



On the reporting and review requirements of ISO 14044

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1 Introduction

In today's LCA world, one can encounter a variety of LCA practitioners and commissioners from different industries and fields of research who have different levels of expertise, experience, and expectations. Even those with more experience who are actively involved in the field of LCA can have rather varying opinions about what ISO 14044 requires (or does not require) regarding the preparation, critical review, and dissemination of third-party reports in accordance with ISO 14044:2006, clauses 5 and 6 (ISO 2006a).

This commentary and discussion paper aims to summarize and discuss the most common misconceptions and ambiguities encountered by the authors in the field. They are presented

in two separate subsections to clearly distinguish one from the other, but in no other particular order and without any claim of comprehensiveness.

2 Common misconceptions encountered in the field

2.1 Misconception #1: the term “third-party report” refers to reports that have been critically reviewed by a third party

ISO 14044:2006, clause 5.2 mandates that “when results of the LCA are to be communicated to any third party (i.e.

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interested party other than the commissioner or the practitioner of the study), regardless of the form of communication, a third-party report shall be prepared” (ISO 2006b). Clause 3.46 further defines “interested party” as “individual or group concerned with or affected by the environmental performance of a product system, or by the results of the life cycle assessment” (ibid). As such, the term “third-party report” simply refers to a report prepared to be shared with any third parties other than the commissioner and the practitioner. This also means that even LCA results that are only shared in a business-to-business context require that a third-party report be made available.

2.2 Misconception #2: you only need to prepare a third-party report if the LCA study contains comparative assertions for public disclosure

Clause 5.2 of ISO 14044:2006 states rather clearly that “when results of the LCA are to be communicated to any third party [...], regardless of the form of communication, a third-party report shall be prepared” (ISO 2006b). This requirement does not distinguish between different forms of communicating the LCA results. So, be it marketing collateral, a website, a print ad, a label on a product, an email, or even an oral communication—as long as LCA results are communicated to a third party in any way, a third-party report needs to be prepared. Why? Because clause 5.2 couples the first requirement with a second one: “The third-party report constitutes a reference document, and shall be made available to any third party to whom the communication is made” (ibid). In practical terms, this means that if people are generally expected to believe claims based on an ISO-conformant LCA study, then they are 100% entitled to a likewise conformant third-party report to support them.

In addition, note that ISO 14044 further does not differentiate whether the third-party report itself “contains” any comparative assertions, which are defined by clause 3.6 as “environmental claim regarding the superiority or equivalence of one product versus a competing product that performs the same function” (ISO 2006b). Instead, ISO 14044 distinguishes studies, results, or indicators that are “*intended to be used in comparative assertions*” intended to be disclosed to the public” (ibid), and the reporting requirements in 5.2 require that a statement be added to each and every LCA report “as to whether the study *intends to support comparative assertions* intended to be disclosed to the public” (ibid).

2.3 Misconception #3: you only need a critical review if you are comparing your own to your competitor’s products

Contemporary witnesses can confirm that the comparison of products from competing companies was at the heart of the

issue when the ISO requirements around panel review were conceived. However, the language in clause 3.6 about an “environmental claim regarding the superiority or equivalence of one product versus a competing product that performs the same function” (ISO 2006a) is not as narrow. It speaks of “competing products,” not “products from competing companies.” At the very least, and this is rarely disputed in practice, any two products that compete for market share would fall under this language, even if they were made by the same company or two companies owned by the same corporation.

After all, ISO 14044, clause 6.1, states that the purpose of such panel reviews is “to decrease the likelihood of misunderstandings or negative effects on external interested parties” (ISO 2006b). When in doubt, it is always better for LCA practitioners and commissioners alike to err on the side of more transparency and scrutiny, rather than the opposite.

2.4 Misconception #4: you do not need to provide third-party reports if they contain any kind of sensitive information

One can frequently encounter situations where commissioners of LCA studies are more than happy to communicate the results of an LCA study, but they are reluctant or unwilling to share any third-party report with their audience. The reason given usually is that the third-party report contains sensitive information. While confidentiality of business information is a legitimate concern, such restrictions are in direct conflict with the spirit of transparency underlying the reporting requirements in ISO 14044 and not sanctioned by the current language in 5.2, which states that “the third-party report can be based on study documentation that contains confidential information that may not be included in the third-party report” (ISO 2006b).

While the extent or even the nature of such confidential information is not discussed in the standard, the intent clearly was not that the entire report can be declared confidential and no third-party report provided at all. In practice, there are several ways to meet the ISO requirement for third-party reports, while at the same addressing concerns about sensitive information:

1. Share the third-party report under NDA
2. Black out or aggregate sensitive information in the report
3. Create a confidential annex, which can be easily removed prior to sharing

The last option is, arguably, the most elegant one if it is clear from the beginning of the project that the LCA results will be communicated to third parties. The first two can still be applied to reports that have already been written, and one can see all three options applied in practice.

