

sc | nat Chemistry
Platform of the Swiss Academy of Sciences

An Overview of Corporate Social Responsibility in Chemical Research

Julien Goy*

*Correspondence: J. Goy, Corporate responsibility consultant, E-mail: goy.julien@gmail.com, <http://responsabilitesocialeentreprise.wordpress.com>

“The Platform Chemistry invited Julien GOY, CSR Consultant, to discuss our role and responsibilities when performing research at both the academic and industrial levels. Although both environments differ in many ways, interesting parallels can be drawn.”

Dr. Adrien K. Lawrence
Chief Science Officer, Platform Chemistry

In chemistry, what are the responsibilities of the researcher from a social and institutional perspective?

Obviously, a researcher in chemistry often handles highly hazardous products. Products that can harm environment and people. It is therefore crucial to act according to the Precaution Principle.

Precaution is linked to the idea of a moral and political responsibility of collective type; it relates to the consequences in the medium and long-term of human action or the cumulative effect of individual actions whose effects or likelihood are impossible to predict.

Indeed, the action of individuals often takes place in the context of community – *i.e.* businesses, governments, universities, *etc.* The actions of individuals are absorbed and can reach consequences that we can hardly relate to the initial intent.

In other terms, the researcher has to be aware that his own individual responsibility falls within the responsibility of a larger entity and that, as a result, the consequences of his actions can be way more serious than what they look when taken separately.

Individual responsibilities are modified when they are exercised within a community – *e.g.* a business: the consequences of individual action can have a much more significant scale than if they were completely isolated. These responsibilities, while individual, must be understood in the context in which they operate.

What link can be made between laboratory practice and industrial practice?

Responsibilities toward environment and society are basically the same: we must not harm either. Scientists doing research that involves hazardous materials learn appropriate ways of handling the materials, to dispose of them, to protect themselves and others in case of accidents.

Of course, the scale – and therefore potential consequences – can vary highly from laboratory practice to industrial practice. But, once again, the Precaution Principle applies to both contexts. There is also a similitude in the ‘shared nature’ of responsibility. In the laboratory, the principal investigator is in charge, but the research assistant has important responsibilities too. So does the institution under whose auspice the laboratory is operating. In the industry, managers as well as operating staff and the company itself have responsibilities.

In both cases, knowing the right ways to deal with hazardous materials is not sufficient to mitigate the risks. Proper procedures need to be implemented. Otherwise, the knowledge about the risks of hazardous materials is mostly useful in explaining bad outcomes after they happen.

If we identify a problem, what should be undertaken?

Procedures established by the environmental, health and safety (EHS) department, or at least by the manager in charge of these matters, should exist and should be followed.

The EHS manager’s main mission is to make sure that health and safety programs are adequately distributed and implemented. He is also responsible for assessing a company’s workflow and determining what practices are necessary to keep employees safe on the job.

To this end, he must inform employees, visitors, local communities, and will be in constant contact with his management, insurance companies, local authorities, labour inspection, *etc.* It is important to stress that the EHS manager’s job is not limited to the facility, but that he also has to be in touch with various external stakeholders.

Therefore, when a problem is identified, various measures have to be undertaken, not only inside the facility, but also by taking into account a broader spectrum that includes the surroundings and the communities.

Regarding mercury pollution in Valais, what can we learn from the preliminary elements?

A lot of things can be said about this case. In order to understand what is at stake, it is important to resort to various frameworks. A simple yet very useful framework is the Polluter Pays Principle. Developed in 1920 and adopted by the Organization for Economic Co-Operation and Development (OECD) more than 40 years ago (1972), the Polluter Pays Principle is essentially a principle of economic policy rather than a legal principle. It states that the polluter should bear the expenses of carrying out pollution prevention measures or paying for damage caused by pollution.

In the OECD context, the Polluter Pays Principle is a non-subsidisation principle, meaning simply that the governments should not as a general rule give subsidies to their industries for pollution control. In Switzerland, the Principle is sanctioned in Article 74, al.2, of the Federal Constitution of the Swiss Confederation: “[...] The costs of avoiding or eliminating such damage or nuisance are borne by those responsible for causing it.” It is important to stress that it concerns who should pay for environmental protection, not how much should be paid.

How can this Principle be applied to the mercury pollution case in Valais?

This principle shows its usefulness, but also its limits, in the case of the mercury pollution in Upper Valais. Lonza has been accused by various stakeholders of having polluted the *Grossgrund Kanal* over a period spanning several decades. The company has recognized that it had polluted the canal between 1930 and 1976. However, the company denies any responsibility in the pollution of the land surrounding the canal. It is not their fault, they say, if people have used contaminated mud at various locations.

In January 2014, Upper Valais discovered what is believed to be the worst mercury pollution to date in the history of Switzerland.

From 1930 to 1976, an unidentified amount of mercury was emitted in the Rhône plain. More precisely, during this period, Lonza discharged its wastewater into the *Grossgrund Kanal* without processing at a wastewater treatment plant. Mercury accumulated in the canal sediments, and from 1930 to 1990, numerous stakeholders dropped off contaminated mud at various locations.

In 1990, the State of Valais regulated the use of sediments but there was no further investigation.

Even in 2007, when the Environmental Protection Service published the cadastral plan of polluted sites in the Canton, the *Grossgrund Kanal* and its surroundings did not appear. Finally, when work was performed for the construction of the highway in 2010, soils were analyzed; the analysis revealed a severe pollution. The service of environmental protection in the Canton of Valais sent - on January 17, 2011 - a letter to the Federal Office for the Environment (FOEN) to inform them of the discovery.

In September 2011, the canton of Valais asked Lonza for investigations. This request was accepted by the company in December 2012.

