



An essay on mining and the moral obligation not to harm others

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ABSTRACT

The terms ‘harm’ and ‘harm avoidance’ are increasingly being utilised in the global mining industry, particularly in relation to occupational health and safety. However, avoidance of harm has not been given the same priority when it comes to dealing with the social impacts of mining. Rather, industry discourse has focused more on ‘mitigating adverse impacts’ (which is a broader concept than ‘harm avoidance’) and leveraging positive outcomes or ‘shared value’ for local communities. Companies should be expected to contribute to local level development, but we argue that avoidance of harm to people must always be the foremost social goal. In this article, we offer a working definition of harm, and make the case for viewing harm avoidance as a moral obligation. We also challenge the proposition that, in the case of mining, it may sometimes be acceptable to expose some communities and groups to harm to derive a broader societal benefit. The evidence that people can be harmed by mining is indisputable. We argue that a priority for the global mining industry should be to ensure that practices that cause harm are no longer tolerated or considered an unavoidable cost of development.

1. Introduction

The terms ‘harm’ and ‘harm avoidance’ are increasingly being used in the global mining industry, particularly in relation to occupational health and safety. For example, one of the 10 Mining Principles articulated by the International Council of Mining and Metals (ICMM) is to ‘[p]ursue continual improvement in physical and psychological health and safety performance with the ultimate goal of zero harm (2023:7). Harm in this context has mostly been equated with death or serious injuries. Some companies are now also including psychosocial hazards, defined as aspects of work that have the potential to cause psychological or physical harm, including bullying, mental stress, and workplace violence (ICMM, 2023:7). Harm avoidance is likewise a key focus of the Global Industry Standard on Tailings Management, which states in its preamble that the standard strives to ‘achieve the ultimate goal of zero harm to people and the environment with zero tolerance for human fatality’ (GTR, 2020).

In this article, we argue that a similar emphasis on harm avoidance should inform social impact policy and management practices in the mining industry. At the most basic level, embedding ‘avoidance of harm to people’ as a guiding principle would entail a significant shift in language, given that mining companies and other actors such as governments and international agencies have mostly avoided characterising

unwanted social impacts as ‘harms’. For example, the International Finance Corporation (IFC, 2012) *Performance Standards on Environmental and Social Sustainability*, which continue to be a key reference point for the mining sector, hardly use the term ‘harm’ at all, preferring to use the descriptor ‘adverse impacts’.¹ Likewise, the ICMM Mining Principles, which define good-practice environmental, social and governance requirements of the Council’s corporate members, use the term ‘adverse human rights impacts’ (2023:6), rather than adopting the stronger terminology of ‘human rights harms’, which is used by many human rights defenders and practitioners.

More substantively, adopting the principle of ‘harm avoidance’ as a priority for the social performance domain of mining would involve a significant change in strategic focus. While ‘zero harm’ is widely seen as the primary aspirational goal for occupational health and safety, objectives in the social performance domain are framed much more around the delivery of positive outcomes such as generating ‘shared value’ (Owen et al., 2021; Porter and Kramer, 2011); ‘making a positive contribution’ to the United Nations 2030 Sustainable Development Goals (UN, 2015); and ‘going beyond “do no harm” to maximizing development gains’ (World Bank, 2016:2; see also Gulakov and Vanclay, 2024).

In the ICMM’s Mining Principles, the Social Performance commitment (Principle 9) is expressed solely in positive terms as being to ‘[p]

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¹ In fact, the word ‘harm’ appears in the IFC’s Performance Standards only once, along with one mention of ‘harmed’ and one of ‘harmful’. In contrast, there are 32 references to ‘adverse impacts’. The World Bank’s *Social and Environmental Standards* contain 80 references to ‘adverse impacts’, while the term ‘harm’ is used only five times in the document and is never defined.

ursue continual improvement in social performance and contribute to the social, economic and institutional development of host countries and communities' (2023:9).² In an accompanying guidance document that the ICMM has published on human rights due diligence, there is a brief statement that one of the aims of social performance management is to '[a]void harm to people and communities from company activities throughout the mining life cycle'. However, this not couched as a requirement, and there is no cross-reference back to Principle 9.

A persuasive argument can be advanced that elevating harm avoidance as a social performance goal for the mining sector would, over time, contribute to a reduction in the incidence of mining-related conflict, improve the human rights performance of the sector, and deliver better development outcomes for impacted communities. However, our aim in this essay is not to sell the 'business case' for taking such an approach. Rather, the justification we offer for prioritising harm avoidance over other goals is grounded in ethical, not pragmatic, considerations. 'Do no harm to others' has long been recognised in multiple fields of endeavour as a core ethical principle that should govern the behaviour of individuals and organisations. Examples include the medical, psychology, and social work professions (Hugman et al., 2011; Lilienfeld, 2007; Smith, 2005) and humanitarian and aid work (Anderson, 1999; Wallace, 2015). There is no logical reason why activities associated with resource extraction should be exempt from this overarching moral obligation.

As we discuss in the following section, we consider that the obligation to avoid doing harm should hold regardless of whether those who are harmed—or are at risk of being harmed—are employees, contractors, or people who live in, or are otherwise connected to, localities that have been or may be impacted by mining. We further argue that the concept of harm should not be restricted to the physical domain (e.g. death, injury, illness) or financial loss, but should encompass any actions or inactions that have a significant detrimental impact on people's overall wellbeing.

The approach that we advocate is broadly aligned with how the UN (2011) *Guiding Principles on Business and Human Rights* (UNGPR) characterise the state's responsibility to protect human rights and the concomitant responsibility of business to respect human rights and exercise human rights due diligence. In response to the proposition that business should play a positive role in society, the architect of the UNGPR, Professor John Ruggie, has stated the following:

I am strongly in favour of business contributing to the solution of societal challenges of all sorts. But the first step is to not infringe on the rights of others; not to contribute to harm or make a situation worse; not to exploit the absence of or weakness in the rule of law in a particular country or situation. (Interview with John G. Ruggie, 2012:898).

