# If a tree falls in the forest ...

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The question, "If a tree falls in the forest and no one is around to hear it, does it make a sound?", raises interesting issues regarding observation and perception. Regardless of who postulated this thought experiment first, or when, it remains valid today, particularly in a society obsessed with capturing and projecting images, often aimed at creating or influencing specific perceptions.

It is just as important in a world where civil society has become more aware of the devastating impact that modern industrial activities have on the environment. Perceptions matter, but the key question is whether responsibility for historical, current and future pollution and degradation of the environment is something which can only be determined based on perceptions of strong supporters of environmental rights, or whether civil society has developed to a point that there is consensus on the general principle that polluters must pay. If so, are there certain levels of pollution which are tolerable and acceptable because they facilitate growth and development that benefits the majority of citizens?


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In this article, we explore views around the "polluter pays" principle and whether, in South Africa, certain pollution is tolerable (and therefore acceptable) where the activities that have caused, are causing and may cause pollution and degradation, also provide benefits such as increased revenue to the fiscus, jobs, infrastructure development, social upliftment and more inclusive procurement.

On 25 January, Brazil suffered one of the worst tailings dam failures in recent history, with the collapse of Vale's Brumadinho Iron Ore Tailings Dam. This brought back memories of South Africa's tailings dam disaster at Merriespruit in Virginia on 22 February 1994, which resulted in the death of 17 people and extensive damage to property and the environment.

Tailings dams, simply put, are structures designed for the storage of mining waste. During the mining process, minerals are extracted, and processed, typically using water, to allow the minerals to be separated and processed. The remaining waste, containing water, is pumped and stored in tailings dam facilities, which need to be properly designed, constructed, managed and maintained. Usually a tailings dam failure is related to shortcomings around design, construction, management and maintenance.

The response from civil society, government, and regulators following these disasters was swift, decisive and substantial, including both prosecutions and the payment of fines. This was understandable, given the magnitude of the disasters, and the very public way in which they were brought to world attention.

The collapse of the tailings dam walls at Brumadinho saw the reported release of approximately 11.7 million cubic tonnes of tailings. The effects were nothing short of devastating, with a reported 248 people losing their lives and another 22 missing.

Aside from the loss of human life, damage to property and the death of livestock, environmental devastation to the region has been catastrophic. Reports suggest that the volume of waste released has the potential to pollute over 300km of river systems and to contaminate both the soil and ground water. The question turned to who would be responsible for remediation of the environment and for how long.

Globally, the Polluter Pays Principle (PPP) has emerged as a cornerstone of Environmental Law. The PPP features under Principle 16 of the Rio Declaration on Environment and Development 1992, and provides:

> "National authorities should endeavour to promote **the internalization of environmental costs** and the use of economic instruments, taking into account the approach **that the polluter** should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment."

Applying this principle, Vale has already reported expenses related to the collapse, amounting to approximately USD 4.5 billion by the first quarter of 2019.

Reportedly the world's largest producer of iron ore, these ongoing rehabilitation costs can be absorbed by Vale, albeit with a significant dent to the company's reputation and share price. Unfortunately, not all producers of environmental pollution have the financial resources available to properly rehabilitate until their obligations have been fulfilled. In addition, the costs of rehabilitation are often difficult to quantify as the impact of pollution can often only be determined years after the event. It is also frequently difficult to identify the people (and corporate entities) responsible for the pollution and, in instances where multiple persons are involved, to accurately apportion liability for the rehabilitation costs.

In South Africa, the starting point is s24 of the Constitution which provides:

> "Everyone has the right- (a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that – (i) prevent pollution and ecological degradation; (ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development."

In support of s24, PPP is provided for in s2(4)(p) of the National Environmental Management Act (107 of 1998) (NEMA), which provides that:

> "The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment."

In addition, s28(1) of NEMA provides that:

> "Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment."

An important provision that was subsequently inserted, is s28(1A) of NEMA, which provides:

> "Subsection (1) also applies to a significant pollution or degradation that— (a) occurred before the commencement of this Act; (b) arises or is likely to arise at a different time from the actual activity that caused the contamination; or (c) arises through an act or activity of a person that results in a change to pre-existing contamination."

