been discussed, evaluated and summarised in e.g. Jha-Thakur & Fischer (2016), Arts et al. (2012) and IEMA (2011). Well over 12,000 EIAs have been conducted since EIA became a formal requirement following the EIA Directive nearly 30 years ago. About 450 EIAs are currently undertaken in the English planning system every year, meaning that EIA is still applied to less than 0.1 % of all planning applications. Based on the voluntary IEMA-led accreditation scheme 'EIA quality mark' there are audit data available going back over five years from the present of at least one third of all EIAs produced, representing the work of over 50 organisations. These are valuable for research on improving empirical understanding of the overall effectiveness of EIAs, which in the past has been found to be thin at times (Fischer et al. 2015).

The early application of EIA in the 1980-90s arguably brought about a significant improvement in infrastructure design and mitigation, and infrastructure development now commonly adopts as standard environmental practices that were once seen as cutting edge. A 2011 survey with 181 participants representing a wide range of EIA stakeholders found 45 % perceived UK EIAs to have had a moderate effect on projects, and EIA resulted in the most environmentally friendly alternative being chosen according to just under 10 % of the respondents. Less than 5 % of respondents estimated EIAs to have had no impact at all, and 30 % felt that EIA led to the explicit consideration of environmental values without changing the project decision (Arts et al. 2011). These achievements are supported by the results of another major survey of study in which two-thirds of 1,671 (mostly EIA industry based practitioner) respondents believed that EIA Directive best practices always or often contributed to effective protection of the environment and quality of life (IEMA 2011).

IEMA (2011) looked at the scope for improving the EIA procedure. Focussing on screening of projects, they established that over 40 % of participants believed that case-by-case screening decisions had required EIA to be undertaken for a proposal, which in their view, was unlikely to generate significant environmental effects. On the other hand, 55 % also believed that EIA had not been required for projects that would result in likely significant environmental effects (for respondents from consenting authorities this figure stood at 80 %). The screening stage is probably the most common area of legal challenge in UK EIA practice (Tromans 2012), with examples including challenges to screening judgements based on inadequate information; projects 'screened out' on the basis of untested assumptions about the adequacy of mitigation measures, and where further ecological studies were expected to be carried out between project approval and implementation; and where project extensions were screened out without considering their cumulative impact with the initial project (Glasson et al. 2012).

Another key problem associated with current EIA practice is over-inclusive scoping practices, one of the reasons for EIAs overall being perceived as disproportionate (Bruce 2014). IEMA (2011) stated that 'current EIA practice is too often driven by a risk averse approach, leading to broad assessments that lack the focus required to demonstrate the true value environmental professionals can add to project design and the decision-making process'. Connected with this, there is currently a failure of responsible authorities to consistently respond to scoping requests within five weeks (IEMA 2011).

Other challenges are perceived to be the generation of an unnecessarily large amount of baseline data and insufficient monitoring / follow-up practices. Whilst a lot of effort is expended on the gathering and reporting of baseline data, much of these data are subsequently not used in the actual assessment of impacts. The main issue here is a cautious approach based on a fear of missing anything which could cause a delay in the consenting process or lead to subsequent legal challenge (IEMA 2011), rather than focusing on what is likely to be relevant for expected significant effects. The resulting EIA reports are often lengthy and unwieldy (i.e. disproportionate), with chapters of roughly similar lengths rather than concise documents that focus on key issues.

That said, the UK courts have led to the very useful practice of what is referred to as the 'Rochdale Envelope'.² This means that where aspects of the proposed project are uncertain at the time of the preparation of EIA, the EIA must consider the range of possible parameters within which the project might evolve, and the range of impacts that might result from these parameters. This means a version of the precautionary principle is applied. Furthermore, since 2009 all planning material related to Nationally Significant Infrastructure Projects has been made public on one centralised website.³ These projects are subject to a particularly rapid but publicly visible planning process, and the easy access to their EIA reports should help to improve the development of a better understanding of EIA practice overall.