Furthermore, Ruggie confirms that human rights harms in one sphere of activity cannot be offset by 'good deeds' in another.

As we discuss in detail in the following section, there is ample evidence that people have been—and continue to be—harmed by mining, in a variety of ways and in a range of different settings. These harms have not always been inflicted intentionally—some may have resulted from neglect, inattention, poor management, inadequate knowledge, and lack of regulatory oversight and enforcement (Bainton and Skrzypek, 2021) and some may be attributable to 'wilful ignorance' (Lawrence and O'Faircheallaigh, 2022). But intent is not the issue here, it is the consequences for impacted populations that are important. Simply asserting that harm was not intended or contemplated is never a sufficient justification for causing, or contributing to, that harm (Ames

and Fiske, 2013; Guglielmo and Malle, 2010; Kemp et al., 2015). Rather, it should be incumbent on mining industry actors to demonstrate that they have taken all reasonable steps to avoid causing or contributing to harmful outcomes and have accepted responsibility for providing remedy in instances where harm has already been caused as a result of mining-related activities.

Our essay proceeds by offering an initial definition of harm (Section 2) and engaging two fundamental questions that are important for our argument that avoidance of harm to people should be an overarching priority for the mining industry (Section 3). In Section 4, we address the utilitarian argument that exposing some people to a degree of harm can be justified when there is a broader societal benefit to be obtained from allowing a mining project to proceed. In addition, we explore the related question of whether, and to what extent, it is acceptable to offset harms by 'trading' them for benefits. In our concluding remarks (Section 5), we reflect on harm in the context of the global energy transition and the importance of prioritising harm avoidance in this environment.

Before progressing, we should also clarify that we have opted not to use the terms 'social harm' and 'social risk' in this essay despite them often being employed in relation to the mining sector (Franks et al., 2014; Frederiksen, 2018; Morrice and Colagiuri, 2013; White, 2013). Instead, we refer to 'harming people' and 'risks of harming people'. The primary reason for omitting the word 'social' is that there is a considerable divergence of views in the broader literature around what makes a harm 'social'. The term has been used to refer both to the *processes that have caused harm*—which has been the approach taken by criminologists working in the emerging field of zemiology (the study of social harms)³—and to *what has been harmed*, such as collective properties (cultures, group cohesion, governance) as distinct from the wellbeing of individuals only. Another consideration is that the concept of 'social risk' has been used in different ways within the mining industry. For example, social science researchers generally understand the term 'social risk' as referring to risks for potentially impacted communities, whereas many corporate practitioners equate 'social risks' with business risks arising from social factors (Kemp et al., 2016).

2. Defining 'harm'

Most people would accept the general proposition that causing harm to others—whether deliberately or because of carelessness or neglect—is morally wrong. Likewise, most would accept that people should not knowingly benefit from harm done to others or turn a blind eye to this possibility. However, the issue of what is encompassed by the term 'harm' continues to be debated by moral philosophers, social scientists and professionals working in the fields of harm reduction and prevention. A key reason for this debate is the following:

[H]arm ... is not an objective concept possessing a fixed meaning. Rather, harm is a normative concept dependent on social judgments about the interests that matter, bound up in social visions of the good and the bad. (Lin, 2006:984).

Criminologists writing about social harm have likewise struggled with definitional issues, as demonstrated by the following observation provided in a recent review of developments in the field of zemiology:

When we begin to probe and penetrate deeper, there remains a remarkable paucity of coherence or consensus around the conceptualisation and content of social harm. (Raymen, 2021:61).

² The issue of avoiding harm to people is addressed to a limited extent in Principle 3 (Human Rights) and Principle 4 (Risk Management) but these principles focus mainly on specifying the management processes that companies should follow, and, unlike the Health and Safety commitment (Principle 5), do not articulate an *ultimate* goal of the elimination of harm (ICMM, 2023).

³ One of the prominent contributors to the field of zemiology has characterised social harm 'as shorthand to reflect the relations, processes, flows, practices, discourse, actions, and inactions that constitute the fabric of our societies which serve to compromise the fulfilment of human needs and in doing so result in identifiable harms' (Pemberton, 2015:24). Our concern is that all-encompassing definitions such as this make it very difficult—if not impossible—to put boundaries around the phenomena which are being analysed.

Raymen is also critical of attempts by others working in this field to develop an ‘objective’ concept of social harm given that ‘ethics is an unavoidable and indispensable facet of the concept of harm’ (2021:65).

There is likewise an ongoing debate in the climate change literature about what is captured by the term ‘damage and loss’, particularly in relation to the extent to which this term should encompass intangible harm, or non-economic loss (e.g. Preston, 2017; Tschakert et al., 2019).

However, not everyone is concerned about the lack of precision surrounding the use of the term ‘harm’. For example, the American philosopher Robert Audi presents the following argument:

Vagueness ... is intrinsic to moral language ... Not only would we be unable to use moral language as we do in guiding and appraising conduct if we had to be precise; we would also have far less room to refine or heighten our moral demands and to expand our prohibitions and permissions ... [A] good ethical theory must provide space for moral imagination as people, ideals, and social structures are evaluated. (2004:167).

While Audi’s argument may have intellectual merit, it does not provide a great deal of assistance to legislators, regulators, policy-makers, and practitioners who are looking for practical guidance on how to operationalise the concept of harm and advocate for its avoidance. In this domain, as in others, definitions have consequences. Designating an impact as a ‘harm’ triggers, or should trigger, a moral obligation to take action to avoid or minimise that impact (or to remedy it, in the case of existing harms), so it is important to be as clear as possible about when the term should be applied.