2.5 Misconception #5: the third-party reports must be publicly available

Third-party reports do not need to be publicly available (e.g., through a website). ISO 14044, clause 5.2 only requires that third-party reports “shall be made available to any third party to whom the communication is made” (ISO 2006b). This includes upon request or under NDA, if necessary, as long as there is no unreasonable effort associated with obtaining the copy. While the publication of the third-party report on a publicly accessible website can be viewed as best practice in this regard, less proactive forms of sharing the report are nevertheless in line with the ISO requirements.

3 Additional ambiguities

3.1 Ambiguity #1: do you need to make third-party reports available if you publish a verified EPD?

Another commonly used justification for not sharing third-party reports is the language that can (or cannot) be found in other standards, specifically in the Type III Environmental Product Declaration (EPD) space. While business practice continues to evolve, many program operators (PO) do not commonly share background LCA reports with the same audience as with whom the EPDs are shared, or make sharing third-party reports a case-by-case decision. While these practices may well be argued to be in conflict with the two *shall* requirements in ISO 14044, 5.2, the two justifications most commonly encountered in the field are (a) that ISO 14025 does not address the reporting requirements around EPDs so we need to wait until it does and, more frequently, (b) that the revised international standard ISO 21930 contains a sentence stating that “the project report is not part of the public communication” (ISO 2017c).

It is certainly true that ISO 14025 does not mention any reporting requirements in excess of the ones that apply to the EPDs themselves (ISO 2006a). However, ISO 14044, 5.2 explicitly covers the communication of LCA results “to any third party” and “regardless of the form of communication” (ibid.). Since Type III Environmental Product Declarations are a vehicle to communicate LCA results to third parties, and ISO 14025 uses ISO 14044 as a normative reference, there certainly is an argument to be made that ISO 14044, 5.2, applies to EPDs as well.

This point of view was further supported by the more recently published amendment ISO 14044:2006/AMD 1:2017 (ISO 2017b) and ISO 14026:2017 on principles, requirements, and guidelines for communication of footprint information (ISO 2017a), which make the provision of a third-party report according to ISO 14044, clause 5.2, mandatory when communicating any kind of LCA-based footprint

communication (e.g., carbon footprints according to ISO 14067). Accordingly, these more recent standards raise the question why consumers and businesses alike should not expect the same level of transparency from Type III EPDs based on ISO 14025 that now applies to all other environmental footprint communication.

Correspondingly, if the language in ISO 21930 that is quoted above is interpreted as a license to withhold third-party reports, it would effectively transfer the power to scrutinize EPDs to the program operator and verifier. Such a “scrutiny monopoly” would not only be contrary to the spirit of transparency in ISO 14044, it would also provide a disservice to the continuous improvement of EPDs themselves by replacing the expertise of many with the expertise of one. While some program operators try to alleviate the issue by only accepting LCA reports that have been previously critically reviewed, this practice only increases the level of scrutiny from one to a maximum of two sets of eyes (LCA reviewer plus EPD verifier), and nowhere in ISO 14044 does a critical review nullify the requirements of clause 5.2.

More broadly, it should be noted that sector-specific ISO standards, such as ISO 21930, cannot overrule generic ISO management standards. The ISO Directives, Part 1, Annex M.5.2.5, unequivocally state that “technical committee, subcommittee, project committee (SyC in IEC) or International Workshop developing sector-, aspect- or element-specific environmental management standards shall [...] not interpret, change, or subtract from the requirements of the generic ISO 14000 series environmental management systems, environmental auditing, environmental labeling, life-cycle assessment and greenhouse gas management standards” (ISO/IEC 2019).

Ultimately, the “project report” referenced in ISO 21930 can still be argued to be equivalent to the “study report” or “LCA report” in ISO 14044; however, the “study report” is not synonymous with the “third-party report” required by clause 5.2, a term that is not used at all by ISO 21930. While neither ISO 21930 nor ISO 14044, for that matter, require you to share the *study report* with third parties, nothing in these or other standards nullifies the shall requirements of ISO 14044 which demand sharing third-party reports with the same audience as with whom LCA results are shared.

Companies that publish EPDs should therefore welcome and embrace ISO 14044’s disclosure requirements as an opportunity to improve the quality and consistency of EPDs for all. While more transparency means more scrutiny, it will lead to higher quality EPDs and more public trust in their results in the long run.

