

EIA decision-making and administrative justice: An empirical analysis

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ABSTRACT

In this paper we aim at determining the link between EIA report substance and administratively just EIA decisions. In so doing, previous research on 42 case studies showing administratively just decisions (that were lawful, procedurally fair and reasonable - see Alberts et al 2021b) were reviewed for the substance of the EIA reports on which the decisions were based. The research found that administratively just decisions can be achieved even with weak EIA report substance in areas such as need and desirability, identifying alternatives, dealing with significance, and addressing mitigation measures. We thereby conclude that administrative justice may be a false safety net in ensuring better EIA outcomes if not supported and informed by good EIA report substance. We conclude by making recommendations to improve substance and thereby strengthening administrative justice in EIA.

Is EIA just admin?

Environmental impact assessment (EIA) is increasingly understood internationally as a policy instrument that delivers more sustainable outcomes (Pope *et al.*, 2004; Cilliers *et al.*, 2020; Roos *et al.*, 2020). However, the original intent of EIA as envisaged by Caldwell (1988) was to protect the public and the environment from the consequences of reckless or inadequately informed policies or decisions (Caldwell, 1988, Alberts *et al.*, 2021b). The legislative desire to reinforce administrative accountability was specifically stated by Caldwell (1988) to be one of the key factors that shaped the development of EIA, and it is this desire that created the nexus between EIA and the field of administrative justice.

Given that EIA is implemented in most countries as an administrative procedure subject to an administrative justice perspective, it is surprising that the EIA effectiveness literature, for the most part, have not considered EIA within the context of administrative justice with the notable exceptions of Retief *et al.*, (2019) and Alberts *et al.*, (2021b). Alberts *et al.* (2021b), specifically, showed that EIA do as a whole (for 42 cases evaluated against specifically designed key performance indicators (KPIs) in the South African context) deliver on the internationally

accepted principles of administrative justice, namely lawfulness, reasonableness and procedural fairness. The research concluded that “*EIA decisions made for the sample of cases evaluated can, on the whole, be considered administratively just*” (Alberts *et al.*, 2021b: XX). This is considered an encouraging result, especially from a regulator’s perspective as it suggests that government is arriving at decisions in an administratively just manner.

An important uncertainty that remains, however, and which is the focus of this research, is the connection between EIA report substance and administratively just EIA decisions. Literature suggests that substantive weakness is an ongoing challenge for EIA practice both internationally and within the South African context (Wood, 2003, Sandham *et al.*, 2010, Sandham *et al.*, 2013, Sandham *et al.*, 2020, Alberts *et al.*, 2021a, Fischer and Retief, 2021). The contribution to knowledge of this paper is that EIA report substance has to date not been evaluated within the context of administrative justice. It must be noted that the authors do not seek to engage with EIA outcomes beyond the actual final decision and if it was considered administratively just. Further follow-up research on the post decision outcomes is considered an area of future research for the dataset underlying this paper.

Method

To address the central research question, the 42 EIA cases that were reviewed for conformance to administrative justice principles (Alberts *et al.*, 2021b) were now also reviewed against specially designed key performance indicators (KPIs) relating to EIA report substance – see Tables 1 and 2. The KPIs addressed South African minimum legal requirements and international best practice for EIA report substance (Adapted from Sandham *et al.*, 2008a, Sandham *et al.*, 2020, Alberts *et al.*, 2020, Alberts *et al.*, 2021a) - see Table 3.

In line with previous research on EIA report substance evaluation (Lawrence, 1997; Retief, 2007a; 2007b), we have applied the following three KPI design criteria, namely:

- KPIs should be objectively and empirically measurable (albeit on a subjective evaluation scale);
- Data for evaluation against the KPIs should be readily available;
- The KPI should be explicitly linked to a particular area of legal requirement or best practice.

The EIA cases selected in the original research (Alberts *et al.*, 2021b) comprised of EIAs from seven sectors to ensure a broad sample of development types as set out in Table 1.