In particular, we need to be careful that harm does not become a catch-all term for any unwelcome change, disruption, irritation, annoyance, or inconvenience that people might experience. If the label of ‘harm’ is applied too broadly, the concept loses both its analytical utility and its moral force. An example of what could be seen as an overuse of the term is provided by the 2021 report of the Responsible Mining Foundation (RMF, 2021) titled *Harmful Impacts of Mining: When Extraction Harms People, Environments, and Economies*. The report provides examples of various forms of corporate wrongdoing (including corruption and alleged non-payment of taxes), but it does not offer a conceptual framework or a working definition of harm with these considerations in mind, we propose the following simple formulation as a basis for this essay, and for stimulating future debate and discussion about what constitutes ‘harm to people’ in the mining context:

*People are harmed when their overall wellbeing is detrimentally impacted by the actions and/or inactions of others.*⁴

Wellbeing as a concept presents its own definitional challenges, but it basically encompasses core aspects of physical and psychological health; the ability to maintain a decent standard of living; and the capacity of people to develop and sustain valued relationships and function as social beings. According to Amartya Sen:

The functionings relevant for well-being vary from such elementary ones as escaping morbidity and mortality, being adequately nourished, having mobility, etc., to complex ones such as being happy, achieving self-respect, taking part in the life of the community, appearing in public without shame. (Sen, 1993:37).

⁴ A related definition of harm is ‘making people worse off than they would otherwise have been’ (Purves, 2019). However, a difficulty with this formulation is that it relies on establishing the counterfactual case, which can be very difficult to achieve.

Drawing on the work of the OECD (2011), Smyth and Vanclay (2017) propose a broadly similar formulation to that put forward by Sen.⁵

2.1. Harms and rights

Another threshold question to address is whether there is any substantive difference between applying a ‘harm lens’, rather than a ‘human rights lens’, given that many breaches of human rights involve a harm of some kind, and vice versa. As evidence of the overlap, the UNGPs make several explicit references to ‘human rights harm’ (although the more commonly used phrase is ‘adverse human rights impacts’). Also, the Australian Human Rights Commission and the Australian Human Rights Institute (AHRC & AHRI, 2021:22) have observed that mandating human rights due diligence ‘would essentially create a ‘do no harm’ standard of care, guided by the processes set out in the UNGPs.

While we acknowledge that there is a significant degree of complementarity between these two perspectives (see Esteves et al., 2017; Götzmann et al., 2016), we consider that the ‘harm lens’ adds value in two important ways. First, it allows for the possibility that people can be harmed (as we have defined the concept) without necessarily having their human rights violated. For example, disrupting someone’s social networks, damaging their business interests or causing them psychological distress may be very detrimental to a person’s wellbeing, but may not amount to an abuse or violation of a recognised international human right. Conversely, some minor rights infringements (for example, a temporary restriction on freedom of movement in a locality) may not constitute harm as we have defined the term.

A second—and more pragmatic—consideration is that the language of harm is more widely used than the language of rights, and more closely aligned with everyday language, including synonyms such as ‘hurt’, ‘damage’, ‘loss’, ‘impairment’, or ‘injury’. This is likely to be advantageous when it comes to explaining key principles to people who are not immersed in international human rights discourse.

2.2. Harm in the mining context

The scale and nature of the social changes brought about by mining can vary widely, depending on the temporal and spatial context. These changes are not always deleterious, but the academic literature contains many examples of people’s *overall wellbeing* being detrimentally impacted (i.e. harmed) as a result of mining (see Table 1).

Not all negative impacts attributable to mining constitute harms under our definition, although we recognise that even apparently minor inconveniences have the potential to become harms if they are not managed appropriately. Examples of potentially negative impacts that, on their own, may fall short of harms include a moderate increase in mining-related traffic on local roads (provided that this does not increase road trauma, higher noise levels that are detrimental to the mental and/or physical wellbeing of local residents, increased dust levels that are potentially damaging to health, reduced accessibility, or significantly longer travel times for local people); changed access routes to a recreation area utilised by a community (provided that access to the same or equivalent areas remains possible); increased prices of some foodstuffs (provided that affordable alternatives are available and the overall nutritional quality of people’s diets is not diminished); and increases in class sizes in a local school (provided that they still comply with national standards and that learning outcomes for pupils are not diminished). In these cases, the *moral imperative* to take preventive or

⁵ According to Smyth and Vanclay, “wellbeing” is an all-encompassing notion that includes having one’s basic human needs met (e.g. adequate food and water), being in good mental and physical health, having the ability to pursue one’s goals and to thrive, feeling connected to and a part of one’s local community and locality, and a general feeling of being satisfied with life (2017: 73).

Table 1
Examples of harmful impacts caused by mining.