3.2 Ambiguity #2: do I ever need panel review for non-comparative studies?

The ISO language cited in misconception #2 may be interpreted to mean that even third-party reports that are not

comparative in nature at all but are still created with the clear *intent* to inform and support such comparative assertions intended to be disclosed to the public would need to be critically reviewed by a panel of three independent experts in accordance with clause 6.1. As currently phrased in ISO 14044, it would again be the *intent* to support such comparative assertions that makes all the difference here. In practice, this would prevent an organization from performing two separate, non-comparative and non-reviewed LCA studies and then publicly communicating the environmental superiority of one product system over the other based on these two studies, all while claiming conformance with ISO 14044. While this hypothetical example would certainly not be in the spirit or the letter of the ISO standards, current practice is limiting panel review mostly to comparative LCA studies.

3.3 Ambiguity #3: can alternative product designs qualify as “competing products”?

Building on misconception #3 above, the ISO language around comparative assertions may be interpreted even more broadly; it can easily be argued that the ISO requirements also apply to design choices made within a single company. For instance, if a company performs an LCA on different design options, and then intends, for marketing purposes, to communicate the overall environmental improvements of the chosen design over the current one, the report would then need to be critically reviewed by a panel of independent experts. In this interpretation, the “competing products” are the design options that compete for selection in the design process, with the material and technology providers for these designs competing for a supply contract with the product manufacturer.

Let us use an illustrative example to support the argument: if a steel company compares a steel product to an aluminum product from an aluminum company (or vice versa) with the intent to market its environmental superiority, most people will agree that critical panel review is absolutely mandatory under ISO 14044. However, if a producer of automotive parts is informing an in-house design choice between an aluminum design and an incumbent steel design, also with the full intent of marketing the environmental superiority of the new design in very similar ways as the steel or aluminum company would have done, then there is no good reason to reduce the level of scrutiny that the study should undergo just because the product systems investigated are not made by different companies or because the product designs will never compete for market shares. After all, both of these exemplary studies compare a steel design to an aluminum design with the intent to support comparative assertions.

If the purpose of such panel reviews is, in fact, “to decrease the likelihood of misunderstandings or negative effects on external interested parties” (ibid.), then these parties very much include the component producer’s raw material and

tooling suppliers as well as downstream actors, e.g., the producers of aftermarket replacement parts, service providers, or scrap recyclers. As such, the interests of these “interested parties” deserve to be protected from arbitrary or biased decisions that may be informed by an LCA study that has not been scrutinized to the same degree as a corresponding study conducted by the exemplary steel or aluminum companies themselves. Granted, due to the existing gray area in the standard, this point will likely remain open to interpretation and debate. We argue that, at the very least, it should not be misused as a loophole to avoid critical review.

3.4 Ambiguity #4: can you “conform” to ISO 14044 without any critical review?

ISO 14044 is somewhat inconclusive when it comes to the conditions under which the commissioner(s) or practitioner(s) of an LCA study can claim conformance with the standard. ISO speaks of conformity assessments as a “set of processes that show your product, service or system meets the requirements of a standard” (ISO, n.d.). The critical review as described in ISO 14044 can therefore be argued to be the only form of conformity assessment available for LCA studies today, and it culminates in the issuance of a critical review statement to be appended to the third-party report (ISO 2014). So, while each and every LCA report is mandated under ISO to include a statement that the study has been carried out “in accordance with” ISO 14044, and the standard only mandates a critical review to take place for studies intended to support comparative assertions intended to be disclosed to the public, it can be debated whether studies that do not fall into the latter category can (or should) claim ISO conformance without any form of critical review. While the authors do not take any position either way at this point, it would again appear prudent to err on the side of caution whenever in doubt.

Since the above ambiguities appear to be reasonable interpretations of the current language in ISO 14044, they should be addressed and clarified by future ISO/TC207/SC5 Working Groups, e.g., when revising ISO/TS 14071:2014.

At this point, you may wonder why LCA practitioners and researchers like the authors should even care this much whether third-party reports are shared or critical reviews conducted. After all, it is clearly a responsibility of the study commissioner as the study’s owner to decide on critical review and reporting questions. As such, study commissioners are always free to withhold third-party reports or decide against panel reviews if, in return, they do not claim conformance with ISO 14044 for their results. However, it seems rather odd that one would invest the necessary resources to first conduct an LCA according to ISO 14044 only to then fall short of the applicable reporting and review requirements. Note that you

cannot “partially conform” to an ISO standard; either you meet all relevant shall requirements or you do not.

Regarding critical review, the requirements in ISO 14044 are less clear than the ones about third-party reports but, when in doubt, a critical review will always add credibility to the study and usually costs only a fraction of the costs of the overall study when considering all resources spent. Communicating LCA results externally without any form of critical review may therefore often be possible but is rarely prudent.

Going back to the question of why LCA practitioners should care about these issues if they are not the ones deciding on the dissemination or review of the LCA report, I hope the above considerations provided some context. Transparency, to the greatest extent possible, is the one and only path forward to earn public trust in LCA-based results and claims, and it will be essential to the long-term survival of the tool itself and its successful integration into business-to-consumer (B2C) and business-to-business (B2B) communications and decision-making.

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