Table 1: Selected EIA cases for review

| Number of cases | Sector | Description of cases |
|------------------------|-----------------------------|--|
| 6 | Mining | Open cast and underground mining with related infrastructure. |
| 6 | Agriculture | Feedlots, broilers, abattoirs. |
| 6 | Energy | Coal fired power stations, transmission infrastructure, renewable energy projects. |
| 6 | Tourism | Access and accommodation infrastructure in national parks and nature reserves. |
| 6 | Housing | High-cost country, golf and lifestyle estates; low-cost housing developments; mixed land use developments. |
| 6 | Bulk services and transport | Linear developments such as roads, bridges, agricultural infrastructure, and bulk water pipelines. |
| 6 | Waste infrastructure | Waste storage, waste processing and recycling infrastructure. |
| Total: 42 | | |

The EIA reports for these cases were obtained from the ten competent authorities within the South African EIA system who evaluate and make EIA decisions. These include the nine provinces and the national Department of Environment, Forestry and Fisheries (DEFF). The sampling was purposive, based on the following selection criteria:

- EIAs for which authorisations had already been issued;
- EIAs where the proposed developments had been implemented;
- EIAs where there is full access to the complete case files and documentation; and
- EIAs that together provide a range of scales and complexities (i.e. big and small projects, diverse projects within a particular sector).

In total, the environmental authorities provided access to 105 EIA case files, of which 73 cases complied with the above case selection criteria. The research also aimed, as far as possible, to select cases equally from different sectors to ensure a diverse and well-represented profile. A second round of selection was done from the 73 cases to include six cases for each of the seven sectors, bringing the final total to 42 cases as shown in Table 1.

The evaluation was done by six qualified and experienced EIA case evaluators, with a combined total of 100 years' experience in EIA practice between them. The use of multiple evaluators aimed to address the issue of researcher bias and subjectivity. Evaluators were selected based on their knowledge and experience of the South African EIA system and international best practice, as well as their knowledge of EIA within the context of the specific sectors chosen for the evaluation. The evaluators all held as a minimum, a relevant Master's

degree in the field of Environmental Management, with two holding relevant PhDs. The minimum years of experience was 10 years and the maximum 30 years. Two of the reviewers were published academics in the field of EIA and environmental and administrative law, whilst the remaining reviewers were experienced consultants working in the field of EIA both nationally and internationally.

The performance measurement was based on informed qualitative judgement, and did not set out specified thresholds or specific quantifiable parameters. EIA report substance were ranked as:

- **C = Poor:** Failure to perform to the majority of indicators. i.e. non-performance;
- **B = Average:** Partial performance to the majority of indicators, or an even spread in performance. i.e. partial performance;
- **A = Good:** Performance, to the majority of indicators. i.e. good performance; and
- **NA = Not applicable:** Where certain indicators are not applicable to a particular case.

Results and discussion

Table 2 compares the overall conformance results to administrative justice principles from Alberts *et al.* (2021b) with the results from the EIA report substance review. The results for EIA report substance are varied with meaningful areas of good and weak performance across the 10 key performance areas (KPAs) and 16 key performance indicators (KPIs), producing 343 As, 118 Bs, 183 Cs and 28 NAs scores.

Table 2: Scores for KPIs related to lawfulness, reasonableness, procedural fairness (Alberts *et al.*, 2021b) and EIA report substance key performance areas

| Key performance area | A | B | C | N/A |
|--|-----|-----|-----|-----|
| Lawfulness <i>To what extent was the EIA outcome/decision based on a complete and lawful application?</i> | 351 | 8 | 39 | 22 |
| Procedural fairness <i>To what extent did the EIA process comply with minimum legal procedural requirements?</i> | 154 | 2 | 42 | 54 |
| Reasonableness <i>To what extent was the decision described in the environmental authorisation consistent with and based on the content of the EIA report?</i> <i>From: Alberts et al., (2021b)</i> | 23 | 5 | 14 | 0 |
| Substance <i>What was the EIA report substance that informed the EIA decision?</i> | 343 | 118 | 183 | 28 |

The detailed report substance results from this research are set out in Table 3, which indicates the differing scores for each of the sixteen KPIs related to EIA report substance across the 42 cases. Figure 1 illustrates the results per KPI and indicates that the majority of the weaker KPI scores are centred around the significance and mitigation key performance areas. This is in line with wider international findings, both with regards to EIA (see e.g. Wood, 2003; Philip-Jones and Fischer, 2013) and also strategic environmental assessment (SEA; Fischer, 2012). These weaknesses are persistent and not much change has been observed over several decades (see e.g. Jha-Thakur and Fischer, 2016; Ortolano and Shephard, 1995).