Topic	Nature of Impacts	Indicative References
Environmental health	Adverse health outcomes for communities arising from increased exposure to airborne and/or waterborne contaminants	Akçil and Koldas (2006); Bellinger et al. (2017); Macklin et al. (2023); Ukaogo et al. (2020)
Displacement	People left worse off as a result of being dispossessed or displaced from their traditional lands or territory	Owen and Kemp (2015); Vanclay (2017); Wang et al. (2020)
Livelihood	Loss of access to key natural resources on which people depend for livelihoods; for example, water, land and forests	Ballard and Banks (2003); Bury (2004); Hajkowicz et al. (2011); Nuttall (2005)
Population migration	Social and economic disruption arising from rapid and uncontrolled population inflows into mining areas	Banks and Schwörer (2024); Bebbington and Humphreys (2018); Hilson et al. (2014)
Conflict	Upsurge in intra and/or intercommunity conflicts and grievances arising from disputes over issues such as mineral ownership and unequal access to benefits	Berman et al. (2017); Coumans (2011); Hilson (2002); Li (2015)
Disease	Increased exposure to diseases arising from effects such as population influx, increased population mobility, overcrowding, inadequate sanitation	Entwistle et al. (2019); Laney and Weissman (2014); Viliani et al. (2017)
Connection to place	Destruction of, or damage to, landscapes that have deep spiritual, environmental and/or emotional value for local people	Bainton et al. (2012); Burton et al. (2024); Kemp et al. (2022); O'Faircheallaigh (2008)
Social inclusion	Increased social exclusion, discrimination and marginalisation within communities arising from factors such as changed power dynamics and unequal distribution of income and benefits	Andrews (2018); Fisher (2007); Mancini and Sala (2018); Sesele et al. (2021)
Personal safety	Increased levels of violence and harassment, particularly towards women	Broderick (2012); Jenkins (2014); Warren and McAuliffe (2021)
Economic disadvantage	Higher incidence of poverty arising from factors such as increased cost of living, loss of traditional jobs and sources of livelihoods	Betz et al. (2015); Loayza and Rigolini (2016); Reeson et al. (2012); Sovacool (2019)
Health infrastructure	Decreased quality of healthcare arising from increased pressure on health services and state failures to provide adequate funding support	Mactaggart et al. (2016); Shandro et al. (2011)
Housing	Reduced availability of, and access to, affordable and safe housing as a result of rapid population growth, rising demand and increased construction costs	Marais et al. (2022); Owen et al. (2021); Pelders and Nelson (2019)
Risk and uncertainty	Heightened levels of fear, anxiety, and uncertainty arising from the imposition of risk or failure by developers or governments to provide credible information about risks that concern local people	Asante Boadi et al. (2019); Islam et al. (2017); Owen and Kemp (2015)

remedial action is not as strong as when there is an immediate and appreciable risk of causing harm. However, given that future impacts cannot always be foreseen, companies—and other actors, such as regulators and lenders—should continue to monitor what is happening ‘on the ground’ and be prepared to take remedial action if the potential for harm appears to be greater than anticipated.

Our proposed definition of harm and the examples provided above include ‘intangible’ as well as ‘tangible’ harms.⁶ Many harms can be measured, quantified and observed (e.g. scale of economic loss, number of fatalities and injuries recorded, incidence of disease and malnutrition, reduced life expectancy, level of toxic substances in the environment, housing quality). However, people can also be harmed if their subjective wellbeing is diminished for reasons such as increased anxiety; loss of sense of self-worth; negatively perceived transformation of a loved ‘home’ environment (characterised as ‘solastalgia’ by Albrecht et al., 2007); and breaking or weakening the spiritual connection that Indigenous people have with their traditional lands and waters.

Our proposed definition also encompasses ‘cumulative harm’, which occurs when what might be considered relatively small changes when viewed individually, have a significant overall negative impact on a person or group’s wellbeing when viewed together (Franks et al., 2013). An example from the mining context is where people might simultaneously be exposed to factors such as increased levels of dust, noise, traffic and changes to the landscape. Each of these changes by themselves may be tolerable, but as a whole, they can amount to a significant negative impact on a person’s quality of life and their overall wellbeing. An example not exclusive to mining is where what might appear to be apparently trivial and disconnected acts of disrespect (sometimes referred to as ‘microaggressions’) accumulate to make a person feel marginalised and unworthy (Friedlaender, 2018).⁷

The second part of our proposed definition characterises a harm as an outcome that results, at least in part, from the actions or inactions of others. We acknowledge that people can also negatively impact their own wellbeing through self-harming behaviours and the life choices that they make (Gratz, 2001; Mangnall and Yurkovich, 2008). However, the harm literature generally focuses on situations where there is some external contribution (which includes not acting when one had a duty to do so). Whether the harms in question were intended; were the result of carelessness or neglect; or occurred despite the responsible party’s best efforts goes to the question of culpability, not causality.

2.3. Harm and vulnerability

The concept of ‘harm’ is closely linked to the concepts of ‘vulnerability’ and ‘resilience’. According to de Zeeuw and Reeman, [s]imply defined, “vulnerability” refers to the risk of being exposed to harm’ (2024: 258). These authors view vulnerability as both a cause and manifestation of harm:

Vulnerable groups and individuals refer to people who are often exposed to several risks and adverse impacts at once, are more

⁶ Historically, the mining industry has resisted acknowledging intangible harms on the basis that they are ‘too subjective’, but there are signs that this may be changing—at least in relation to some behaviours. For example, the Chairman’s introduction to BHP’s annual report for FY2023 refers to ‘sexual harassment, racism and bullying in our workplaces’ as harmful behaviours that the company is committed to eliminating’ (2023:4). Elsewhere, the report states that the concern here is not just with the welfare of employees, but with the wellbeing of whoever might be exposed to these behaviours: ‘[we] acknowledge the presence of sexual harassment in the mining industry and ... consider it a material health and safety risk, harmful to impacted individuals, bystanders, our stakeholders and our operations’ (2023:34).

⁷ On cumulative impacts in relation specifically to mining, see the volume edited by Blakley and Franks (2021), and especially the chapter by Aucamp and Woodborne (2021).

sensitive to those risks and impacts, and/or have a weaker adaptive capacity for coping with and recovering from impacts, usually due to limited access to certain assets and/or resources. (de Zeeuw and Reeman, 2024: 258).

This definition broadly aligns with Vanclay et al.'s definition of vulnerability as 'a situation or condition characterised by low resilience and/or higher risk and reduced ability of an individual, group or community to cope with shock or negative impacts' (2015:18). By emphasising the situation or conditions that drive vulnerability, this definition avoids assuming that particular groups of people are *inherently* vulnerable. Vulnerability in turn is connected to the issue of intersectionality, which is a term used to describe 'the interconnected nature of social categorisations such as gender, ethnicity, class, and age' (Rowan, 2024:567). On this point, Rowan notes that

'[T]he environmental and social standards of many lenders, notably the Inter-American Development Bank and the European Investment Bank, place increasing emphasis on assessing and understanding gender and vulnerability, often with reference to intersectionality' (2024:567).