Section 24 of the Constitution, read with s2(4)(p), s28(1) and 28(1A) of NEMA not only introduces PPP but provides that PPP will apply in respect of persons who have caused, are causing, or will cause pollution and degradation, even where the event occurred before the coming into force and effect of NEMA, and potentially provides for ongoing liability and responsibility long after the event.

The application of PPP in South Africa has played out in the mining sector.

In the widely publicised case of *Harmony Gold Mining Company Ltd v Regional Director: Free State Department of Water Affairs and Others* (971/12) [2013] ZASCA 206; [2014] 1 All SA 553 (SCA); 2014 (3) SA 149 (SCA) (4 December 2013), the Supreme Court of Appeal held that the obligations imposed by a directive issued by the Minister of Water and Sanitation, in terms of s19(3) of the National Water Act (36 of 1998) (NWA) to prevent and/or remedy pollution remained in place until the obligations had been fulfilled.

In this matter, five mining companies were issued with a s19(3) NWA directive to undertake anti-pollution measures in respect of both ground and surface water contamination apparently caused by historical gold mining activities. The preventative measures were required to continue until an agreement and a joint proposal towards the long term sustainable management of water arising from mining activities could be reached, and subsequently approved by the Department of Water and Sanitation. Notably, the judgement confirms that obligations imposed on polluters would remain in place, irrespective of whether or not a polluter had alienated the land on which the pollution had occurred.

More recently, questions have arisen regarding the application of PPP within the context of the obligations placed on mining companies to continue undertaking preventive and/or rehabilitative measures after the closure of the mines. This question is particularly relevant in South Africa in addressing the issue of acid mine drainage (AMD). The impact of AMD may only become apparent after the closure of a mine. Pumping of contaminated water, and, sometimes, treatment of water, particulary AMD, and the principle "last mine standing" raises interesting questions, some of which have been addressed in the Financial Provisioning Regulations Pertaining to the Financial Provisions for Prospecting, Exploration, Mining and Production Operations: National Environmental Management Act (107 of 1998) ("The 2015 Financial Provision Regulations"), and the Proposed Regulations Pertaining to Financial Provisioning for the Rehabilitation and Remediation of Environmental Damage caused by Reconnaissance, Prospecting, Exploration, Mining or Production Operations ("The Proposed Financial Provision Regulations 2019"). It is clear from both the 2015 Financial Provision Regulations and the Proposed Financial Provision Regulations 2019 that government's intention is to ensure ongoing responsibility and liability for water, long after mines have closed. This has required careful consideration of the methods of financing these ongoing responsibilities, particularly in circumstances where the mines have closed, and the income-generating capacity of that mine has ceased. PPP is heavily reliant on the polluter remaining in business, in some form or another, and having enough resources, or having made sufficient resources available, to attend to the rehabilitation and remediation, where necessary, after the mine has closed.

Successful compliance with PPP is, therefore, dependent on financing arrangements during the life of the mine, to enable the implementation of appropriate rehabilitation post closure. The extensive challenges faced by the mining sector, which have resulted in many mines being placed on care and maintenance and even closure, continue to place significant strain on funding available for rehabilitation, and the ability to contribute to financial provisioning for remediation and management, particularly in relation to water, post closure.

Unless appropriate financial provisions are made, or an alternative funding method is devised, government and ultimately tax payers may bear the burden of rehabilitation and water management in future, regardless of the provisions of s28(1) and s28(1A) of NEMA.

Given the significant contribution that the mining sector makes to the economy, directly and indirectly, through its support of infrastructure development, growth and development, transformation, and the "multiplier effect" – the principle that for every mine worker at least ten other persons are benefitted, the question must turn to whether it is necessary, in certain circumstances, for the state to carry the burden.

There will be a number of vocal stakeholders, particularly environmental activists, who will vehemently oppose any assumption of liability by the state, despite these significant benefits that have been derived from mining.

In principle PPP makes sense but it is clear that, laudable as the principle may be, it requires careful consideration and a pragmatic approach, particularly where, like the mining industry, significant benefits have been derived and are likely to continue in future. Ongoing discussions amongst stakeholders will be necessary to consider whether it is appropriate for certain pollution to be tolerated in the interests of civil society as a whole, taking into account the general principles of sustainable development. ◆

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