Table 3: Performance scores for EIA report substance KPIs

| Key performance area (KPA) | Key performance indicators (KPIs) for EIA report substance | A | B | C | N/A |
|---|--|----|----|----|-----|
| Activity description | S1: <i>Was the description of the activity provided sufficient to inform the identification of listed activities?</i> | 22 | 17 | 3 | 0 |
| Scoping | S2: <i>Was the information provided sufficient to justify the identification of key issues (scoping)?</i> | 23 | 9 | 10 | 0 |
| Need and desirability | S3: <i>Was the timing of the development sufficiently justified in relation to need and desirability?</i> | 24 | 5 | 13 | 0 |
| | S4: <i>Was the location of the development sufficiently justified in relation to need and desirability?</i> | 23 | 6 | 13 | 0 |
| Key issues | S5: <i>Did the plan of study sufficiently incorporate the key issues as identified during scoping?</i> | 13 | 3 | 7 | 19 |
| Alternatives | S6: <i>Were reasonable alternatives sufficiently presented and addressed?</i> | 20 | 10 | 12 | 0 |
| Significance | S7: <i>Was significance sufficiently determined according to a justified methodology, which includes the method and its application?</i> | 27 | 5 | 10 | 0 |
| | S8: <i>Was the determination of significance consistently applied across specialist disciplines?</i> | 3 | 8 | 27 | 4 |
| Mitigation | S9: <i>Was sufficient justification provided for different proposed mitigation measures against the mitigation hierarchy?</i> | 12 | 3 | 27 | 0 |
| | S10: <i>Has the significance rating after mitigation been sufficiently justified?</i> | 10 | 7 | 25 | 0 |
| | S11: <i>Were the proposed mitigation measures as described in the impact assessment incorporated into the management plan?</i> | 19 | 15 | 8 | 0 |
| Environmental Management Programme (EMPr) | S12: <i>Were roles and responsibilities assigned meaningfully in relation to management actions in the management?</i> | 26 | 8 | 8 | 0 |
| Public participation | S13: <i>Was all information ultimately used for decision making in the public domain?</i> | 35 | 1 | 3 | 3 |
| | S14: <i>Were all comments from interested and affected parties (I&APs) adequately responded to in the impact assessment process and reports (not relegated to comments and response reports)?</i> | 26 | 9 | 5 | 2 |
| | S15: <i>Were all key I&APs consulted in the impact assessment process?</i> | 37 | 3 | 2 | 0 |
| Recommendations | S16: <i>Were the key recommendations from the impact assessment sufficiently justified and clearly summarised in a non-technical fashion?</i> | 23 | 9 | 10 | 0 |