Given that there is a close association between vulnerability and harm, it follows that mining companies should be prioritising the needs and concerns of people who are likely to be in the most vulnerable of situations, as opposed to those who have social agency and have the capacity to adapt to, and take advantage of, change. Such an approach would be a significant departure from traditional industry approaches to stakeholder engagement, which have typically prioritised the cultivation of relationships with more well-resourced and influential members of communities with the greatest potential to advance or hinder mining interests.

The Interpretive Guide prepared for the UNGP makes a similar point:

Depending on the operational context, the most severe human rights impact may be faced by persons belonging to groups that are at higher risk of vulnerability or marginalisation, such as children, women, Indigenous peoples, or people belonging to ethnic or other minorities. If the enterprise decides it needs to prioritise its responses to human rights impacts, it should take into account the vulnerability of such groups and the risk that a delayed response to certain impacts could affect them disproportionately (UN, 2011:84).

The issue of marginalisation has also been addressed in social impact assessment (SIA) guidelines recently issued by the New South Wales Government in Australia. These require proponents to identify the following:

Whether any vulnerable or marginalised people may be affected by the project, including people on low incomes; people living with disabilities, chronic medical conditions or in poor health requiring access to services; culturally and linguistically diverse communities; people who are homeless or in insecure housing; people who are unable to represent themselves; or other vulnerable people such as elderly people, children or single-parent households. (DPE, 2023:17).

3. Working through the issues

The following two fundamental questions need to be addressed as part of building the case for embedding 'avoidance of harm to people' as a guiding principle of social performance in the mining sector.

1. Why should this objective take priority over other considerations?
2. Are there any circumstances where it is morally permissible to harm people, or expose them to a heightened risk of harm?

3.1. Why prioritise harm avoidance?

Three broad rationales can be offered for why the mining industry should be more focused on harm avoidance: (1) to limit the legal risk exposure of companies; (2) to reduce the level of conflict and controversy around mining developments and build societal support for mining; and (3) to fulfill a core moral responsibility (applicable to both corporate and individual actors) not to cause harm to others. As we argue below, the first two justifications, both of which rely mainly on external drivers, are insufficient for ensuring that companies will behave appropriately, especially when they are under commercial pressure. Strengthening of legal and regulatory requirements and increased external scrutiny of social management practices in the mining industry can make some difference, but sustained improvement in corporate social performance in the sector also requires embedding harm avoidance as a core industry value.

3.1.1. Legal considerations

Prevention of harm has long been seen as justifying the intervention of the state to prohibit and regulate various activities, and to impose criminal and civil sanctions on those who wilfully or negligently cause or contribute to harm to others or to the environment.

Putting aside the special case of 'victimless crimes', criminal law generally seeks to prohibit and punish acts that (1) harm the wellbeing or interests of others; and (2) result from the wilful, reckless or, in some cases negligent, conduct of another actor. The harms addressed by criminal law include causing physical injury or death; various forms of psychological harm (e.g. causing fear, stalking, abuse of authority); economic loss (through theft, fraud, or wilful damage to property); and certain forms of environmental damage. Modern criminal law also covers some acts that do not cause physical harm but have the *potential* to do so, such as dangerous driving or discharging a firearm in a public place.

Generally, criminal law focuses on the harmful actions of individuals, rather than organisational entities such as companies, but there are some exceptions to this. For example, an increasing number of jurisdictions have now criminalised the offence of corporate (or industrial) manslaughter to deal with serious management failures that result in a person's death. Depending on the jurisdiction, executives and board members may also be subject to a range of sanctions, including imprisonment, fines, and disqualification from serving as a director, although so far these provisions have been used only sparingly (Hopkins, 2022). In many jurisdictions, companies and senior management can also be prosecuted for causing environmental harm, such as by deliberately or recklessly causing contamination. Again though, it appears that only the most serious breaches have resulted in the imposition of criminal sanctions.⁸ Another constraining factor is that large-scale mining is often undertaken in countries where legal institutions are weak and there is low state capacity to make and enforce appropriate laws. In short, criminal law, as it currently operates, may be a check on egregiously bad conduct by companies in some contexts, but it is of limited utility as a mechanism for promoting good corporate behaviour in the social domain.

Civil law, which is concerned primarily with harms that are the result of negligence and breaches of a duty of care, rather than of intentional acts, is another legal mechanism for dealing with harmful corporate behaviour. Actions in the civil jurisdiction can be brought by aggrieved

⁸ In the aftermath of the Samarco tailings dam collapse that occurred in Brazil in 2015, company employees and executives were charged with criminal offences by Brazilian authorities. The mining companies involved, along with the dam certifier, were also charged with environmental crimes (Nogueira and Blount, 2016). As of August 2024, this matter was still pending, and it remains unclear whether these charges will be proved and, if so, what sanctions will be imposed.

parties, whereas only the state has this power in the criminal jurisdiction. The civil jurisdiction also generally has a lower standard of proof than the criminal jurisdiction ('balance of probabilities' vs 'beyond reasonable doubt'). A further point of difference is that civil law provides a mechanism for providing redress to people who have been harmed (e.g. through awarding damages or requiring restitution), whereas the focus of criminal law is on the punishment of the wrongdoer. Harms that fall within the purview of the civil law include loss of life; injury and adverse health impacts; mental harm, including psychiatric distress; damage to economic interests, including loss of future opportunities; reputational damage (through libel and slander laws); and loss of amenity/peaceful enjoyment (tort of nuisance and trespass).

Historically, there have been significant obstacles to aggrieved groups and individuals initiating civil actions against mining companies because of the length of time it can take to bring such cases before the courts, and the potential costs for litigants (particularly if the action fails and a cost award is made). There are some indications that this is beginning to change, as evidenced by the increasing number of strategic litigations and class actions against mining companies being initiated on behalf of employees and/or impacted communities. However, these cases require very long lead times and are not easy to win. For example, civil action over the Samarco dam failure has been going on for more than five years, and involves more than 700,000 claimants, including municipalities, private businesses, faith-based institutions, individual claimants, trade unions and members of Indigenous communities. The claim is seeking damages of £36 billion (\$70 billion) against BHP (Shanahan, 2024). A trial is set for October 2024 in the High Court of Justice in London.