Finally, monitoring and other follow-up remains problematic. The decision to link EIA with planning consent, rather than to an environmental permit or 'licence to operate' regulatory regime, may have made the context for monitoring more challenging, as rarely does the culture of planning decisions consider monitoring of residual impacts. Whilst there are indications that this has got better over time (Jones & Fischer 2016), much of the observed improvement appears to be related to multiphase projects. In many cases, once all planning phases are complete, monitoring actually stops, resulting in uncertain outcomes, both with regards to conformity with conditions set in EIA and performance with regards to actual (as opposed to predicted) impacts.

However, despite these persistent challenges, there is also mounting evidence to suggest that the quality and impact of EIA has increased over time. As well as the more generic evidence provided by Jha-Thakur & Fischer (2016), Arts et al. (2012) and IEMA (2011) for improvements (either real or perceived), additional evidence exists for specific sectors. For example, Phylip-Jones & Fischer (2013) observed that most people involved in wind farm EIA thought that most EIAs had a major effect on the development. The Environment Agency calculated that the EIA process generated cost savings and avoided undue costs in its flood and coastal management projects to the combined value of nearly £16 million between April 2005 and March 2010 (IEMA 2011).

The revised EIA Drective and likely procedural changes to existing EIA practice

To date, most commentators have focused on the potential implications of the revised EIA Directive on the EIA process (e.g. Fothergill 2014; Nicholas Pearson Associates 2014). Considering the procedural nature of the EIA Directive, this is neither surprising, nor unexpected, even though we believe that substantive changes may be more significant on this occasion, as we will discuss later.

Changes apply in particular to screening, integration with other processes and monitoring. There are also some more minor changes to scoping.⁴ With regards to screening, there will be a requirement to submit a screening report in line with what is described in the new Annex IIA. Whilst this might be interpreted by some as having to produce a mini EIA, in the UK where screening reports are common, we expect this to lead to an improvement of screening practices, which in the past were described to have 'on occasion been found wanting' (Fothergill 2014).

With regards to the integration of EIA with other assessment processes, to date there have not been any explicit requirements to co-ordinate, integrate or formally tier assessments. Here, the revised Directive is seeking improved co-ordination or joint procedures of EIA with those resulting from the Habitats (92/43/EEC) Directive, and improved co-ordination with the Water Framework (2000/60/EC), Waste Framework (2008/98/ EC), Industrial Emissions (2010/75/EU), Seveso (2012/ 18/EU), and SEA (2001/42/EC) Directives. This may facilitate better tiering. In particular with regards to the relationship of SEA and EIA, the lack of tiering has been described as a key problem of existing practices (Fischer 2016; Arts et al. 2005). We consider the changes brought forward in the revised Directive as a great opportunity to improve the effectiveness of EIA. However, in this context, it is important that past widespread privatisations of UK utility infrastructures now mean there is a discord between strategic level planning and site specific development as systems are market driven.

The revised Directive also introduces a requirement that the EIA reports must be prepared by what is termed 'competent experts'. What exactly this means is not explained. However, we believe that in the UK, in particular based on the existing IEMA individual EIA register and the voluntary accreditation scheme IEMA EIA quality mark, a first step has already been taken in this direction (Bond et al. 2016; Fischer & Fothergill 2014).

Finally, with regards to EIA monitoring, the revised Directive is asking for commitments to be delivered⁵ through their incorporation into development consent. 'This means that environment and sustainability professionals will no longer have to hope the consenting authority picks up and includes the mitigation they have identified in the consent' (Fothergill 2014, www). Currently, the commitment of e.g. a property developer only lasts up to the point of the completion and selling

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Table 1.	Information to be	addraccod in the EIA re	port pow ro	autromonte and	implications
		audressed in the EIA re	port - new re	quitements and	Inplucations