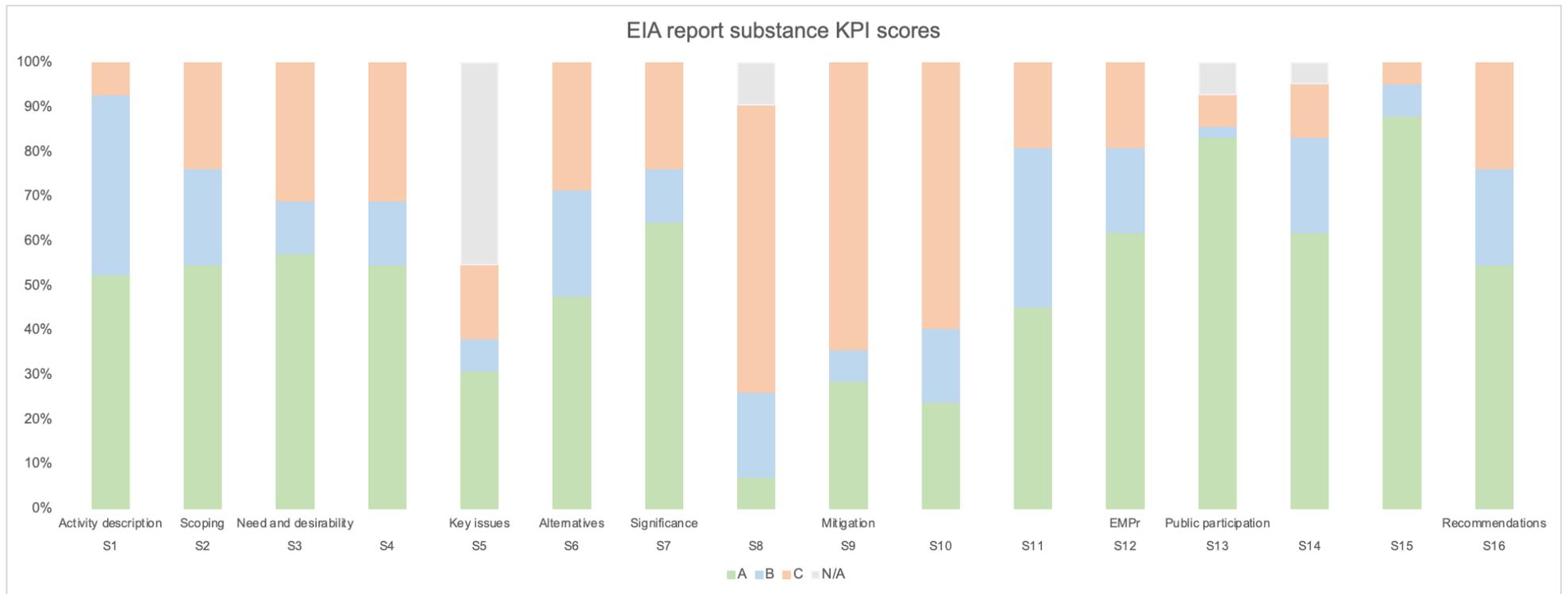


Figure 1: EIA report substance KPI scores

The results are discussed according to key performance areas (KPAs) as set out in Table 3 and Figure 1.

Activity description: In the majority of cases, the description of the activity (S1) was sufficient to determine and justify the need for the EIA (see S1 with only 17 Bs and 3 Cs). However, examples were also found, where at the time of application, it was too early in the project design phase to provide a detailed project description, and/or the project design seemed to change during the EIA process. Both these scenarios have implications for identifying detailed impacts and mitigation measures thereby introducing high levels of uncertainty. These included examples of mining cases where the project was only described as open cast mining or a project was only described as being the construction of surface infrastructure for underground mining. Past research supports these results and associated publications have shown that project descriptions are weaker for more complex and large-scale developments such as those related to mining (Sandham *et al.*, 2008a), explosives manufacturing (Sandham *et al.*, 2013b), and large developments impacting on wetlands (Sandham *et al.*, 2008b). On the other hand, it is important to being aware of observations from elsewhere that EIA can start too late when a particular activity has been decided upon, giving EIA very little space to influence that activity. Whilst in this case the activity can be described in detail, EIA effectiveness is reduced due to an inability to influence decisions (Jha-Thakur and Fischer, 2016; Khosravi *et al.*, 2019; Nadeem and Fischer, 2011).

Scoping and identification of key issues: The project description is critical in justifying the identification of key issues as a basis for the assessment, generally understood as the scoping phase. Scoping is based on the premise that the assessment needs to focus only on the most important issues to optimise resources and avoid obfuscation. In this, S2 did not perform well overall, with almost half the scores being either Bs or Cs (i.e 23 As, 9 Bs and 10 Cs). The weakness in identifying key issues not only refers to instances where key issues were missed, but also instances where unnecessary issues were included and specialists involved, e.g. comprehensive heritage and archaeological assessments in questionable areas of heritage or archaeological significance. The lack of a formal scoping phase requirement in certain cases, combined with a prescribed report template to be followed, does not seem to assist with the identification of key issues and does not contribute to focusing the assessment in these cases. Again, this observation is in line with wider international experiences. In this context, over recent years, increasingly there has been talk about the need of 'proportionate' EIA (Fischer *et al.*, 2016), i.e. EIA that only takes into account those issues where significant effects can be expected.