In addition to the extensive case law that has evolved in the criminal and civil jurisdictions, there is a large and growing body of statutory law that creates obligations for individuals and organisations to avoid causing harm to others. This includes laws relating to matters as diverse as workforce health and safety; discrimination and harassment; road safety; environmental management; cyber-safety; child protection; responsible service of alcohol; and regulation of healthcare professionals.

In the sphere of environmental protection, which is particularly relevant to the mining industry, regulatory objectives are often framed around minimising harm to the environment, with the level of potential harm being used as a basis for determining approval requirements and sanctions for non-compliance. For example, in Australia the *Environmental Protection Act (Qld) 1994*, s. 319 defines a 'general environmental duty', which requires a person or organisation to 'not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm'. The Act also creates a hierarchy of potential harms that is used to determine approval conditions (ss. 14–17); these range from 'nuisance' through to 'material' and 'serious' harm. Sanctions provided for in the Act include cancellation or suspension of operating licences, monetary penalties and, in some instances, imprisonment.

Historically, governments have been much less interventionist in relation to the social—as opposed to environmental—impacts of mines or other large-scale developments. However, there have been some recent moves by regulators in Australia to require proponents of 'significant' industrial and infrastructure developments (including new mines) to prepare baseline SIAs and submit social impact management and monitoring plans for regulatory review (e.g. Queensland Government [DSD, 2018], New South Wales Government [DPE, 2023]). The Queensland guideline (DSD, 2018), which is the more directive of the two, specifies that SIA should include management measures for all potentially significant negative impacts (i.e. harms) and demonstrate that the hierarchy of 'avoid and mitigate' has been followed. The guideline further states that options to 'mitigate social impacts must only be proposed where all reasonable measures relating to project design, location, consultation, and implementation have been explored to avoid negative social impacts' (DSD, 2018:7).

Also relevant is the recent adoption by the European Union of a *Directive on Corporate Sustainability Due Diligence*, which is due to take effect in 2027 (European Commission, 2022). One of the Directive's requirements is that if companies are based in the European Union or have a significant business presence there (which includes many of the larger mining companies), they must integrate environmental and human rights due diligence into policies; identify actual or potential adverse human rights and environmental impacts; prevent or mitigate potential impacts; and bring to an end or minimise actual impacts. The Directive will enable groups and individuals who believe they have been adversely impacted by the actions of companies to seek damages from the company responsible through the courts. This may provide another avenue, to hold companies accountable for harms that they may have caused or contributed to, particularly if the use of class actions continues to increase.

Overall, these examples indicate that, in some jurisdictions at least, legislators, regulators and courts are gradually moving towards making companies more accountable for the harm that they may cause to people—not just in the workplace, but 'beyond the fence' as well. However, this move towards ensuring greater accountability is occurring very unevenly, and the legal remedies available to impacted parties in many jurisdictions remain limited. In addition, the extent to which mining companies actually modify their behaviour to adapt to this changing legal environment will depend, to a considerable extent, on their appetite for risk. If companies are to fully commit to a 'do no harm' approach, they need to be provided with a more persuasive rationale than just the minimisation of legal exposure.

3.1.2. Business drivers

A key theme in the corporate social responsibility literature—summed up in the adage 'doing better by doing good'—is that it can often be in the long-term commercial interests of companies to apply standards of behaviour that go beyond what the law requires (Lindorff et al., 2012; Wettstein et al., 2019; Wirth et al., 2016). In the mining context, this is often couched in terms of the value for companies—and the industry as a whole—of securing and maintaining a 'social license to operate' (Lacey and Lamont, 2014; Moffat and Zhang, 2014; Williams and Walton, 2013). Purported benefits of conformance include enhanced corporate reputation, easier pathways to regulatory approval of new mines, reduced likelihood of projects being stopped or disrupted by community action, and greater capacity to attract environmental, social and governance ('ESG') investors and lenders (Buhmann et al., 2019; Vanclay and Hanna, 2019).

However, in practice, these broader strategic considerations are still often outweighed by more immediate business considerations, such as the need to deliver projects 'on time and on budget'; internal cost reduction pressures (particularly when commodity prices are falling); and the mining industry's continuing reluctance to leave commercially exploitable resources 'sitting in the ground'. Put simply, the argument that mining companies should avoid causing harm to people cannot be based only on demonstrating a 'business case' because that case is always vulnerable to being overridden by other, more compelling, short-term business priorities (Owen, 2016; Owen and Kemp, 2013). By and large, the obligation to avoid doing harm has now been recognised in the health and safety domain, where the objective of zero harm is enshrined in law and regulation, and accepted, in principle at least, by many companies as a moral imperative. Our argument is that the same imperative needs to be applied in the social performance domain as well.

3.1.3. Moral imperatives

Audi (2004) lists 'prevention of injury and harm' as the first of ten key moral obligations that people (and by implication, organisations) have as members of society. This obligation aligns to what DeGrazia and Millum (2021:58) characterise as the moral principle of 'non-maleficence'. This principle prohibits the causing of harm to others, except where there are justifying circumstances (such as self-defence, consent by the person or to prevent a worse harm from occurring).

According to these authors, '[a]mong general ethical principles, *non-maleficence* has the strongest claim to being self-evident' (2021:59). Another influential American philosopher Gert (2004) has observed that commonsense morality is far more concerned with prohibiting and discouraging harm (or 'evil', which is Gert's preferred term) than with placing a moral obligation on people to enhance goods or benefits.