100	te 1. Information to be addressed in the Erk rep	ore new requirements and implications	
N°	New requirements (in italics) from Annex IV	Implication for UK practice (type of change in bold)	Extent of change
1	'A description of the location of the project'	No change expected to current practice	✓
2	A description of the project, <i>including</i> , <i>'where rele-</i> vant demolition work'	No change expected to current practice	1
3	A description 'of the operational phase', 'ener- gy demand and energy used' 'and natural re- sources (including water, land, soil and biodiversi- ty)'	Land currently not routinely considered, i.e. change likely to be necessary	
4	'And subsoil' pollution	No change expected to current practice	 Image: A second s
5	'quantities and types of waste produced during con- struction'	Construction waste currently not routinely considered	
6	Description of the 'reasonable' alternatives' (for ex- ample in terms of project design, technology, loca- tion, size and scale)' 'which are relevant to the proposed project' 'including a comparison of the environmental effects'	Reasonable alternatives and design currently not systematically assessed, particularly not in terms of a comparison of the environmental effects *); however, revised Directive adds 'studied by the de- veloper', which some may interpret to mean no change	(?)
7	'A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without im- plementation of the project as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availabili- ty of environmental information and scientific knowledge'	Currently, only impacts of the development itself are assessed and other options considered are de- scribed; this now requires a comprehensive as- sessment of both the development and the zero- alternative (i.e. the future in the absence of the development) ; the choice of wording, though, means some may think no change is required (i.e. 'outline', 'reasonable', 'availability')	.(?)
8	A description of 'human health, biodiversity, climate (for example greenhouse gas emissions, im- pacts relevant to adaptation) cultural' heritage	Human health and climate (in particular adapta- tion) currently considered in a limited manner at best. Climate change adaptation is seldom covered, and climate change mitigation is often tested only against national emissions. No change expected with regards to consideration of cultural heritage but some to biodiversity (currently fauna and flora)	!!!
9	'The cumulation of effects with other existing and / or approved projects'	No change expected to current practice	1
10	A description of the forecasting methods 'or evi- dence and the main uncertainties involved'	Uncertainties currently not routinely considered, i.e. change likely to be necessary	
11	A description of the measures envisaged to 'avoid', prevent, reduce or, if possible, offset any 'identi- fied' significant adverse effects on the environment and, 'where appropriate, of any proposed monitor- ing arrangements (for example the preparation of post-project analysis). That description should ex- plain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases'	Post-project analysis is currently not considered; also, avoiding impacts implies the consideration of wider alternatives than current practice	!!!
12	A description of the 'vulnerability of the project to risks of major accidents and/or disasters'	Major accidents and disasters currently not rou- tinely considered, i.e. change likely to be necessary	!!!
✓ ! !!! *) (?)	Current practice already meeting requirement some changes to current practice likely to be necessary potentially giving rise to some more substantial changes Annex IV specifies that these are [only] alternatives 'stud what reasonable alternatives are. Reasonable alternative extent of change not fully clear	to current practice lied by the developer'; however, the developer will need is are a major field of legal controversy in UK SEA	d to explain

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of houses. Any subsequent issues (including monitoring demands) are left to the new homeowners.

The revised EIA Directive and likely substantive changes to existing EIA practice

The 2009 European Commission Report on the effectiveness of the EIA Directive (CEC 2009) concluded that there was a need to move beyond a procedural approach to EIA. In line with this conclusion, the revised EIA Directive also includes a range of changes with regards to substantive issues. For the first time, Annex IV explicitly establishes 'information for the EIA report', extending substantially the aspects listed in the 2011 codified Directive Annex IV. Table 1 lists new requirements and implications for UK practice. The right hand column summarises the expected changes in terms of no, some or more substantial changes.

Table 1 lists 12 new requirements. Four of these are unlikely to change existing UK practice in any major way, as they are already normally addressed: (1) the description of the location of the proposed project, (2) anticipated demolition work, (4) soil pollution, and (9) the cumulation of effects with other exisiting and approved projects. However whilst these are normally dealt with, they are not necessarily always addressed in a satisfactory way in every case.