Need and desirability: Determining need and desirability are based on the (sustainability) principles set out in South African legislation (RSA, 1998). These require the timing and location of the particular activity to be justified, presenting a number of questions that require an engagement with the sustainability principles. This is in line with wider international discussions, in particular with regards to the need of suitable guidance (Montaño and Fischer, 2019)). This KPA, especially considering the importance thereof, was often poorly addressed, with almost half of the scores for S3 and S4 being either B or C. The lack of up-to-date policy guidance in some sectors exacerbates the difficulty in contextualising the appropriateness of development proposals (i.e. understanding the timing and need for development and to scope the key issues). Location, as one of the need and desirability considerations, are slightly better considered in instances where strategic plans and documents such as spatial development frameworks (SDFs), strategic environmental assessments (SEAs), and environmental management frameworks (EMFs) which serve to provide a spatial context, were available (again, this is a similar observation to what has been described for practices elsewhere; see Fischer et al, 2021). The renewable energy sector in South Africa, which has developed a strong strategic and policy context, is an example where need and desirability have been well addressed. For some other sectors, the policy context did exist, however, it was not always well considered, for example, climate change and energy policy were not consistently considered in coal mining applications (see also e.g. Jiricka et al, 2018). This suggests that short term socio-economic factors are prominent with the assumption that development (even coal mining) in general is desirable.

Alternatives: Results related to KPI S6 shows that dealing with alternatives is a particular area of weakness, with more than half of the scores being Bs or Cs. This is in line with wider international observations made by e.g. Ortolano and Shepherd, 1995, Wood (2003) and Fischer et al (2016). Apart from the waste sector, all other sectors seemed to have struggled with considering alternatives. There were instances where no alternatives were considered. Broadly speaking the lack of alternatives reflects a lack of mitigation thinking and failure to realize the value adding potential of alternative considerations. For example, the failure by applicants to adequately consider technology and location alternatives, or statements around mining applications that there are no alternatives available. Admittedly, the timing of EIA also influences the feasibility of certain alternatives and within some cases much of the alternatives thinking happened during the feasibility stage preceding the EIA (see also Fischer and Gonzalez, 2021). In one instance, alternatives thinking was found to have a substantial influence on the project, which ultimately resulted in an open cast mine being converted to an underground mine with great cost implications so as to minimise environmental impacts. It is

recommended that alternatives also be considered explicitly in relation to the impact mitigation hierarchy, especially the first step in aiming to avoid impacts.

Significance: Dealing with significance (S7 and S8) is a particular weakness of the EIA reports evaluated, with 30 A, 13 B and 36 C scores. The weaknesses are caused by inconsistencies in how significance is defined and measured, with specialists for example using widely different significance methods (see also Rossouw, 2003). The common use of quantitative scoring for subjective value judgements is methodologically flawed¹. For example, differing specialists on a single project rating impacts on a sensitive wetland differently. Moreover, it is highly questionable that for all 42 cases not a single high significance rating was achieved after mitigation. In some instances, the significance findings of the specialists never made it into the EIA report and therefore inconsistencies exist. For example, statements by a specialist that the significant impact on a wetland is unavoidable, despite mitigation, not being included in the EIA report. Clearly, guidance is needed on how to deal with significance in EIA. Cumulative effects are poorly dealt with as also reflected in the lack of cumulative considerations and thinking in significance ratings. None of the cases reviewed provided clear statements and showed an understanding of the cumulative impacts associated with the particular project. The above aligns with previous research in the international and South African context, that found dealing with significance remains a key challenge (Arts et al, 2012; Erlich and Ross, 2015; Retief, *et al.*, 2016; Sandham *et al.*, 2020, Alberts *et al.*, 2021a)

Mitigation and Environmental Management Programme (EMPr): Dealing with mitigation is closely linked to significance. KPIs S9, S10 and S11 related to mitigation performed particularly poorly, with 41As, 25Bs and 58Cs. The main weaknesses related to the following: lack of application of the mitigation hierarchy; jumping between significance before and after mitigation; and inconsistency between the mitigation measures recommended by specialist studies and the content of the main EIA report and environmental management programmes (EMPrs). Finally, the outcome that all impacts for the 42 cases were mitigated to a point of medium to low significance is questioned. It is however recognised that dealing with mitigation remains a key challenge for EIA both internationally and in the South African context (Kidd *et al.*, 2018). The quality of EMPrs (KPI S12) scored, comparatively speaking, well with 26As, 8Bs and 6Cs. However, the generic nature of the content of the EMPs presents some cause for concern.