The moral obligation to avoid harm requires not only that corporate actors take all reasonable steps to prevent harm to people occurring in the future, but also that these actors work to remedy existing or past harms that they may have caused, contributed to, or benefited from.⁹ This is the same principle that applies in relation to human rights, as set out in the UNGP. Similarly, the Conference of the Parties to the UN Framework Convention on Climate Change has acknowledged that there is an obligation for signatory parties to take remedial action to address past and present harms arising from climate change (defined as 'loss and damage'), as well as to prevent further harms from occurring (Mechler et al., 2019).

3.2. Justifications for harming others

As explained by Shiffrin:

Generally, the justified imposition of ... harm on another person requires as a necessary condition that at least one (and perhaps more than one) of the following be true: that the harm be deserved; that its imposition is necessary to avoid greater harm to the recipient or to others; that its imposition be necessary to vindicate another's right; or that the recipient consents (2012:262).

The first of these justifications refers primarily to the situation where the state imposes civil or criminal sanctions on someone to punish—and denounce—their wrongdoing. As a rule, we do not accept that private actors (individuals or corporations) have the authority to exercise retribution. Circumstances where the second justification (to avoid greater harm) might apply in the mining context are likely to be restricted to emergency situations, such as where the state uses 'reasonable force' to prevent people from accessing or remaining in a mining area because there is an imminent risk to life. The third justification applies when an action is deemed necessary to protect the rights of others; for example, where police shoot an armed person to prevent them from killing or maiming others and there is no other way of stopping that person, or when police use 'reasonable force' to remove a trespasser from someone else's property.

According to Shiffrin, the final justification for imposing or tolerating harm—that the recipient consented—is acceptable only if the recipient's consent and the 'perpetrator's action' are 'both motivated by the reasonable idea that suffering or inflicting the harm will serve a legitimate and suitably important end' (2012:362). Any such consent must be *freely given* (i.e. not obtained through coercion, intimidation, bribery, deception or withholding information). Shiffrin emphasises that consent requires 'active engagement with the features that generally make the condition harmful' (2012:390); that is, it must be *informed*. Furthermore, there must be some equivalence in the capacity of the parties to participate in this exchange (e.g. similar levels of access to information, similar legal rights).

In the mining sector, the issue of whether—and when—consent should be sought from impacted communities before engaging in

⁹ The moral obligation to act to prevent or redress a harm may also, in limited circumstances, extend to situations where the actor concerned has not caused or contributed to the harm in question. An example might be where there has been an earthquake in a nearby locality and a mining company is able to deploy earth moving equipment to help rescue people from collapsed buildings, or to clear roads of debris so that emergency vehicles can access a site. In such cases, the company may derive a reputational benefit, but this should not be the primary reason for acting (see Friedland, 2015).

potentially harmful activities has been directly addressed in relation to developing mines on Indigenous peoples' lands. Invoking the UNGP and the UN *Declaration on the Rights of Indigenous Peoples* (2008), the ICMM's (2024) *Indigenous Peoples and Mining Position Statement* acknowledges that the duty for obtaining consent for project development lies with states. The Position Statement encourages ICMM member companies to conduct human rights due diligence to obtain agreement from Indigenous peoples to impact their land and their rights under equitable terms. Shiffrin's (2012) test of reasonableness also includes the element of parties negotiating on an equal footing, including having access to information about harms before the harms occur.

How mining companies should proceed in instances where they do not obtain agreement, or where the state fails to obtain consent before issuing project approvals, remains somewhat open in the ICMM's statement. Our position in relation to harm does not challenge Indigenous peoples' right to self-determination, which could include consenting to potentially harmful activities, but rather, we argue that a project's harm potential should be at the forefront of negotiations. This requires a readiness on the part of states and developers to examine harm; competency to engage with people who may be harmed; and a willingness to disclose information for the purposes of exploring safeguards, protections and strategies for harm avoidance, mitigation and monitoring over time. In our experience, and despite the ICMM's evolving policy framework, harm avoidance is not at the forefront of agreement practice, and these agreement processes are routinely inequitable (O'Faircheallaigh, 2023). If these fundamental issues relating to causing harm are not addressed by states and developers, harms will continue to be structured into, rather than out of, mining projects.

4. Counterarguments

4.1. Utilitarian objections

In simplified terms, the utilitarian principle asserts that we should strive for outcomes that deliver 'the greatest amount of good to the greatest number' and that do the least overall harm. From this perspective, it may be justifiable in some cases to engage in actions that harm people or expose some groups and individuals to a higher risk of harm, but that deliver a broader societal benefit. A hypothetical example is where a valuable mineral resource is discovered in a remote area of a country that is inhabited by isolated communities who would be exposed to a heightened risk of social breakdown if mining was to be allowed. Most utilitarians would agree that in such circumstances, 'all reasonable steps' should be taken to minimise the harm caused to these 'at risk' communities, and that affected people should be compensated when some level of harm and disruption is unavoidable. However, from a conventional utilitarian perspective the decision to proceed (or not) with the project should ultimately be based on an assessment of the overall benefit to the wider region or country, and not on whether some people may be harmed or exposed to an elevated risk of harm. Cost-benefit analyses often apply similar calculations.

A variant on the utilitarian argument is the idea that mining is a 'necessary evil' that must be undertaken to provide materials essential to support economic and social development, notwithstanding that there may be some unavoidable local social and environmental and social costs associated with the extraction process. This proposition is sometimes advanced by those who believe that urgent action is required to meet the anticipated increase in demand for critical and strategic minerals to enable a transition to a post-carbon economy (Bainton et al., 2021). A related argument is that requiring the mining industry to bear the full cost of avoiding harm to people (or the environment) could make minerals less competitive with other substitutes, and significantly increase the cost of inputs into other processes (e.g. manufacturing and

¹⁰ Noting the argument that some mining-induced harms are simply 'irremediable' (Owen and Kemp, 2023).

energy production). From this perspective, it is better to accept these externalities than to allow mass unemployment in some mining regions and the flow on of costs to other, more exposed, economic sectors.