Some changes to current practices will be necessary for six issues: (3) the new requirement to consider 'land' as a resource, which we believe is already reflected at least to some extent in the planning process's preference for brownfield development, although this is not necessarily documented in EIA reports; (5) the requirement to consider construction waste, which is also frequently (but not always) happening; and (10) the main uncertainties involved in forecasting impacts which will need to be explained. There are two issues revolving around alternatives where some changes are necessary. The extent of these are, however, not yet clear. For the first time the revised Directive is asking for (7) an assessment (i.e. not just the mentioning) of two alternatives; the proposed preferred option for the project and the 'zero alternative'. Furthermore, (6) the revised Annex IV explicitly mentions the need for a comparison of the environmental effects of the reasonable alternatives assessed: whilst these (only) need to be the alternatives 'studied by the developer', this goes beyond existing practices of only briefly describing what other alternatives were considered. The new requirements could increase pressure by stakeholders and / or the general public on a developer with regards to what 'reasonable alternatives' are. In this context, England has had many legal challenges relating to 'reasonable alternatives' in SEA, which may help to inform EIA practice. Finally, (8) the consideration of biodiversity goes beyond current practice of looking at flora and fauna, and the inclusion of the consideration of human health and climate change, including both mitigation and adaptation (liricka et al. 2016), will need to be addressed in EIA. To date, whilst issues like water, air and soil pollution are routinely considered in EIA, their impact on health tends to be alluded to at best. and social, behavioural and economic determinants⁶ of health are only dealt with sporadically (Fehr et al. 2014).

This leaves two issues which we believe may potentially give rise to some more major changes to existing practices. Annex IV establishes that (12) the 'vulnerability of the projects to risks of major accidents and / or disasters' is to be addressed. Again, this is currently not routinely done, although there has been a burgeoning discussion about resilience in the UK (e.g. Therivel 2011), and this will pose some interesting questions with regards to avoiding disasters (both from and to the development) in the first place as well as for potential post disaster EIA (Tajima et al. 2014). Finally (11) what has already been discussed above under the EIA procedural changes with regards to postproject analysis, in particular the need to avoid impacts may lead to some more substantial changes to current practice.

Other issues

With regards to the types of projects to be subjected to EIA, there have been no changes to Annexes I and II of the Directive. Some have suggested that this will continue uncertainty about whether or not EIA should be applied to e.g. the controversial shale gas operation ('fracking') and solar farms. However, in England industry has agreed to conduct EIA for these types of projects.

Ecosystem services have been the subject to an extensive professional debate in the UK, but were dropped from being included in the revised Directive. In particular considering its potential usefulness within EIA (Baker et al. 2013; Fothergill et al. 2012; Geneletti 2013) at a time when 'costs' are a key argument for or against development, we think this is disappointing, even though we acknowledge the difficulties associated with using the concept in practice (Geneletti et al. 2015).

Finally, the revised Directive mentions the need to 'lay down rules on penalties applicable to infringements'. As there are currently no such rules in place it will be interesting to see how this will be implemented. In this context, it is intriguing to see a requirement set for authorities to provide feedback on EIA reports⁷ within 90 days. Current EIA regulations already fit to this timescale.

Conclusions

England, never an ardent fan of EIA, has recently been pulling back from anything that might be perceived as a constraint on economic development. Never a particularly Europhile country, either, it is now actively engaged in considering 'Brexit'. That said, more than many European countries, England has generally implemented European Directives on time and without major loopholes, and plenty of British planners, consultants and developers are actively involved in working together to continuously improve EIA practice, both domestically and overseas.

We are personally delighted at the changes to the

EIA Directive, and believe that they will provide valuable hooks to further strengthen EIA practice in England. Some of the ways in which EIA practice is most ponderous in the UK has nothing to do with the EIA Directive, but rather with conditions in England: many people living on a small island, who want to maintain their standard of living and will use the courts (including the legal tool of EIA) to do so.

Notes

1 Note by the editor in chief: By the time printing the article, the "Brexit" had been decided but it was not at all clear how far this would reach and especially whether or not transposition would be necessary to access the Single European Market, i.e. the remarks in this article still make sense despite the result of the referendum.

2 http://infrastructure.independent.gov.uk/wp-content/uploads /2011/02/Advice-note-9.-Rochdale-envelope-web.pdf

3 http://infrastructure.planningportal.gov.uk

4 Here current practice in England already goes beyond what the revised Directive will require.

5 along with modifications to project design and any additional mitigation measures

6 NB: the word 'determinants' is not normally used in EIAs.

7 following the revised Directive presumably the new term to be used, rather than environmental statement

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Focus Article

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Results of an SEA: Renaturalisation along the River Humber

(photo: Prof. Dr. Thomas B. Fischer)