¹ We do acknowledge that this is widespread practice, though, not just in EIA, but also in other technical assessments, including e.g. cost-benefit analysis (CBA) and multi-criteria analysis (MCA; see e.g. Fischer et al, 2010)

Public participation: Public participation aspects (KPIs S13, S14 and S15) were particularly well addressed with 98 As, 13 Bs and 10 Cs. Research has shown that this is not typical for South African EIA report quality since public participation is not always well conducted (Kidd *et al.*, 2018). The adequacy of responses to issues raised was difficult to verify, though, without also engaging with the public, which was not possible as part of this evaluation. However, based on the content of the project files and reports, we consider public comments to be well captured and addressed. The use of comments and response tables seemed to work particularly well in summarising and communicating outcomes. Much could still be said about the adequacy of the responses contained in these tables, and if they qualify as being sufficient. For example, in numerous cases reviewed, consultants would make statements to the effect that interested and affected party (I&AP) concerns around certain impacts were noted and would be addressed through the implementation of the mitigation hierarchy as contained in the EMPr. As stated above, the EMPrs were, however, often generic and lacking sufficient details as to exactly how mitigation will be affected.

Recommendations: The key recommendations from the impact assessment were generally sufficiently justified and clearly summarised in a non-technical fashion, with S16 scoring mostly As, and only 9 Bs and 10 Cs. Although the overall performance seems relatively good there is still important room for improvement with regard to the non-technical nature in which information is communicated.

Conclusions

The results and discussion provided in this paper indicate that despite the majority of decisions in the selected cases complying with the principles of administrative justice, the substance on which the decisions are based remains questionable in key areas (see Tables 2, 3 and Figure 1). It, therefore, seems that we may be achieving administratively just decisions based on poor substance, confirming that performance in terms of administrative justice principles does thus not necessarily reflect good EIA report substance (Bond *et al.*, 2014). In this regard Runhaar *et al.* (2013; XXX), argue that the administrative functioning of EIA systems is good (i.e. procedures implemented, openness to public), however, the outcomes seem to be weak in terms of EIA not being able to considerably more environmentally sustainable decisions. This is in line with research conducted internationally over several decades (see e.g. Nicolaisen and Fischer, 2016; Byron et al, 2020; Dipper, 1998), even though there have been exceptions (see e.g. Fischer and Retief, 2021)

Although the importance of EIA conforming to the principles of administrative justice should not be underplayed, administrative justice may be a false safety net. Any appeal or judicial

review against the EIA decision, not grounded on substance, faces difficulty, as administrative law is primarily concerned with questions of law (Sive, 1970). It is, thus, likely that appeals and reviews will shy away from the question of fact or substance as courts are reluctant to interpret such, but tend to rather focus on process (Peraudeau, 2019). It is, therefore, imperative that good substance is ensured in any EIA system and that over reliance on administrative justice to deliver good substance and ultimately better EIA outcomes be avoided.

The question that remains is - *what may be done to improve EIA substance up to the point of the decision?* Much has been written (Retief, 2016, Cilliers *et al.*, 2020, Roos *et al.*, 2020, Sandham *et al.*, 2020, Alberts *et al.*, 2021a; Fischer and Retief, 2021) on how to improve substance, including factors such as:

- Improving regulator capacity to improve their role as gatekeepers by not accepting weak report substance and not bow to political interference;
- Improving consultant capacity to ensure good report substance, especially in the face of emerging disruptive technologies and new industries;
- Empowering communities to ensure that their inputs and role as EIA watchdogs improves EIA report substance;
- Strengthening legislative mandates in support of good EIA report substance;
- Providing guidelines and standards for decision-making against which EIA report substance can be measured;
- Introducing registration bodies/authorities aimed at setting and upholding standards of professional practice; and
- Strengthening EIA follow-up to improve feedback loops so that we avoid the redesign of the wheel and the we learn form best practice.

The authors argue accordingly that in order to improve EIA practice, we cannot only focus on the administrative nature of EIA and administrative justice. Neither can we solely focus on improving substance. Both EIA report substance and administrative justice must be considered in tandem to ensure the effective and successful functioning of any EIA system. Compliance with the administrative justice principles ensure lawfulness, reasonableness and procedural fairness of the EIA process, whilst strong substance may ensure better, more environmentally sustainable EIA outcomes and better informed decisions.

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