In 2014, the press revealed the case and all eyes were on Lonza, the pioneer of chemistry in Upper Valais, and its site in Visp - one of the oldest and more important industrial areas for chemistry in Switzerland.

For this study, facts published until 28 May 2014 were taken into account.

The Polluter Pays Principle is very clear: the polluter should bear the expenses of paying for damage caused by pollution. So is the Swiss Federal Constitution: the cost of eliminating environmental damage are borne "by those responsible for causing it." But what can we do when the identification of the polluter is subject to interpretation?

It is obvious that Lonza is responsible for the pollution of the canal - the company even acknowledged the fact; but the company has a point when it says that it is not responsible for the pollution of the surroundings. Technically, it is true.

In addition, the pollution occurred between 1930 and 1976, almost 40 years ago. How can we hold current managers responsible?

In terms of corporate social responsibility (CSR), facts can be read in another way. One very common mistake is to think that

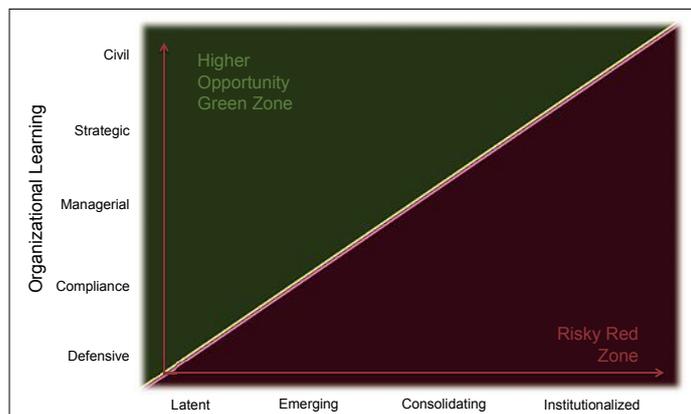


Fig. 1. Civil-Learning Tool: helps companies to see where they fall on a particular societal issue. Adapted from source: S. Zadek, 'Paths to Corporate Responsibility', *Harvard Business Review*, December 2004.

you get the benefit of the doubt because you are new management. In reality, stakeholders do not care; you are still the polluting company. The company's response must be fair, reasonable and justified. And when it engages with stakeholders, it should always present its side of the issues frankly and non-defensively.

This is typically illustrated by the Civil-Learning Tool, developed by Simon Zadek (see Fig. 1). As shown in the graph below, we can see that if a company's implementation of social responsibility does not match the maturity of an issue in the society, the company is likely to encounter major difficulties.

We can agree on the fact that Lonza can be situated at the 'Compliance' level: compliance is understood as a cost of doing business; it creates value by protecting the company's reputation and reducing the risk of litigation. Lonza aims for compliance, but various stakeholders want a greater commitment from them: the community surrounding the canal, organizations such as *Médecins en faveur de l'environnement*, officials from Canton of Valais, etc. This is where the 'Issue Maturity' comes into play: because the problem of mercury pollution is well-known - tending to the 'Institutionalized' stage - the public expects the company to take its responsibility. A responsibility that goes beyond the law. This is what CSR is about: the need to take a step further than the legal obligations.

By turning this challenge into an opportunity, Lonza could gain competitive advantage and become a pioneer of waste management in the chemical industry.

Received: June 19, 2014

Bibliography

- ATS, 'Pollution au mercure: le canton et Lonza vont collaborer', *Le Temps* 2014, January 23, retrieved from <http://www.letemps.ch>
- ATS, 'La quantité de mercure déversée à Viège serait sous-évaluée', *Le Temps* 2014, January 29, retrieved from <http://www.letemps.ch>
- ATS, 'Lonza avoue une pollution au mercure plus grave', *Le Temps*, 2014, February 21, retrieved from <http://www.letemps.ch>
- W. Boder, 'Lonza préfinance la décontamination du site de Turtig', *Le Temps*, 2014, January 24, retrieved from <http://www.letemps.ch>
- Federal Constitution of the Swiss Confederation, 1999.
- H. Jonas, 'The Imperative of Responsibility: In Search of an Ethics for the Technological Age', UCP, 1985.
- Lonza's website, <http://www.lonza.com>, consulted 28.04.2014.
- Médecins en faveur de l'environnement's website, <http://www.aefu.ch/actuel/?L=1>, consulted 28.04.2014.
- OECD, 'Recommendation of the Council on Guiding Principles concerning International Economic Aspects of Environmental Policies', 1972.
- M. Parvex, 'Le haut-Valais découvre la pollution au mercure la plus grave de Suisse', *Le Temps* 2014, January 7, retrieved from <http://www.letemps.ch>
- M. Parvex, 'Chronique d'une catastrophe ignorée', *Le Temps* 2014, January 8, retrieved from <http://www.letemps.ch>
- M. Parvex, 'Lonza refuse de payer le nettoyage des terres polluées au mercure', *Le Temps* 2014, January 9, retrieved from <http://www.letemps.ch>
- M. Parvex, 'Découverte d'une nouvelle pollution au mercure', *Le Temps* 2014, February 14, retrieved from <http://www.letemps.ch>
- M. Parvex, 'A Turtig, la zone polluée au mercure ne cesse de s'étendre', *Le Temps* 2014, May 6, retrieved from <http://www.letemps.ch>
- A. W. Savitz, 'The Triple Bottom Line: How Today's Best-Run Companies Are Achieving Economic, Social and Environmental Success - and How You Can Too', Jossey-Bass, 2006.
- S. Zadek, 'Paths to Corporate Responsibility', *Harvard Business Review* December 2004.

Additional information about the «Platform Chemistry» and its activities may be found at www.chemistry.scnat.ch



Follow the «Platform Chemistry» on Twitter @SCNATChemistry