We acknowledge that prioritising harm avoidance *could* result in some mining projects not going ahead at all and may also add to the cost of developing and operating some others (although this can be mitigated by careful planning and design). However, it remains the case that, from an ethical perspective, it is not morally acceptable to harm one group of people—or expose them to a high risk of harm—just so another group of people can derive a benefit. The only circumstances where this might be justified are where the action taken is necessary to avert a larger harm—such as an environmental catastrophe or a public health crisis—and where there is no other viable alternative available to the state or other actors. In our assessment, these situations rarely arise in the mining context. Where they do, every effort would need to be made to minimise and mitigate the harm and to ensure that those who are expected to bear the cost of the response have access to a remedy that is commensurate with the harm they have experienced or to which they are likely to be exposed.¹⁰

4.2. The risk of a ‘chilling effect’

Another objection to prioritising harm avoidance is that mining companies may become so focused on this objective that they fail to grasp opportunities to contribute to improving local social and economic conditions. For example, a company could decide to establish a fly-in fly-out operation to avoid disrupting a nearby community, rather than seeing the mine as an opportunity to promote local economic development; or decline to fund an education and training program for local women out of concern that local men may see this as a threat to their own power and status.

This issue was directly addressed by [Vanclay et al. \(2015\)](#) in one of the leading guidance documents on SIA. They argued that SIAs should focus both on minimising harm and maximizing benefits to affected communities, with the overarching goal being sustainable social development.

Communities don’t want only harm minimisation, they want to benefit from projects. No matter how well-designed projects are, there will nearly always be residual impacts on people, who will also experience changes in their lives and in their communities, especially in terms of their sense of place. ([Vanclay et al., 2015:52](#); see also [Gulakov and Vanclay, 2024](#)).

We broadly agree with this approach, *provided that* the potential to cause harm is kept firmly in focus even when considering benefits, and care is taken to avoid the ‘trade-off traps’ that we discussed previously in this article. Beneficial outcomes must be pursued in ways that, at a minimum, do not cause or exacerbate harm (and preferably alleviate it). Furthermore, ‘doing good’ in some ways does not provide an excuse for harms caused in other ways.

The concern that too strong a focus on harm avoidance will have a chilling effect has also been raised in relation to the provision of humanitarian aid to poor and disadvantaged communities, and to countries and regions that have been ravaged by conflicts or natural disasters. Various critics have asserted that such aid often does more harm than good. However, as [Wallace \(2015\)](#) has argued strongly, the principle of ‘do no harm’ is not an excuse for inaction; rather, it is a reason to continue searching for other options. Importantly, Wallace emphasises that a ‘do no harm’ approach is not just a defensive position:

The principle of do no harm is a holistic perspective that is equally focused on both harm and benefit. The concept of ‘harm’ in the phrase has no meaning without an effort to provide benefit. The warning of the words ‘do no harm’ reminds us to think before rushing to do good, not to stop us from considering the good altogether (2015:7).

We consider these observations to be equally applicable to the mining context.

5. Concluding remarks

A key aim of this essay is to encourage dialogue and debate about the moral responsibilities of the mining industry in relation to the people who live in, or are otherwise connected to, places that are (or could be) impacted by mining activities. We have called for a clearer delineation in the concepts and language that industry actors use to talk about the social impacts of mining. Many of these impacts are ‘harms’ and should be referred to and regulated as such, rather than just being lumped into the category of ‘adverse impacts’. We have also argued that avoidance of harm to people should be a primary goal of the global mining industry, and should not be substituted for, or subsumed by, aspirational objectives to ‘contribute positively’. It is right to expect that companies should be supporting initiatives to enhance the sustainability of the communities and regions in which they operate, but this must be done in a way that does not cause, contribute to, or excuse, the harming of people. Overall, the industry needs to be more attuned to the harm end of the social impact spectrum.

We recognise that there are many practical challenges to embedding ‘avoidance of harm to people’ as an operating logic. These challenges include incorporating harm into risk-management and regulatory processes (and agreeing on criteria for what constitutes harm); assessing risks in particular situations and contexts; building social expertise among industry, government and communities; finding ways to better assess intangible and cumulative harms; developing internal and external reporting frameworks; interfacing with specialist discourse communities (e.g. human rights); incentivising decision-makers to focus on the wellbeing of people ‘outside the fence’ of a mine (and beyond the workforce); and engaging with global markets that have so far failed to ‘price in’ the costs to communities for harms caused by mining.

In the context of the climate crisis and the predicted exponential demand for mineral-intensive renewable energy technologies (solar panels, wind turbines, batteries, electric vehicles), some places will face unprecedented changes and disruptions from new and more intensive forms of resource extraction. This includes localities that have had little or no previous exposure to large-scale mining and where there are indicators of local-level vulnerability ([Owen et al., 2023](#)). With the increasing demand for transition minerals comes the need to better understand when, how and why mining harms people, and how those harms can be avoided. Yet, there are few indications that the mining industry is prioritising this challenge. Instead, mining companies and their representative bodies mostly focus on promising local benefits while calling for state support and streamlined regulatory processes to accelerate the development of new mines. In some jurisdictions, state actors are in turn signalling a willingness to reduce regulatory red tape for major projects while largely disregarding calls to strengthen social safeguards for local people ([Sinclair and Coe, 2024](#)). As the mining industry responds to rising global demand for minerals, it is timely to encourage more active debate about the direction and strength of the mining industry’s moral compass and to work to ensure that the imperative not to harm others becomes embedded in global industry practice.

CRedit authorship contribution statement

David Brereton: Writing – review & editing, Writing – original draft, Conceptualization. **Sharon Flynn:** Writing – review & editing. **Deanna Kemp:** Writing – review & editing, Writing – original draft, Resources, Project administration, Funding acquisition, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial

interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

No data was used for the research described in the article.

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