



## **The death of a river: the Rio Doce disaster and its implications**

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On the 5th of November two dams burst in Brazil, more precise in Minas Gerais, a south eastern state at the north of Rio de Janeiro, causing one of the worst, if not the biggest, ecological disaster of the country. The huge flood consisting of 60m cubic metres of toxic mud (which is equal to 25,000 Olympic swimming pools or the volume carried by about 187 oil tankers) has caused the death of a yet undetermined number of people. Rescue operations are still in action. Until now, nine people have been found dead and 19 are still missing; almost 600 people lost their homes and are temporarily hosted in hotels without any certainty about their long term accommodation. 250.000 people living in nearby villages do not have access to drinking water. As reported by [Greenpeace](#), the city of Governador Valadares near to Rio Doce is completely paralysed, with schools and shops closed and the army distributing water, since tap water is dirty and probably contaminated.

The iron mines where the dams burst in the little village of Bento Rodrigues belong to Samarco Mineração, a joint venture owned half by the Brazilian mining corporation Vale SA and half by the Anglo Australian BHP Billiton. On 17 November an agreement was signed according to which the two companies cited above will pay a fine of \$ 263 million divided in two tranches: the first of \$ 132 million within ten days, to help the immediately affected population and to clean the region and the second tranche within 30 days. The Brazilian Institute of Environment and Renewable Natural Resource has imposed another fine of 65 million dollars and, once the entity of the damage will be assessed more clearly, the amount of the total sanctions will certainly increase. All activities of the mining company in the State of Minas Gerais have been suspended, apart from emergency operations.

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Although the two corporations insist that the mud is not toxic, the ecological damage appears to be serious. The flood has reached Rio Doce, polluting 600 km of its 853 km of total length. According to a laboratory analysis commissioned by Serviço Autônomo de Água e Esgoto (SAAE), Rio Doce has been completely contaminated. [The water samples taken by SAAE](#) at Valadares contain particles of heavy metals such as lead, aluminium, iron, barium, copper, boron and mercury. More specifically, the iron content is 1,366,666% more than tolerable for treatment, manganese levels, toxic metal, exceed the tolerable at 118,000%, and the aluminium presents a concentration 645,000% greater than the potential for treatment and distribution to residents. According to Luciano Magalhães, director of SAAE, it is as if the entire periodic table has been poured into the river. He [summarised the catastrophe in two words](#) : rio morto; the river is dead, the water no longer has any use, being unfit for irrigation and animal and human consumption. Moreover, according to environmentalists, there is the concrete risk that most of endemic biodiversity (Rio Doce is a nesting area for sea turtles in danger of extinction) has been destroyed, buried and suffocated by the mud. Given that the economy of the region is mostly based on coffee, spas and mining, the economic and social impact will be huge. The Brazilian

president Dilma Rousseff, who flew over the affected area some days ago, compared the incident to the environmental disaster in the Gulf of Mexico caused by the oil platform of British Petroleum in 2010; others even speak of a 'Brazilian Fukushima'.

### **Private responsibility and political inadequacy**

Until now, responsibilities and dynamics have not been clearly assessed, however, investigations are ongoing to determine whether what happened has been an accident or rather (as seems more likely) the result of poor control and inadequate preventive measures. Suffice to say that apparently, once the dams collapsed, no alarm went off inside the mine. In the meantime the State Environmental Prosecutor [Carlos Eduardo Ferreira Pinto](#) has declared that it was not an accident. Yet, the catastrophe cannot solely be blamed on the negligence of private companies, but just as much on the lack of a strict legal and normative framework dealing with natural resources and environment. As underlined by [Adriana Ramos](#), coordinator of ISA (Instituto Socio Ambiental) and by [Maurício Guetta](#), advocate of ISA, prevention is fundamental to avoid this kind of catastrophes and it is necessary to review and enforce legal tools for environmental management and control. A conclusive system of environmental licensing should be introduced, according to which entrepreneurs have to strictly respect and follow specific criteria before starting economic activities with potentially significant ecological effects. However, in Brazil economic and political forces seem to push exactly in the opposite direction. There is even a law proposal, 654/2015, by Senator Romero Juca (Partido do Movimento Democrático Brasileiro), according to which 'strategic infrastructure projects regarding national interest' such as highways, railways, waterways, ports, airports, power projects and any other that regard the exploitation of natural resources, would actually follow a shorter and easier procedure to be eligible for Environmental Licensing. In other words, as emphasised by Guetta, the situation is moving into a direction where the higher the risk of potential environmental damage, the less is the level of control and prevention required. This proposal may appear absurd, but it is actually perfectly in line with current European and US American positions, for instance with respect to TTIP. I pointed out in another [post](#), TTIP originally featured a proposal to introduce a tribunal where companies can sue States in case national laws damage their profits. The general tendency currently is to privatise national resources, as water in Italy, and dismantle regulations devoted at protecting environment and human life. The argumentation is always the same, based on the specious and unfounded idea that deregulation and privatisation would favour development and growth. The truth is that not only would an improvement of the legal framework increase certainty and security for business activities, but it is just as essential for preserving the safety of our environment and the wellbeing of the global population, which are threatened by political and economic pressures of corporations essentially guided by profits and dangerous incentives, and not only in developing countries as the Volkswagen scandal has shown.

There is a video showing some members of the indigenous tribe of the Krevas (which have been living along the river) [shedding bitter tears about the death of Rio Doce](#). If the river dies, we all die is what they say. The river, in its yellow unnatural colour, reminds us of the black liquid mass of oil invading the Gulf of Mexico five years ago; both images symbolically reflect our society, suffocated by the toxic mud of pollution, profits and wars.

Despite the recent terrible events in Paris, the climate international conference COP21 will still be held in the French capital, from 30 November till 11 December. This could be also an opportunity to highlight the necessity of stricter regulation, such as environmental licensing, to prevent ecological disasters like that of the Rio Doce in Brazilian. Instead, the conference will

probably result in evasive agreements on climate change, [as pointed out by EJOLT](#) (The Environmental Justice Organisation, Liabilities and Trade), a global research project that composed an [environmental justice atlas](#) documenting and cataloguing social conflict around environmental issues. The list of this type of conflicts is constantly growing. Still, COP21 offers an opportunity and an obligation for the European Union to step up its own climate and environmental ambition, encourage other countries to increase theirs and help prevent future ecological disasters.